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The Antiseptic

Monthly Medical Journal

EDITED BY
Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

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Original Articles.

COMMON INJURIES OF THE KNEE JOINT.*

BY

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The future efficiency of a man specially one who has to do outdoor work, depends upon early and proper treatment and absolute cure of any disability of the knee joint. The difficulty with the knee joint cases is that if it is not perfectly cured, the trouble is sure to recur and the man would be incapacitated. For this reason every case of knee joint trouble should be thoroughly examined, the exact nature of injury diagnosed and efficiently treated. In many cases it may be extremely difficult, if not impossible, to arrive at the correct diagnosis; but after a thorough investigation, the proper line of treatment can always be marked out.

The injuries of the knee joint commonly met with are:

I. Traumatic effusion in the joint.
II. Sprain of the Internal Lateral Ligament.
III. Hypertrophied and thickened Infrapatellar pad of fat.
IV. Lesions of the Semilunar Cartilages, specially the Internal one.

* Specially contributed to the 'Antiseptic.'

I noticed that men of big stature are more liable to sustain these injuries than the small sized men. Gurkhas for example very seldom suffer from these injuries, whereas these are common among the Pathans, although both these tribes are equally used to hill conditions. This appears to me to be due to the heavier weight and greater leverage action on the joint, in the case of the bigger man.

Recapitulation of the important anatomical facts of the structures mainly concerned in these lesions may be useful for understanding the mode of production of these injuries.

Condyles of the femur.—The posterior two thirds of the internal condyle are parallel and equal in extent to the whole of the outer condyle. The anterior third of the internal condyle curves outwards towards the trochlear surface and has no corresponding part in the external condyle. In extension, with the tibia as the fixed point, the femoral condyles glide and roll on the upper surface of the tibia and the semilunar cartilages until the whole of the external condyle and the corresponding part of the internal condyle are used up. After this the femur rotates inwards, round the spine of the tibia, until the remaining third of the internal condyle is used up, and at this point of complete extension, the joint is properly fixed. At this stage the greater part of the internal condyle is in contact with the semilunar process of the infrapatellar pad of fat, and not with the internal semilunar cartilage. If the knee is extended with the femur as the fixed point, the tibia rotates outwards at the end of extension, along the curved portion of the internal condyle of the femur. This is generally known as the "Screw home movement" at the end of extension. At the commencement of the flexion the reverse movement takes place and the joint is unfixed.

Capsules of the joint.—The true capsule is a thin but distinct layer of fibrous tissue continuous with the periosteum of the femur and tibia, and strengthened at certain spots by ligaments. It does not exist as a separate structure in front but merges with the tendinous part of the Quadriceps femoris. It is in contact with the outer surface of the synovial membrane and with the convex margins of the semilunar cartilages except where the popliteus emerges. The internal lateral ligament and the oblique popliteal ligament are strengthening bands in contact with the capsule, but the external lateral ligament is separated from it by a distinct interval. The firm aponeurotic covering round the knee joint derived from the vastii, iliotibial band and the hamstring muscles can, in most cases, be separated from the capsule.

Semilunar Cartilages.—These are two crescentic plates of fibrocartilage which lie upon the outer parts of the articular surface of the tibia. They are wedge-shaped in transverse section, the base of the wedge being towards the periphery. The concave margin is free, but

the convex margin is attached to the femur and tibia by the deeper fibres of the capsule which are known as the coronary ligaments. The fibres of the coronary ligament passing to the femur are long and moveable, while those passing to the tibia are short and more fixed, so the cartilages move with the tibia on the femur and glide forwards in extension. The anterior and posterior horns of both the cartilages are attached to the front and back parts of the nonarticular areas on the upper surface of the tibia.

The intrinsic structure of the cartilages is an important factor from the aetiological point of their lesions. The bundles of fibrous tissue run mainly longitudinally and the remainder obliquely. The cartilages are elastic, so that, if divided transversely, the cut ends project outwards, or, if the anterior or posterior horns are separated from the tibia, they come closer together, forming larger part of a smaller circle. The peripheral or convex border has got good blood supply, whereas the inner or concave margin is nourished by the synovial fluid only, a comparitively poorer source of nutrition. So in cases of rupture of the cartilage, the peripheral part has got a better chance of healing than the central part. It is not uncommon to find, on opening, a joint, that the convex border is united by scar tissue while the concave border is still ununited.

Peculiarities of the internal semilunar cartilage.—Variations may occur in the attachment of the anterior horn. It may be connected with the anterior horn of the opposite cartilage by the transverse ligament. Sometimes there may be an additional accessory band attaching it to the anterior cruciate ligament. The relation of the internal lateral ligament to the internal cartilage is very important. Most anatomy text books state that it is firmly attached to the cartilage, and injury of the cartilage cannot take place without a tear of the ligament. Fisher (1924)[1] considers the statements to be of a nature of half truth. He has demonstrated that the anterior part of the ligament is very loosely and the posterior part very firmly attached to the peripheral part of the cartilage. The posterior fibres are attached a little behind the central part of the cartilage. Therefore a weak mechanical spot exists at the junction of the mobile anterior and the more fixed posterior part of the caritlage.

The external semilunar cartilage is more mobile and has no attachment to the external lateral ligament.

Synovial membrane.—It clothes the inner surface of the capsule and extends as a pouch for a variable distance between the femur and the Quadriceps femoris. The pouch is supported during movements of the knee joint by the Subcrureus, which is attached to it. Below and anteriorly the synovial membrane is separated from the capsule and the ligamentum patellae, by the infrapatellar pad of fat. A delicate fold of synovial membrane passes upwards and backwards from

the apex of this pad of fat and is attached to the front part of the intercondylar notch of the femur anterior to the anterior cruciate ligament. This is known as the ligamentum mucosum, and the free margins of the fold are called the alar ligaments.

The synovial membrane covers both the surfaces of the semilunar cartilages and gives a sheath to the intracapsular part of the popliteous. It passes across the front of the cruciate ligaments which are therefore outside the synovial cavity. At the posterior aspect of the femoral condyles it forms small recesses which are very difficult to drain in cases of suppurative arthritis.

Infrapateller pad of fat.—It is placed below the patella and between the patellar ligament and the synovial cavity. A semilunar process of the pad of fat is interposed between the anterior end of the internal semilunar cartilage and the internal condyle of the femur. The "Screw home" movement of the internal femoral condyle takes place on this structure. This process of the pad of fat is liable to injuries which may affect it alone or in conjunction with injury of the internal semilunar cartilage.

Subcrureus.—This is a small muscle, usually distinct from the Vastus Intermedius, but is occasionally blended with it. It arises from the anterior part of the body of the femur and is inserted into the upper part of the synovial membrane of the knee joint. Some of the fibres are attached to the infrapatellar pad of fat. Their function is to prevent the pad from being nipped during full extension of the joint. These fibres can often be traced to the anterior ends of the semilunar cartilages and it is probable that they play an important role in pulling the semilunar cartilages forward during extension of the joint. Sometimes recurrent displacements of the semilunar cartilage can be cured by exercise of this muscle.

Internal Lateral Ligament.—It is a strong band about 4″ long, attached above to the femur just below the adductor tubercle and below to the medial condyle and medial surface of the shaft of the tibia extending about 1½″ below the tuberosity.

The anterior part of the ligament is flat and long, and inclines forwards as it descends to be inserted into the shaft of the tibia. The posterior fibres are short and incline backwards as they descend and are inserted into the inner part of the tuberosity of the tibia above the groove for the semimembranosus. It has already been pointed out that the anterior part is loosely and the posterior part firmly attached to the peripheral border of the internal semilunar cartilage.

There are two small synovial recesses in contact with the ligament. They play an important part in the pathogenesis of the injury of the ligament. One of them is situated beneath the upper part of the ligament near its femoral attachment—a part of the synovial membrane reflected from the femoral condyle on to the capsule. The other, a shallow synovial pocket, is present beneath the attached margin of the semilunar cartilage, where the synovial membrane lines the deep surface of the coronary ligament and is reflected from it on the margin of the tibiale condyl.

In the erect posture the femora are set at such an angle to the tibia that the weight is principally transmitted through the outer part of the joint. So, there is a constant tendency (in this posture) of separation of the inner condyles of the femora and the tibia, with the consequent production of abduction. This is normally prevented by the anterior part of the internal lateral ligament and muscular action. The muscles concerned are the Quadriceps, hamstrings and the Gluteus maximus acting through the fascia lata. The main functions of the ligaments are to prevent slipping of the bones over one another, to keep them in apposition and to limit the movements. The important ligamentous bands are the two lateral ligaments, patellar ligament and the cruciate ligaments. The main function of the cruciate ligaments is to limit the range of movement.

The knee is a hinge joint with certain peculiarities. In flexion and extension the condyles of the femur move on the upper surface of the tibia and the semilunar cartilages. During this movement the femoral condyles not only roll but also glide, "Like a wheel hampered by a skid", as originally described by Godsir (1868).[2] A certain amount of rotation is also possible during flexion. This takes place on the inner side of the joint, principally between the internal femoral condyle and the internal semilunar cartilage. The anterior part of the internal semilunar cartilage moves towards the interior of the joint in this movement, upon the upper surface of the tibia.

Examination of the knee joint.—For the proper treatment of a case, correct diagnosis is essential, and this can only be arrived at by careful examination. History is a very important factor and in some cases forms the only basis for diagnosis. So, no pains should be spared to elicit how and when the injury occurred, condition of the joint after the injury, any recurrence of attack, locking, and if so, if in any definite position, etc. Next comes the examination of the joint, whether there is any effusion, swelling or obliteration of the normal depressions about the joint, pain or tenderness and their exact site. The movements should then be tested. Limitation of movements is quite common in knee joint lesions, but in order to appreciate this the surgeon must have a thorough idea of the range of mobility in a normal joint. In a normal joint, flexion is possible until the leg comes in contact with the thigh and in full extension, the leg should be in a straight line with the thigh. A correct idea of the range of movement can usually be gained by comparing with the opposite side. Wasting of the thigh muscles can be determined by

measuring the girth of the thigh at a certain distance above the patella and comparing with the other side. Loss of tone of these muscles can be detected by feeling their consistency on both sides. Last, but not the least, is the X-ray examination of the joint, which may show some unsuspected disease or injury.

I. Effusion in the knee joint.

I have called the condition "Effusion in the knee joint" and not "Traumatic synovitis". Though the latter is certainly the scientific term, it always carries the impression that effusion consists of synovial fluid. I have found that, in 25% of the cases, the effusion consists of blood mixed with synovial fluid, in other words, it is a condition of haemarthrosis. The peculiarity of effusion in the knee joint is that, if it is not properly treated in the early stages, it is always liable to recur whenever the joint is subjected to any strain. These recurrent effusions progressively weaken the joint leading to a sense of insecurity and may terminate by permanently incapacitating the man for any active outdoor work.

Aetiology of recurrent effusion.—If the traumatic effusion is not promptly and efficiently treated, the synovial membrane remains lax and loose and is liable to be nipped between the tibia and femur during movements of the joint. These traumata may cause further effusion into the joint.

After an effusion in the joint, there is always some amount of wasting of the Quadriceps. A part of the Vastus internus muscle wastes more rapidly and to a greater extent than the other parts of the Quadriceps. Normally the Vastus Internus plays an important part in drawing the patella inwards and steadying the inner side of the joint, particularly when the weight is borne on a partially flexed knee e.g. when descending stairs, walking on uneven ground etc. The stability of the joint, whenever the position of full extension has been departed from is largely dependent upon its capacity of controlling the amount of flexion. Hence wasting of the Quadriceps causes an increased liability to a repetition of the sprain and with each sprain there is further distension of the synovial membrane, stretching of the ligaments, and further wasting of the Quadriceps. In this way a vicious circle is set up in which there is an increased liability to sprain and diminished capacity to recover from it.

The wasting of the Quadriceps is associated with wasting of the Subcrureus, whose function is to pull the synovial membrane, semilunar process of the infrapatellar pad of fat, and probably the semilunar cartilages, forwards during extension of the joint and prevent these structures being injured in this movement. With the wasting of this muscle these structures are more liable to undergo minor traumata during movements of the joint and so cause effusion.

On routine aspiration I have found that in one out of four cases the effusion consists of blood mixed with synovial fluid. If the blood is left to be absorbed adhesions form, which when stretched or broken down by exercise cause effusion into the joint.

Treatment.—Too much stress cannot be laid upon the proper and thorough treatment of this condition. As is evident from the causes of recurrent effusion, the principles of treatment are to ensure,

1. That the synovial membrane regains its original resiliency and form.
2. That there is no wasting of the Quadriceps.
3. That no adhesions are formed in the joint.

The routine procedure I adopt, is to aspirate the joint with a 20. cc syringe as soon as the patient is seen. It is absolutely safe, if done with strict aseptic precautions. The main idea is to relieve the distension and stretching of the synovial membrane. It gives the synovial membrane a much better chance to regain its original resiliency and form, than when the knee is put up in a splint or when Scott's dressing is applied.

While carrying this out as a routine procedure, I was surprised to find the large number of cases, where haemarthrosis existed but was never suspected. As aspiration is undoubtedly the best treatment for haemarthrosis and as this condition is fairly common, I consider that the only rational treatment for cases of effusion is aspiration.

Simple application of Scott's ointment or Iodine ointment does not hasten the absorption of the fluid. It is very doubtful if it even relieves the pain in a case of traumatic effusion. Scott's dressing or Iodine ointment with tight bandage has no better effect than an ordinary tight bandage in promoting absorption except that it gives the patient an impression that he is getting some drug treatment.

After the joint is aspirated, it is bandaged with plenty of cotton wool round it, and is kept in a slightly flexed position with a pillow behind the knee. The patient is given massage of the Quadriceps and Gluteus maximus from the first day. It is demonstrated to him how he can contract the Quadriceps and pull the patella up. He is asked to contract his Gluteii by pressing the knee against the mattress. This is easier to do if the patient puts his hand behind the knee and presses against it. He is asked to carry out these exercises for ten to fifteen minutes twice a day from the very beginning. About the third day he pushes his foot against the lower end of the bed and by the fifth day he puts his weight on the leg. Cycling on a fixed cycle is started on on the eighth day and the patient is usually fit for walking in an ordinary case, by the twelfth day; although, for the first few days it is advisable to keep a bandage on and then discard it gradually. In cases where there is great wasting of the

Quadriceps—"Tip toe double knee bend and stretch" is a good exercise. Electrical massage of the muscle is also very useful.

If the joint is not aspirated early, it takes a long time for the fluid to be absorbed and thus the Synovial membrane is more damaged. Long recumbency and immobilisation, as happens when the limb is put up in a back splint, cause wasting of the muscles and must be avoided.

II. Lesions of the Internal Lateral Ligament.

Complete rupture of the internal lateral ligament is a very serious injury. Fortunately it is rare. Sometimes the ligament may be avulsed from the bony attachment with a small piece of bone attached to it. The commonest injury of the ligament is a partial tear or sprain.

A. Sprain of the Internal Lateral Ligament.—This is usually caused by forcible internal rotation of the thigh when the foot is firmly fixed on the ground. Injury of the long or superficial part is nearly always caused by forcible abduction at the knee.

Pathology.—It has already been pointed out that a recess of the synovial cavity exists beneath the upper part of the internal lateral ligament and a pocket of the same cavity is present at the lower part of the ligament. In ruptures of the long parts of the ligament, either partial or complete, the synovial membrane must participate and if the joint is then kept at complete rest, the apposed layers of the synovial membrane become glued together. Moreover the outer layer of the synovial membrane may be adherent to the ligament itself. After rupture of the deep fibres of the ligament, adhesions are particularly liable to form giving rise to presistent tenderness, which may be mistaken for lesion of the internal semilunar cartilage.

The sprain gives rise to synovitis, which causes reflex wasting of the thigh muscles and laxity of the synovial membrane and these predispose to minor traumata in the joint and delayed absorption of effusion.

Symptoms in a case of recent injury.—At the moment of occurrence, severe pain is felt on the inner side of the joint, but there is no locking. Pain and tenderness are always present; the point of their maximum intensity depending on the exact position of the rupture. Usually these are present over the femoral attachment. When the deep fibres are involved, the site of pain and tenderness is at the level of the attachment of the ligament to the semilunar cartilage. In very severe cases the pain may be referred up the thigh or downwards into the calf. Swelling, which may be boggy in a severe case due to presence of blood clot, is usually present at the site of the rupture.

The amount of synovial effusion and the time it takes to appear depend on the severity of the injury. In a serious case, it may occur almost immediately and is usually haemorrhagic. In a case of moderrate severity, the effusion may not appear for several hours. All the movements of the joint are limited due to reflex spasm of the muscles.

Symptoms in a case of neglected sprain.—A history of recurrent attacks of synovitis and signs of chronic synovitis are usually present. Flexion is limited. The site of tenderness is either over the middle of the inner border of the internal semilunar cartilage, or over the internal condyle of the femur just above the articular margin. The leg can often be bent outwards in the extended position of the joint. Great care should be taken in doing this test, as it is very liable to produce further damage and is extremely painful. The Quadriceps is flabby and wasted. This occurs with great rapidity and its treatment is often a very difficult and prolonged matter.

Treatment of Recent cases.—The knee should not be put on a back splint and left at the mercies of nature. This treatment is not only very uncomfortable but full extension causes stretching of the ligament and the prolonged immobilisation produces wasting of the important muscles.

In cases where effusion is present (and this is generally haemorrhagic) the joint is first aspirated and bandaged with plenty of cotton wool round it. If there is no effusion the knee is similarly bandaged. It is then kept in a slightly flexed position with a pillow behind the thigh. Flexion relaxes the ligament. Massage of the Quadriceps is started from the second day and gentle passive movements are commenced from the fifth day or a little later, according to the severity of the injury. Active movements are started about the seventh day. Movements at this stage must be limited to flexion and extension only. In mild cases of sprain weight bearing may be commenced by the 12th day. Where there is a definite partial rupture, the reparative tissues in the process of formation must be relieved of all stress by deflexion of the body weight to the outer side of the foot. This can be done by thickening the inner side of the heel and sole of the boot. The patient uses this boot for a month and should not do very strenuous walking for that period.

Chronic cases.—Tenderness over the internal lateral ligament is due to the presence of scar tissue, which may be present not only in the ligament but also in the synovial membrane lining its deep surface. These scars may be adherent to each other. When the ligament is stretched the scar produces pain and reaction in the joint; hence the recurrent attacks of effusion which occur after

exercise. This vicious circle can only be broken by manipulative treatment which is carried out as described below.

Firm pressure is maintained by the fingers and thumb of the left hand pressing on the tender spot. The joint is then sharply flexed with the other hand to the full extent possible. This is generally accompanied by a snap. The joint is then kept bandaged. The increased range of movement obtained by manipulation must be preserved and gradually increased. The wasted thigh muscles are made to recover by re-education; then the lateral mobility which had so long been present will disappear.

B. Complete Rupture of the Ligament.—This is generally caused by a severe twist of the knee joint when the leg is in an abducted position. It may or may not simultaneously cause injury to the internal semilunar cartilage. The joint is distended with effusion, generally haemorrhagic. Tenderness is present at the site of the rupture. The leg can be abducted in the extended position. The head of the tibia can be moved from side to side for about quarter of an inch on the condyles of the femur.

Treatment.—The effusion is aspirated and the knee bandaged and kept in a slightly flexed position in a splint so that the patient cannot hurt himself when asleep. The line of treatment is more or less the same as already described but the movements should be given carefully and gently, and the altered boot should be used longer. If after discarding the boot, the patient gets recurrent injuries of the joint, it should be used all the time. (A man can hardly be fit for military duties with a thickened inner side of the heel and sole of the boot).

In some cases the above treatment is not successful. The only alternative is operative treatment. Several operations have been described; Edwards' operation (1920)[3] is the best. In this the tendons of the semitendinosis and Gracilis ure used to form the new ligament.

The tendons are exposed and divided about the medial condyle of the femur. The distal ends are stitched together pulled forwards, and then inserted into a groove previously made in the femoral condyle in the line of the internal ligament, and fixed there by a staple. The fibrous tissue of the condyle is then stitched over the groove. The proximal ends of the tendons are stitched to the Sartorius.

I did this operation upon one man. The result was not satisfactory. It appears to me that the tendons cut through the staple when subjected to strain. In one case I performed the operation with certain modifications as described below with very good result.

The tendons are divided at the upper level of the internal condyle. Two tunnels are bored in the condyle very close to each other, so that when the tendons are pulled through them, they are in the line of the internal lateral ligament. The distal ends of the tendons are pulled through each tunnel separately and then they are stitched together. The periosteum of the condyle is incised longitudinally just above the tunnels and carefully separated from the bone. A groove is made here in the bone and the stitched tendons are fixed in it with a staple. The periosteum is then stitched over them, the sutures including the tendons, the idea being that the spur of bone between the sutured tendons would prevent them being pulled out of the groove and the tendons having been fixed to the periosteum would be stronger.

Injury of the external lateral ligament is rare. It is generally produced by violent abduction with extended knee. Pain and tenderness are present over the ligament. Effusion may be present. Treatment is along the same lines as in lesions of the internal lateral ligament.

III. Lesions of the Infrapatellar Pad of Fat.

1. Hypertrophy.
2. Injury of the semilunar process of the infrapatellar pad of fat.

1. *Hypertrophy of the infrapatellar pad of fat.* This may be caused by trauma. It may also be produced in the early stages of what is generally known as chronic arthritis of the synovial type. In young individuals, it is due to trauma whereas in older people it may be caused by chronic arthritis. The older patients I saw, were about 40 years old and slightly phlegmatic. I had two cases showing signs of chronic osteoarthritis with lipping of the edges of the bone etc., associated with the hypertrophy of the pad of fat. After removal of the fatty pads the symptoms of osteoarthritis also subsided. It appears to me that in people of the phlegmatic type, there is a tendency to hypertrophy of the pad. This hypertrophied pad undergoes minor traumata which lead to further hypertrophy of the fatty pad and set up chronic inflammatory reactions in the joint terminating in osteoarthritis; when the fatty pad is removed, there is no further injury to the joint and the symptoms subside. As has been stated previously, the Subcrureus pulls the pad away during extension. With wasting of the Quadriceps the Subcrureus fails to do this, and thereby the pad is liable to be nipped between the bones. In many cases the pad may be already enlarged from previous trauma and this now becomes further hypertrophied which in its turn increases the liability to further injuries and thus sets up a vicious circle.

Signs and Symptoms. The infrapatellar pad of fat is obviously enlarged. The patellar ligament is pushed forwards but it may not

be more prominent, as the normal depression on either side of the ligament may be obliterated or even bulging. There is tenderness on either side and behind the patellar ligament. Recurrent effusion in the joint may occur. There may be a sensation of giving way of the joint but no true locking. Wasting of the Quadriceps may be present.

Treatment.—Sir Robert Jones (1918)[4] has pointed out that further injury to the pad must be prevented. This can be attained by raising the heel of the boot on the affected side. When the case is seen early, this may cure the condition if massage of the Quadriceps is carried on at the same time. A knee cage can be used as an alternative. The hinge is so made that the joint cannot be extended to its full extent. (Limitation of about 20°).

In most cases, the only effective treatment is the removal of the pad of fat before other osteoarthritis changes take place in the joint. Because, though limitation of movement of the joint may alleviate condition, it seldom cures it.

The best treatment, unless the case is seen very early, is to remove the pad of fat by operation. All bleeding vessels must be secured before closing the wound. And this can only be done with a good view of the operating area. For this purpose a long incision on the inner side of the patella is useful. The patella is then pushed outwards and the pad of fat removed. Massage and movements must be started early with bandage around the knee as in other cases of knee joint lesion already described.

2. *Injury of the Semilunar process of the Infrapatellar pad of fat.* The mechanism of injury to this process is very similiar to that of the internal semilunar cartilage which may be damaged by the same trauma. But in some cases only the fatty process is injured. Symptoms are practically the same as in lesions of the internal semilunar cartilage but there is no history of locking. In chronic cases the pad may be thickened and may produce a sensation of something slipping in the joint, and recurrent effusion. It may also be adherent to the neighbouring parts and this is usually the cause of the disability.

The following points are useful for diagnosis. Flexion and extension of the joint may be painful. There may be a history of recurrent effusion without any locking of the joint.

Treatment.—Manipulative treatment usually cures the condition. The knee is kept in the extended position. First of all the patella is mobilised by pushing it from side to side with a thumb on either side of it. This is very important before other movements of the knee joint are carried out; because if the patella is adherent it may be fractured during forcible movements. The joint is then steadily flexed and extended. Rotatory movements are given when the knee

is being extended. Massage of the thigh muscles is also essential. Active movements of the joint are carried out as detailed before.

IV. Lesions of the Semilunar Cartilages.

The commonest injuries of the semilunar cartilages are fracture, contusion, and dislocation. Dislocation apart from fracture is rare and simple contusion is not common. A sudden twist inwards of the femur upon the fixed tibia when the knee is slightly flexed, may cause a tear in the cartilage or separation of its anterior attachment. This may cause a minor displacement not sufficient to produce obvious locking but giving a feeling of discomfort on extension which may be slightly limited. These cases are amenable to manipulative treatment.

Injury of the internal semilunar cartilage is four times as common as that of the external. Various types of fracture may occur. The particular type is determined by the nature of violence and (as has already been described) the disposition of the fibres. It may be transverse, longitudinal or oblique. The commonest form of lesion is the bucket handle type of fracture, originally described by Rutherford Morrison (1909)[5]. This is a longitudinal fracture of the cartilage in which the concave side of the meniscus is dislocated towards the interior of the joint and lies in the inter-condyler notch between the condyle and the cruciate ligaments. Dislocation of either cornu in association with fracture, is frequently seen in addition to the common "bucket handle" type.

Clinical Phenomena.—The patient usually gives the history of a sudden twist of the knee, severe sickening pain in the joint and a fall. On recovering from this sudden attack he generally notices that he cannot extend the joint to its full extent, limitation of about 15°. Then the joint swells up with effusion.

On examination, the joint is found to be swollen. It is kept in a slightly flexed position. The usual site of tenderness is midway between the inner edge of the patellar ligament and the internal lateral ligament. In injuries of the posterior form, pain is generally present at the back or inside the joint.

Symptoms in recurrent cases.—Often there is a history of locking which may be transitory. On examination, signs of chronic synovitis are found and the normal lateral patellar depressions are obliterated. On flexion a depression may occur on the anterointernal aspect of the joint, particularly when the anterior half of cartilage is injured. In rare cases, when there is complete transverse fracture, the fractured ends may form a prominence externally. Wasting of the Quadriceps is the usual rule. Tenderness is usually present over the antero-internal border of the tibia or over the semilunar cartilage. The best way to test this is to place the thumb over the interarticular interval, a little to the side of the patellar ligament, when the knee is flexed. If the patient does not feel pain in this position, he generally gets it when the leg is being extended. Lateral mobility may be present in old chronic cases where the ligaments are lax. Limita-

on of movement may be due to adhesions or to a piece of the actured cartilage interfering with the movements of the bones.

X-Ray. If the joint is inflated with oxygen and a skiagram is ıken it may show a tear of the cartilage.

Diagnosis.—The exact diagnosis of the knee joint lesions is of tmost importance. Many a time a joint is opened on the suspiscion f an injury of the semilunar cartilage when there is none and often ı innocent cartilage is removed. The one important symptom for iagnosis is locking of the joint. But in some cases of small tears ıere may not be any true locking and the symptoms resemble those f injury of the corresponding lateral ligament. The sheet anchor of orrect diagnosis is painstaking history. The position of maximum ɜnderness helps but may be fallacious.

Differential Diagnosis.—The differential diagnosis of the common ɜsions is given ın a tabular form below :—

Clinical Features	Semilunar Cartilage lesion	Internal lateral ligament	Infrapatellar pad of fat.	Foreign body.
Nature of Injury.	Twist of the joint.	Twist of the joint.	No history of any serious injury.	Rarely any history of injury.
History of locking.	Usually present.	Nil.	Nil.	Present. Locking generally momentary.
Site of tenderness.	Generally over the cartilage unless associated with other injuries.	Over the internal lateral ligament.	Either side of the patellar ligament and behind it.	Not localised.
Pain.	Antero-lateral or posterior aspect of the joint.	No pain unless the ligament is pressed or stretched.	Behind the patellar ligament.	Generally *none.*
Swelling.	May be present over the cartilage.	May be present on the ligament.	Both sides of the patellar ligament.	Nil.
X-Ray	May show fracture	Nil.	Nil.	Will show if bony.
Mobility	A peculiar rumble or snap on flexion and extension is almost pathognomonic.	Abnormal lateral mobility outwards.	Full extension may be limited.	No limitation unless fixed between articular surfaces.

Rupture of the cruciate ligament.—Anterior. Hyper-extension and antero-posterior movement of the knee are possible. It can also be moved from side to side in the semi-flexed position.

Posterior. The head of the tibia can be displaced backwards when the knee is flexed.

FRACTURE OF THE SPINE OF THE TIBIA. X-RAY WILL SHOW THE FRACTURE.

Chronic Arthritis.—No history of acute injury or locking is present and X-ray will show the bony changes.

Treatment.—In cases where there is a small tear of the cartilage it is impossible to differentiate from injury of the lateral ligament and the case should be treated as the latter. If the symptoms persist for an unusually long period and manipulation with re-education of the muscles fail, then and then only is exploratory arthrotomy justified. The commonest form of injury of the cartilage is the bucket handle type of fracture, the handle of the bucket generally passes outwards towards the tibial spine. If the fractured fragment can be brought in apposition with the main fragment, union may take place. The repair, if it at all takes place, is exceedingly slow and complete union is a question of months.

TREATMENT BY MANIPULATION.

Recent cases.—The aim is to bring the fractured fragments in apposition, and the earlier this is done, the greater is the chance of cure. Replacement is easy in some cases and in others very difficult. In severe cases a general anaesthetic is necessary to produce the desirable amount of muscular relexation. A preliminary attempt may be made without anaesthesia.

Technique.—Sir Robert Jones (1918)[6] advises manipulation with voluntary forcible extension of the joint by asking the patient to kick ; but very rarely would any patient give a good kick, when asked if the joint is tender.

The patient lies down and the surgeon grasps the foot with one hand and the knee with the other. The knee is now fully flexed and abducted as much as possible and the tibia is then rapidly rotated inwards and outwards. In some cases the displaced fragment returns to its original position with a snap. Failing this a rapid movement of extension produces the desired effect.

With manipulation, in an ordinary case of bucket handle fracture the displaced portion may retrace its steps and union may take place, or it may be pushed further into the interior of the joint. Repair is impossible in the latter case but there may be absence of symptoms for a long time. The test of complete and efficient reduction is that the patient can fully extend the knee without any pain

and the patient's feeling is the only reliable indication of the success of treatment. Early massage of the thigh muscles and movement of the joint are essential, but movements of rotatory nature must be avoided.

Treatment of recurrent cases by manipulation.—After damage to the cartilage, it may form intra-articular adhesions, or the resulting synovitis may cause adhesions. The following signs show the presence of these,

(a) Sensation of giving way or locking of the knee.
(b) A certain degree of limitation of movement.
(c) Tenderness over the semilunar cartilage.
(d) Wasting of the Quadriceps.

The patient is anaesthetised and the joint is moved through its full range, particularly rotation and the "Screw home" movement at the end of extension. A compression bandage is then applied. Massage and movement are carried on as in other cases of knee joint injury.

Operative treatment.—When a definite diagnosis of injury of the cartilage has been made, the best treatment in my opinion is removal of the cartilage, particularly if the patient has to do outdoor work. But the success of the operation depends to a great extent upon the patient's co-operation in the post-operative treatment.

It is needless to describe the operation for removal of the cartilage.

Post-operative treatment.—After closure of the wound, the knee is tightly bandaged with plenty of cotton wool around it, before the tourniquet is removed. A pillow is kept behind the knee. The patient gets pain in the leg and desires the bandage to be loosened. But this should never be done. If the pain is severe, morphia may be given at night. The leg and foot may be slightly swollen on the third day, when several small nicks may be made at the lower edge of the bandage; this will give great relief, and the swelling subsides the next day. The patient generally has a slight rise of temperature for two or three days, but this should cause no anxiety. The joint is gently moved on the fifth day. Massage of the thigh muscles is started from the 3rd day. As has been described before, the patient is shown how he can contract the Quadriceps and Gluteii. He begins to contract these muscles from about the 8th day. The stitches are removed on the 10th day. Earlier removal of the stitches is liable to cause a little gaping at the convex part of the incision during movement. Then the patient himself moves the joint after massage, and it is then bandaged up again. By the 12th day he pushes his foot against the bed rail and starts cycling about the 15th day. By the end of 3rd week he should be able to walk gently.

The patient should not undertake very strenuous walking or running for 3 months.

SUMMARY.

1. A brief description of the important anatomical facts mainly concerned with the injuries.
2. Traumatic effusions in the joint should be treated by aspiration. Haemarthosis is common.
3. Diagnosis and treatment of injuries of the internal lateral ligament and the infrapatellar pad of fat.
4. Early massage and movement is essential for complete functional recovery after any injury of the joint.
5. The only means of ensuring good functional result after removal of cartilage is proper and efficient post-operative treatment.
6. All injuries of the knee joint are liable to cause recurrent troubles, unless properly treated.

REFERENCES.

1. FISHER—Internal Derangements of the knee joint 1924, page 12.
2. GODSIR—Anatomical memoirs—Vol. II. 1868.
3. EDWARDS—British Journal of Surgery 1920, Vol: VIII, page 266.
4. JONES—Notes on military orthopaedics 1918, page 107.
5. MORRISON—Lancet 1909, Vol: I, page 604,
6. JONES—Notes on military orthopaedics 1918, page 100.

THE FIGHT AGAINST HIGH BLOOD PRESSURE.*

BY

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When Rivi-Rocci, the Italian physiologist, perfected the sphygmomanometer for clinical application he little dreamed what misery he was to create in the minds of millions of people yet to be born. For the dread of high blood pressure haunts the minds of many thousands of people who visit physicians throughout the world. Once a person is informed during the course of a physical examination that his blood pressure is above normal that person will seldom know a peaceful moment for the rest of his days. And the chances are a million to one that when he dies it will be from the effects of some disease entirely unrelated to hypertension. But that will not console him.

Even some physicians have an unnatural fear of high blood pressure, and they are the ones who will scare the wits out of their patients for no earthly reason at all. In many cases high blood

* Specially contributed to the "Antiseptic."

pressure is a compensatory mechanism. Many people have high blood pressure because it is best that they have high blood pressure, and if at the hands of some over enthusiastic but ill-informed medical attendent the pressure is suddenly reduced to normal much havoc will be wrought. In fact, when the blood pressure which has previously been high in a patient begins to fall rapidly without any energetic treatment one begins to look for a fatal outcome in a short time.

But no matter what one will say to a hypertensive patient he will demand that something be done to get rid of his high blood pressure. And the fight to reduce high blood pressure has been an interesting one. One has searched for hypotensive drugs in the most out of the way places: the most unusual substances have been found endowed with blood pressure reducing virtues.

In France for twenty years a certain drug has been very popular. It was introduced and sponsored by LePrince a famous French clinician. You will smile when you are told that the ordinary mistletoe, possesses an active principle which is much lauded by French physicians for its ability to reduce hypertension, gradually and safely. LePrince investigating fresh mistletoe (Viscum Album) succeeded in isolating a volatile liquid alkaloid yielding certain well-defined crystals, as well as viscalbin which is a body of the nature of a glucoside, and visciflavin, which is a drastic resin and an oxydisable product, These evidently are the constituents to which mistletoe owes its curative properties.

When mistletoe is introduced into the body the blood pressure begins to fall, the heart contractions are greatly strengthened, and the output of urine is increased. The fall in pressure is gradual and is maintained in many patients during the administration of the mistletoe extract.

Seventy years ago, the great French physiologist Claude Bernard became interested in the sulphocynates. He described experiments showing their toxic effects: he found the drug to be a direct muscle poison when given intravenously in large doses. It abolished muscular activity without producing sensory changes.

Six years later two French clinicians showed that the sulphocyanates had a toxic action when taken by mouth as well as when given intravenously. In 1903 Pauli found that the sulphocyanates in daily doses of one gram had a sedative effect on neurasthenic, cardiac and tabetic patients. It was during this work on the sedative action of the drug that he discovered the sulphocyanates also had a remarkable action in reducing high blood pressure. Unwittingly Pauli gave to the world one of the most popular hypotensive drugs in use today. Subsequent investigators proved it to be of real value

in many cases of high blood pressure, and to-day one finds in the market many elixirs, syrups, solutions and other preparations of either the sodium or potassium salt of sulphocyanate. In 5 grain doses it is a drug which has proven one of the major weapons against the dreaded high blood pressure.

Another remedy of organic origin which was heralded for a while as a valuable means for lowering the blood pressure was acetylcholine. Hunt and Taveau were the first in 1906 to test this drug physiologically and demonstrate its property in lowering the arterial tension. When administered by mouth this drug was found the have little or no action; intravenously injected it proved dangerous, and the one route found suitable was by intramuscular injections. Acetylcholine has been found particularly valuable in dilating the arteries, and for this reason has been used in Raynaud's Disease and in gangrene arising from inflammation of the arteries. Acetylcholine, however, has not taken its place with the popular hypotensive drugs of the world.

With the search for weapons against high blood pressure going on everywhere in the world investigators turn to unusual objects in the hope of finding something worthwhile. Someone even thought of water melon seeds and Barksdale an American physician began to make extracts of these most commonplace seeds. In the course of his investigation he succeeded in isolating a physiologically active glucoside-saponin which he named "cucurbocitrin." He put this active principle in capsule and began feeding it to dogs and man with normal blood pressures. It lowered the pressures, and in cases of abnormally high blood pressures the effects were even more pronounced.

Barksdale continued his researches and found that direct microscopic measurements on the capillaries of the frog showed that their diameter was more than doubled after the administration of the drug. In man he conducted similar studies with the aid of the Danzer Hooker microcapilliary tonometer and found that there was a lowering of the capillary pressure from an average of 16 mm before to an average of 9 mm. after the administration of this substance. This showed that the drug acted in lowering the blood pressure by dilating the capillaries.

Work in the clinics showed further that cucurbocitrin is active when given by mouth and that its use was perfectly safe. Twenty milligrams of it produces a definite lowering of the blood pressure in normal individuals, and even as much as 300 mg. have been given as a single dose without any ill-effects. Water-melon seed extract has been found not to depress the heart in any way, and it is therefore of value in treating high blood pressure associated with diseased hearts. Clinicians all over the country have reported satisfactory results from the use of this preparation in quite a variety of high

blood pressure, and from present indications it would seem that the humble water-melon seed has furnished together with the humble mistletoe two valuable weapons in the fight against high blood pressure.

One of the most valuable of all the inorganic salts is bismuth. Its healing virtues are many; its therapeutic reputation is great. The more one contemplates it the more one's admiration for it grows. Its value to mankind is greater than any and all of its nobler brothers, even silver, gold and radium.

Bismuth's debut began as an antiseptic in 1700. With the development of X-ray diagnosis it served first as the opaque medium in gastro-intestinal cases before it was replaced by barium. Still later it won a world-wide reputation as a remedy of great worth in the war against syphilis. To-day many Syphilologists throughout the world use bismuth in syphilis in all its stages in preference to any other drug.

More recently much attention has been paid to the blood-pressure lowering properties of bismuth. Famous European physicians, such as Chassevand, Luchsinger, Marti, Mary and others have obtained a lowering of the arterial tension by injecting bismuth preparations into the muscles. In this country Steiglitz of Chicago has done much in regard to the hypotensive properties of bismuth and its salts.

Steiglitz found that a very simple and common salt of bismuth, bismuth subnitrate, given in ten grain doses, three times a day was very effective in causing a reduction of pressure. The capsules are given by mouth and of all the nitrate medication in this disease is the least expensive and longest sustaining.

When the bismuth subnitrate capsule is followed into the bowel it is found to have decomposed and liberated nitrate ions. The action of the Bacillus Coli, normal inhabitants of the intestines reduces the nitrate ions to nitrous acid. Thus minute quantities of nitrite ions are continuously absorbed, as the low solubility of the original salt maintains a persistent repository. This process, Steiglitz found, is the same as the oral administration of glyceril trinitrate at ten or fifteen minute intervals during the day and night, a process which is at once expensive and impossible.

The use of the simple bismuth subnitrate in high blood pressure has yielded very good results in many hundreds of unselected cases. From the author's personal observation in cases in the various hospitals with which he is connected he has obtained some very good results. In bismuth sub-nitrate one finds one of the major weapons, and perhaps the least expensive in the fight against high blood pressure.

The search for drugs against high blood pressure led at length to new domains, to the living body. The various glands and organs were investigated, extracts were made and tried, and one seemed to fill the role with perfection. It was furnished by the liver, the great living chemical laboratory, that most wonderful piece of mechanism in the regulation of bodily functions

The liver has among other duties the conversion of toxic ammonia products, aminoacids, and carbomides into less toxic substances suitable for elimination by the kidneys. These protein waste products are the last intermediaries in the metabolic processes by which the protein wastes of the organism are changed into urea These substances which in themselves are highly poisonous are converted into non-poisonous substances by the liver.

In certain persons this process of the liver to eliminate the poisonous protein poisons become impaired. High blood pressure is one of the pathological conditions which becomes manifest in such a person. When a person who is being poisoned by nitrogenous wastes and whose blood pressure is up there will be found to be an increase in the ammonia and other protein waste products in the blood and a similar decrease of these products in the urine.

Certain students of liver function believe that the liver is a gland of internal secretion as well as external secretion, and that in the internal secretion there is a catalyst which acting upon the liver, increases its ability to transform these dangerous substances into harmless ones. Therefore the administration of extracts containing this catalyst principle would increase the detoxicating processes of the liver and lower the blood pressure because of the elimination of the protein poisons.

Endocrinologists, workers with the ductless glands, continued to make various extracts of liver which they tried out in high blood pressure cases. At length they succeeded in getting a liver extract which had a depressor effect on the blood pressure by increasing the protein wastes which succeeded in maintaining a high blood pressure.

Chemically this liver product has not as yet been established. It is not crystalline, nor is its a pure nucleoprotein. The residue has been found to contain a trace of histamine, a substance which has been found by pharmacologists to have a blood pressure lowering effect, but histamine is a poison and is therefore not suitable as a remedy. It is to something else besides the histamine that the hypotensive properties of liver are due to.

These are but some of the weapons against high blood pressure which man has discovered in his various wanderings. Some have

been found in strange, out of the way places. Other have been remedies with the ancient and honorable past: still others have been versatile in their healing powers in several directions. Of these quite a few have proven of value. As there are many causes of increased blood pressure there are many ways of attacking it. First of course, the causes or cause, if possible, must be removed. Then if the blood pressure does not go down it may be treated symptomatically.

During the past twenty years since man became conscious that he has a blood pressure a new fear was born to haunt him. This, of course, has been without reason in a great many instances, but it is not so easy to reassure a person with high blood pressure that a vessel is not going to burst suddenly in his head. It is more than high blood pressure that will cause that; it is a diseased condition of the artery wall which causes it to become abnormally weak.

But when a fear becomes paramount people begin to do things, and the search that has been going on for means and methods of lowering the blood pressure has been an interesting one. It has placed in man's hands some additional and effective weapons in his eternal warfare against disease.

PROBLEMS OF ASTHMA.*

By

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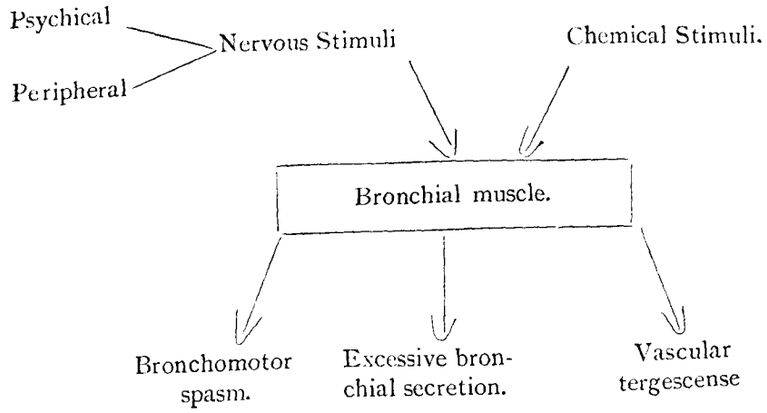
Problems of asthma are so intricate that still more work is required to clear the ground. In this paper I have attempted to define issues in the light of recent work and put before the profession salient points in the problem.

In Asthma there is obstruction in the lungs, interfering with free exchange of air, depending primarily upon Bronchomotor Spasm,—Vasomotor tergescence and excessive bronchial secretion being contributory agents. In the aetiology of this ailment allergy and respiratory infection assume primary importance while psychical, perepheral and chemical stimuli take a second place, because if the first two be absent, last three become powerless to produce asthma.

* Specially contributed to the "Antiseptic."

Various formulae have been suggested to express the above, but the following which I have devised seems to be the simplest as well as helpful from treatment point of view.



The above formula divides the aetiology of asthma into two types:

1. *Nervous type*, where the bronchomotor portion of Vagus nucleus is rendered unstable by Psychical or Peripheral stimuli.

2. *Chemical type*, where the symptoms are due to the fundamental chemical alteration of the blood. We owe this classification to Marjorie Gillespie (1931) who using the method introduced by Mc. Dowall and Thornton (1930) for recording movements of the isolated bronchi has shown that contraction of the bronchial muscle follows the injection of pilocarpine and that a small dose of atropine immediately after, produces no result whatsoever, because atropine has paralysed the nerve endings. A small dose of histamine however still causes the muscle to contract because it is supposed to act directly on the muscle.

Before we analyse these two types let us consider the role of allergy and respiratory infection in the problem of asthma.

Allergy i.e. natural hypersensitiveness of the bronchial centre, has been specially stressed by Freeman, Coke and American workers. Analogy between asthmatic paroxysm and the symptoms of anaphylactic shock first suggested that asthma was an anaphylactic phenomenon. Lungs of the guinea pig killed in anaphylactic shock showed extreme constriction of the bronchioles. Allergy history in the family was another strong evidence. This strong hereditary tendency may be direct i.e. of actual asthma in family though non-specific i.e. exciting factor for father's asthmatic attack may be pollen, for mother dust and the son some chemical like Ipecac, or it may be indirect i.e. of allergic condition in the family like eczema, urticaria,

paroxysmal rhinorrhoea and sneezing, hay fever, food poisoning etc. It has been noted that greater the hereditary tendency, earlier in life the disease appears, thus it is that when history is positive in both the parents the child suffers from asthma within five years, later if history be positive in one parent and 2 or 3 other relatives, still later if only in one relative. It has been observed that before 20 years of age, 50% of patients give a positive family history.

Respiratory infection :—This is the common cause of asthma in Great-Britain 70% of all asthmatics in Great-Britain give history of Bronchitis (colds etc.) preceeding asthma. Prof. Murray Lloyn of Edinburgh University puts down relationship of the two conditions as follows :—

Asthma ⟷ Bronchitis.

Chronic bronchitis produces irritation setting up a constant flow of impulses in a certain direction. This canalization of impulses sufficient to produce an attack depends upon the extent of the child's allergy. Thus in one child first attack of a disease like scarlet fever, measles, or whooping cough may bring on asthma, in another no asthma develops until two to three or even four attacks have occurred; or again he may not develop asthma till later in life when it develops with Bronchitis.

Let us now analyse the nervous type of asthma where psychic and peripheral stimulation plays an important part.

There is no doubt that there are genuine psychic cases of asthma. The instance of artificial flower exciting a paroxysm of asthma, instantaneous relief following hypodermic injection of distilled water when the patient is anticipating one of adrenalin, are too well known to every practitioner. Here the stimulus arises from a psychic conflict. Such a conflict may express itself at the psychic level of the nervous system as an obsession or a phobia, at the sensory motor level as a paralysistic or an anaesthesia, and deeper still at the visceral level as glycosuria, goitre or asthma. In which way the psychic trauma will reveal itself depends upon other influences, thus it is that one sufferer from psychic conflict at a moment of mental stress may escape through a hysterical attack, another who is sensitive to foreign proteins develops asthma.

Perepheral irritation :—Any nerve in the body can by irritation bring on an attack, but the commonest are :—(i) Nasal (ii) Digestive (iii) Uterine.

In (i) there is already good deal of connection between nasal and bronchial mucous membrane, as the former forms the part of the defensive mechanism and is greatly exaggerated in an asthmatic

HEALTH,

SPECIAL NUMBER, JANUARY 1932.

A Special Number of 'HEALTH' has been brought out as a souvenir, on the occasion of the journal reaching its decennium on the 1st of January 1932. It bristles with many interesting articles on Health, Maternal, Infant and Child Welfare and Diseases from the pens of experts and is well illustrated. The frontispiece exhibits a dance pose in costume by Mr. E. Krishna Iyer, B.A., B.L., Advocate, Madras, representing the dance of Lord Nataraja over the joy of creation of the Universe, where land is symbolized by the mud pot and water by the plate containing it. The articles on Health, by the Chief of Aundh, the chief exponent of the Suryanamaskar exercises ; by Sri yogendra, on yoga as a means of rejuvenation ; by Dr. Podolsky on singing as the best way open for the attainment of perfect health and by Mr. E. Krishna Iyer on Dancing, as an art and an aid to Health, are really illuminating and well worth perusal. Dr. Raghunatha Rao's article reveals the hidden treasures of Health in our ancient Hindu scriptures while that of Professor Madhava, will interest Life Insurance Companies and their growing clientele in India. The article on 'The Snpremacy of Motherhood' by Dr. (Mrs.) Anna Thomas and that on 'Infant feeding' by Drs. Jaharlal Das and Saxona, have put the case for the protection and preservation of mothers and infants in this unhappy land of high maternal and infantile mortality, in as clear and forcible a language as possible. The article on Myopia by Dr. Raghbir Saran Agrawal and that on Tonsils by Dr. Sanjivi Rao, must open the eyes of the School-going population and their parents and teachers, as to the imminent need for rectifying these defects, which are wide-spread. On the side of diseases, Mental Disease which is the prime cause of all bodily diseases has been ably dealt with by Dr. Frank Noronha. Among the bodily diseases, the first rank is now held by Consumption, and Dr. Kesava Pai, an expert on Tuberculosis, has written an exceedingly lucid article on the subject. The last article is on Goat's Milk, Gandhiji's Principal diet, by Dr. T.S. Tirumurthi. The importance of Goat's milk to young and old, the healthy and diseased has been clearly brought home to the readers, by this article. There is no doubt this Special number will serve as a valuable book of reference and every household must possess it. The journal, though nearly treble the size of the ordinary one, is valued at only double its price. Copies can be had also in Tamil, Telugu and Kanarese for the same price viz. annas four, (to non-subscribers) from the publishers, 323, Thambu Chetty Street, Madras. Annual subscription to Health is only Rs. 1-8 post paid for any edition and may begin from any period.

This hypersensitiveness produces a focus of irritation which by overflow phenomenon of Meckenzie makes the Vagal centre unstable,

In (ii) there is still greater connection. Overeating and getting short of breath specially in old age is well known. The vagal supply of the intestines supplies another link of connection in the common nerve supply of 2 organs *viz*: Bronchioles and the intestines. If paracenthesis irritating pleura brings about an attack of asthma, why may not a heavy meal or an indigestible article of diet do so? Baccarini goes further and compares asthmatic attack to a localised epilepsy, because in an epileptic a fit can be produced similarly. Apart from the above there is yet another consideration to be borne in mind. Vagus is anabolic while sympathetic is katabolic. That is why Drury has called toxic idiopathies as conservative and self repairing mechanisms. During sleep the tone of vagus is increased, and maximum collection of waste products in the intestines ocurring at about 3 A. M. when the vagus gains the upper hand determines frequent time of asthmatic attack at that time.

In (iii) the association of the gonads with the sympathetic endocrine group may account for the influence of uterine disease in exciting asthma. Asthma is liable to appear at puberty and be aggravated by menstruation and pregnancy periods of life when the gonadal defeciency declares itself, being unequal to stand the increased demand of the system. In other words when the endocrine balance sways in the direction of the vagus asthma is likely to occur in the susceptible subjects, when the balance is redressed in favour of the sympathetic attacks may be cut short.

2. *Chemical type.*—This is a definite type, where the chemistry of body fluids becomes altered in some way. All the food proteins disintegrate into amino-acids, from which each animal builds up its own specific tissues. To some foreign proteins we are naturally immune (i.e., we assimilate them automatically), to others we acquire immunity (i.e., we learn to assimilate them), but to others immunity is neither congenital nor acquired. Body continues to resent the intrusion of such and will not assimilate them. Such proteins excite anaphylaxis in varying degrees. That is why Richet has defined anaphylaxis as the last stand of the race against adulteration of its protoplasm. In less degrees it manifests itself in violent attempts to get rid of the foreign invader. The mechanism which comes in play is anabolic i.e. rejecting food by vomiting, guarding lungs by cough and expectoration. This condition is still more manifest when we remember that drugs which are emetics in large doses are expectorants in small doses. Similiarly may not substances resulting from foreign proteins in smaller doses cause constriction of bronchioles without stimulating intestinal muscle, or an asthmatic show to such substances a

sensitiveness to which others are strangers? Freeman injected himself with 20 times the quantity of grass pollen extract which would have killed a sensitive person, without any ill effect to himself. Thus the substances to which asthmatics show hypersensitiveness are not really toxic and the asthmatic has difficulty in dealing with a number of foreign proteins which donot affect a non-asthmatic.

Treatment.—The above considerations group asthma in two types viz: nervous and toxic or chemical. Fortunately the differentiation by atropine test of Marjorie Gillespie has been rendered easy and every practitioner is advised to have recourse to this. The possibility of combinations however and necessity of all round assault therefore, from every aspect, in every case of asthma should always be borne in mind. Because the asthmatics are unduly suggestive and come from neuropathic families, advantage should be taken of this and the suggestibility of the patient should be utilized to help him to expect a cure. The effect of environment should be looked into, and brought to the patient's notice, if it has bearing on the case. Sources of peripheral irritation should be explored; late suppers eliminated and constipation avoided in digestive cases, œdematous mucous membrane operated on in nasal cases and rest during premenstrual period ensured in cases of uterine origin. Removal of Polypi is condemned by many physicians and surgeons including Langdon Brown, but every case should be considered on its own merits. Endocrine treatment should be considered in cases of uterine origin.

If the atropine test be negative and chemical factor be incriminated, skin reactions should be tried. Where the offending problem cannot be eliminated desensitization which includes bacterial and pollen vaccines may be considered.

Restoration of endocrine balance is important. Ephedrin and ephetonin by stimulating adrenalin, iodides by activating the thyroid, belladona by paralysing parasympathetic nerve endings and arsenic by virtue of its having stood the test of time have all their place.

When emphysema occurs vicious circle is set up. In these cases breathing exercises and compressed air baths are worth a trial.

An all round attack on problems of asthma seems to offer the best chance of relief.

THE PRESCHOOL CHILD.*

BY

DR. MRS. ANNA THOMAS, *Karachi.*

1. INTRODUCTION.

The child welfare movement owes its origin to the Great War of 1914. There might have been some isolated movements before the War, but an organized and systematic child-welfare movement backed up by the state can trace its origin only after the War of 1914. During the War, when the man power of Western countries was called for action, it was found to the great surprise of all that 90% of the would-be soldiers were quite unfit for military purposes as they were suffering from many congenital diseases. Eminent doctors declared that majority of these diseases were preventable by a little care at the time of the attack and the general debility was due to improper attention during their childhood. This turned their attention to the welfare of the children, who are the future hope of the country. The proper rearing of the children is therefore a subject of vital importance to the nation. "Nations are gathered out of Nurseries." The characteristics of the individuals which go to form the nation depend, to a great extent, on the environmental factors in infancy and childhood. It has truly been said that the child is the father of man. We are very prone to ascribe the traits and characters of the individual to hereditary influences. But recent observations have shown the immense importance of the *educational* factors in childhood in moulding the physical and mental make up of a person. Education here is used in its classical sense only which implies a drawing out or educing. A proper education develops all that is good and useful in the individual while it strives to keep in check those propensities which are considered harmful or objectionable from the social standpoint. An education which neglects the body cannot be considered a true education. In Western countries, the 20th century has been marked by an unprecedented interest in the welfare of the children comparable indeed to the great periods of inspiration in art, in religion and in letters which have occurred at different times in past centuries. The child is not only the epitome of the past, but is the treasure house of the future. What shall be the conditions of the citizens of to-morrow depends upon the care of children of to-day. The influences that play round the child influence the course of a man's life. It is admitted by all thinking people that the children of a nation are its greatest assets and all the care spent upon their welfare is richly repaid. "The races march forward on the feet of little children." In the intense competition

of modern life, the protection of young lives is becoming one of the first objects of public concern which no nation can afford to neglect: thus, it is in the spheres of legislation, administration and private philanthropy alike the child takes a place which it never held before.

The intelligent and diligent efforts of those who have worked in the cause of child-welfare movement in the West have proved to the world the immense saving of health and wealth to the nation that could be effected by systematic, scientific care bestowed on the children of a nation. If India to-day lags behind other nations in the great field of industrial enterprise and internal development, it is due to the extraordinarily great infant mortality of 2½ million babies who die every year before they become 1 year old and the neglected way the surviving children grow feeble and weak without much care or attention bestowed on them to cure them of their congenital preventable diseases. It must be remembered that every child's life is an asset to the Nation—a physical and economic asset—so long as the child grew up to be a healthy and efficient citizen.

Thanks to the All-India Chelmsford Maternity and Child-Welfare League for waking up Indians to a sense of their responsibility to their children whom they generally leave into the hands of Fate to look after. In the beginning greater attention was bestowed on the prenatal care and Infant care as well as the health of the school children. Experience gained in the past has brought home the necessity of bestowing greater care on the preschool child.

2. THE PRESCHOOL CHILD.

(Age 1½ to 6 years)

A child during the period of 1½ to 3 years is known a 'Toddler' in the West. The duration between 1½ and 6 is a very important period in the life of a child. Mr. A. White says "that is the golden period of educational possibilities." Experts in child psychology declare that the period of preschool age is the golden period for putting into effect the teachings of mental hygiene and it is the period *par excellence* for prophylaxis and therefore the period above all others, which must be studied if psychiatry is ever to develop an effective programme of prevention. The particular trait of character with which the individual has been struggling all his life—suspicion, cruelty, jealousy, timidity, curiosity, overconciousness, etc.—the trait about which his difficulties arrange themselves, will be found on analysis to have been unfortunately conditioned mostly in the Preschool age as a result of the influences extorted by the various members of the family or their surrogates. The postural attitudes, facial expressions, voices, mannerisms, remarks, opinions, interest, aversions of those in the midst of whom the child moves, etc., subtly half-consciously often quite consciously influence the child all through his life. The child

in the family is one part of an organism which is highly responsive to all that goes on in that organism. The influences which thus reach the child find it particularly plastic, much more so than later in life when the main character traits have become firmly established, and structuaralised. There are some thinkers who advance the germplasm theory of heredity and explain that practically all of our characteristics mental as well as physical, are handed down to us by our ancestors and are something therefore which we can do very little about. Mr. William A. White, M.D., Superintendent of Elizabeth's Hospital, Washington, observes in a thesis on 'Childhood,' as follows:—

> "The theory of the non-heritance of acquired characters and the further theory that for every last trait there is a germplasm determinor has introduced a fatalistic element into our thinking which has made for a therapeutic nihilism by turning attention away from a consideration of the possibilities of effectively modifying the fundamental elements of the character make up."

In this connection Ritter very aptly says that germplasm dogma is "chargeable with grave offence of having added its weight to a conception of human life, the overcoming of which has been consciously or unconsciously man's aim throughout the whole vast drama of his hard and slow progress from lower to higher levels of civilization, the conception that his life is the result of forces against which his aspirations and efforts are important." Even allowing that certain fundamental traits are inherited, it cannot be argued that nothing can be accomplished in an effort to utilize those traits to better advantage. A congenital deaf mute does not give up all efforts to communicate with fellow beings just because he is unable to do it in the usual way. A person may be intensely curious from childhood. This does not mean that he must always use his curiosity in a socially offensive way. Perhaps with proper guidance he may learn to use this particular trait to better advantage and may even become a scientist in searching for the secrets of nature rather than prying into the secrets of his neighbours. Apart from these considerations, there is much evidence that the theory of continuity of the germplasm and the non-heritance of acquired characters, in fact the whole subject of heredity, will have to be materially modified, particularly as it relates to those mental-traits that we are accustomed to observe in our fellows. Certain biologists have observed that germplasm is part of the organism as a whole rather than as a substance which is handed down by parents to offsprings in unmodified form and that there is much evidence that mental traits particularly those which later on make for defects of adjustment, precisely because these have attracted most attention and are developed in response to certain facts in the environment. If the defects in a character make-up can be explained as originating in traits which were acquired

in early childhood as reactions to certain factors in the the child's environment, then the way is opened for an attempt to prevent such undesirable traits by an understanding of the child and a modification or elimination of those environmental factors which produce such results. Mr. Watson writes that in all the babies he has worked with he has never seen a reaction of fear to sudden flashes of light. If the fatalistic way of thinking engendered by the theories of heredity can be put aside, then we find another reason for considering that the period of childhood offers the golden opportunity for mental hygiene and for realising that this is the period upon which effort must finally be centered in the development of a programme of prevention. Dr. Cyril Burt in his brilliant classic work on "The Young Delinquent" published by the University Press, asserts after an investigation of hereditary conditions in the various cases that have come under his observation, that "there is none born a criminal." He says that "it is the post-natal influence that is altogether responsible for Crime and Poverty; bad environment, defective bringing up and overcrowding are some of the bad home conditions that predispose to delinquency."

The problem of the Preschool child came into the forefront as the latest development in the Maternity and Child-Welfare work and it is the connecting link between the Baby-Welfare and the School-Child and his medical inspection. In the recent Maternity and Child-Welfare Conference held in Delhi, Dr. Young rightly deplored that the whole attention to-day was being focussed on infants and the Preschool Child was neglected and her thoughtful appeal to give more attention to the Preschool Children so that they may enter schools with a full record of medical history from birth onwards which will be of immense help to the School Medical Officer, is a timely advice and warning to all those who are interested in the Maternity and Child-welfare work. The experiments and research work conducted within the last 3½ years in the Preschool Psychological Laboratory of the Iowa Child-Welfare Research Station, where 165 normal and superior children between the ages of 2 and 6 have been observed daily, have proved that the preschool child offers good subjects for anthropometric psychological and social study and while they contributed to the useful knowledge of psychologists and educators they benefited from the educational and play-programme presented for their response. Dr. Baldwin, the Director of the Iowa Child-welfare centre, defines " the normal child as a child whose age, bodily development, mental capacities, school progress and social and normal adjustments are developed, each to its separate maximum each nicely balancing each other." Dr. Baldwin says 'Recognizing the presence in every community of increasing numbers of defectives delinquents, degenerates, derelicts and social misfits, the energies of

the station are turned to the constructive problem of materially reducing this social and economic waste by preventive means. The purpose of the station is to develop practical methods of child rearing modified to suit the various needs of child's life and to give to parenthood dependable counsel to insure the continuous improvement of every child to maximum ability consistent with its native endowment and special abilities."

3. The Standard of A Preschool Child.

As a rule a vast majority of Indian parents are ignorant about the proper standard of a preschool child. A child may grow but not develop, may develop but not grow. Sometimes the physical growth hid his lack of development which devotes functional power and brain activities. Sometimes, keen and rapid development overshadowed the necessary physical growth. Some parents say with pride "That child is all brain and is not at all strong." "He is a healthy little chap, but rather slow and dull." Little do such parents realise that the most important golden age of 1½ to 7 has been thus slurred over with stupid platitudes and opportunities lost for ever to their preschool child. Every parent ought to know the general standard of the preschool child especially at the cross-sections of the different years of 2, 4, 5 and 6 of his life.

The following is the chart prepared by eminent medical men about the standard of a normal preschool child.

At 2 years.

Weight—Boys 28·4 pounds girls 27·8 pounds
Height— ,, 33·1 inches ,, 32·7 inches
Brain—growing rapidly weighs 33 ounces
Teeth—should have 16 cut;
Muscles—growing rapidly
Bones— ,, ,,
Heart—weighs 1·87 ounces
Speech—vocabulary of 100 to 500 words; two-word sentences.

At 3 years.—

Weight—Boys 33.5 pounds girls 31·5 pounds
Height— ,, 36 inches ,, 35·6 inches
Brain—growing rapidly weighs 36½ ounces
Teeth—Completion of the 1st set of teeth—20
Muscles—growing rapidly; likes to skip and jump
Bones—growing rapidly strengthening spine; back flatter
Heart—weighs 2.25 ounces
Speech—500 to 1,500 words

At 4 years.—

Weight—Boys 36·4 pounds girls 35·1 pounds
Height— „ 38·6 inches „ 38·4 inches
Brain—growing, weighing 39 ounces
Muscles—growing rapidly with increasing co-ordination
Teeth—Full set of milk teeth—20 teeth
Bones—growing rapidly, especially upper arms and thighs
Heart—slight increase
Speech—able to make new simple sentences

At 5 years.—

Weight—Boys 41·4 pounds girls 40·2 pounds
Height— „ 41·7 inches „ 41·3 inches
Brain—weighs 40 ounces
Teeth—full set of milk teeth—20 teeth
Muscles—same as third year
Bones— do.
Heart—quadrupled its birth weight ; 2·4 ounces
Speech—the articulation is now nearly perfect and an interest in rhyming is developed.

At 6 years.

Weight—Boys 45·1 pounds girls 43·6 pounds
Height— „ 44·0 inches „ 43·4 inches
Brain—contains 8/9 and adult weight approximately 40 ounces
Teeth—the child should have now 24 teeth, 4 of which are permanent-six year molars important to preserve.
Muscles—rapidly growing, increasing correlation
Bones—growing rapidly : still plastic : deformities to be avoided, especially of feet and spine
Heart—in relation to size of body is smallest at this age : weighs about 2·8 ounces
Speech—articulation is now perfect.

Height and weight being in a sense visible to the average eye, can be summed up from the various studies into the general picture that from 2 to 6 years the body weight is nearly doubled, that is increased by about 20 pounds, while the height of that period of 4 years is increased about 3 inches a year or by about 12 inches. The child's skull reaches by six years, its adult circumference and the brain inside that skull keeps pace in growth, so that at 6 years of age, the brain has almost reached its adult weight.

From this rapid growth of the brain comes our appreciation of the marked instability of the whole nervous system of the child, and how best to protect those growing nerve cells from disease or overwork

or damage of any kind becomes a pretty important matter to those in the case of children of preschool age. When the child is 2 years old, we watch the development of the sense activities. It becomes more and more possible to focus a child's attention at this age. At 3, though his attention flits easily, we notice that some amount of concentration is possible. At 5 years we find much finer sense discriminations and a most accurate notice of sound and colour. And at 6 years we find an eagerness to colour things themselves, to taste, etc. Curiosity is very keen in a child between 2 and 6 years of age. At 2, the child begins to investigate everything in the environment. At 3, "What" is everything and begins to demand names and begins to call things and animals. At 4, "Why" is added to "What." And at 6 years of age, this curiosity adds 'How' to the 'What' and 'Why' and includes himself in the inquiry and parents are confronted with questions on life and death, birth and growth. During all these years, memory is particularly strong and quick. Imitation also begins early. At 2, the child will imitate your voice and smile and at 3 he will begin to imitate your moods. At 4, he wants to do literally all that you do. Though he cannot always do it, yet he will try. At 5, he is most dramatic in his imitations. He marches, he drives the motor ; he is the teacher ; he is mother, father and he is even any animal he likes at a moment's notice ; and he is absolutely literal about it. At 6, his imitation is the same of all adult activities, but he is not so literal about it. The emotions of the little child are growing in number and expansion. Reasoning also begins early. The social instincts of the child during this period are developing as rapidly as brain and heart. At 2 years, the sense of ownership appears. That is 'My doll,' is the feeling now. Between 2 and 4, the child will play with the adults, but after 4, he prefers another child to an adult for his play.

The average gain of weight is 5 pounds a year and the average gain of height is 3 inches for a child. Respiration is more rapid in children than later. At birth 35 per minute, at 1 year 27, at 2 years 25, and at 6, 22. The rate of pulse is more frequent and variable than in later life. From 2 to 6 years, the rate is 90 to 105 per minute.

(To be continued.)

Cases & Comments.

TREATMENT OF ECLAMPSIA.*

[A lecture delivered by Dr. P. *Venkatagiri*, M. D. C. M. of Madras, during the anniversary of the Trichinopoly District Medical Association on 14—11—1931 and forwarded by the Secretary, of the *Association* for publication in the 'Antiseptic'.]

The lecturer spoke of the treatment of Eclampsia in two stages (1) Treatment during pre-eclampsia stage, and (2) During the fits stage.

Pre-Eclampsia :—Prevention of Eclampsia is the best part of Eclamptic treatment. During this stage, the patient is generally during her seventh or eighth month of pregnancy, complains of headache, epigastric pain, sleeplessness, diminished urine.

Treatment :—Smart purgatives such as 3 ozs of Mag. Sulph. mixture (Mag. Sulph. 2 drs. in one ounce of Aqua) or 2 drs Pul. Jalap Co. or 2 ozs of Ol. Ricini should be administered.

Diet :—Glucose in water or Lactose in water for 24 hours; if improvement, milk and barley water; later on grapes and oranges; gruel water for poor people.

For Headach, Aspirin and Caffein, or Chloral and Bromide or Veronal. For Epigastric pain 30 grs. of Soda bi-Carb. in one oz. of water given by mouth induces vomiting and thus effects gastric lavage which naturally relieves the pain; stomach-tube will do the same thing. If blood pressure is high or albumin is present in urine, complete withdrawal of food excepting Glucose water by mouth is indicated. This treatment is to be continued for a week; and if the patient does not improve, interference with pregnancy necessary—best and simplest method being rupturing the membranes after separating it all round, through cervix dilated to two fingers. If no progress after 6 hours, an injection of ½ cc. Pituitrin with Morphia ¼ gr. 1/150th gr. of atropine hypodermically should be given. If no progress within six hours after this treatment, give a second injection of Pituitrin without Morphia, a hot saline douche and a mixture of 10 grs of Quinine by mouth; pull down a leg if breech is presenting. The patient is sure to get strong labour pains within a few hours, and delivery takes place safely within 24 hours. In this connection the lecturer emphasised that Ceasarian section, rapid dilation of cervix and *Accouchement force* are absolutely contra indicated, as they only increase the mortality.

During the fits stage :—Treatment commences by administering light chloroform and thorough examination of the patient is made under chloroform—Rectal temperature. Vaginal examination abdominal palpation etc. When the patient is under chloroform, a low enema is given and ¼ gr. of Morphia with 1/150th gr. of Atropine hypodermically; and 1/3 gr. of Morphia if she had had several fits. If blood pressure is over 160, give ½ cc. of Veratrone, if 200, 1 cc of it; and 1/60 gr. of Strychinine if pulse rate goes down to 60; 20 gr. of chloral and 15 grs of Bromide and 3 ozs of Mag. Sulphas mixture are to be administered. If the patient is unconscious, chloral and bromide by rectum; if this is rejected 3 grs. of Luminol hypodermically. If no improvement, when there is cynosis, Oedema of the lungs (rales and Rhonchi), rattle in throat, venesection is indicated up to a quantity of 10 to 14 ozs of blood. An intravenous injection of 10 cc. of 10% solution of Mag. Sulphas daily, or 10 to 20 cc. of the solution intrathecal after removing 3 ozs of Cerebro-Spinal fluid acts as a good nerve sedative. If the patient stops breathing during fits, resort to artificial respiration aided by cardiac stimulants hypodermically as Camphor and Ether.

If in labour, only rupture of the membrane is necessary, and help the delivery with forceps if the head is low and at the outlet. If not in labour, treat as above, leave her alone till fits cease. Give chloroform whenever fits recur.

THE ROLE OF GOLD SALTS IN THE TREATMENT OF TUBERCULOSIS.

BY

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In an interesting paper before the 7th Congress, Far Eastern Congress of Tropical Medicine, Rai Bahadur Kesava Pai and Dr. Gunasagaram, gave a summary of fifty cases treated with Gold salts, particularly Sanocrysin and Krysolgan; and Dr. C. Frimoldt Moller of Madanapalle gave a resume of 100 cases of Tubercle treated with Sanocrysin.

Of these 150 cases many have been treated by A. P. T. and other remedies besides Gold. To-day I present a case of Pulmonary tubercle which has been treated by other remedies with little or no benefit and which after the treatment with Sanocrysin has shown unmistakable evidence of progress towards a cure.

Name of the patient :—Mr. R.

Age :—Twentyeight.

Occupation .—Hotel-keeker.

Residence:—Tirukattupalli.

Married—Children nil—wife carrying now nearing term—Father died 12 years ago. Mother alive and keeps perfect health.

Complaint :—Fever.

Past History :—Had cough from 4th Feb. to 24th Feb. 31. There was no fever then. After the 24th, cough stopped and fever began. Temperature ranged between 101 in the morning to 104 in the evenings. He was treated for Malaria with medicine and injections and subsequently for Enteric. The fever continued unabated from 24th Feb. to 19th May when he was admitted as an inpatient in the Clinic.

Condition :—Continued fever ranging from 100 in the morning to 103 in the evenings. Weight on admission 119 lbs.

Lungs :—No cough but all signs of consolidation of the right lung and dry pleurisy with friction sounds over the left base.

Blood :—No parasites found. Leucopenia present.

Urine :—Normal. S. G. 1012.

Faeces :—A few round worm ova were present.

Lung areas mapped out correspond with X-ray findings.

The patient has been suffering from fever for the past five months and has passed through the hands of medical men for fever diagnosed firstly as Malarial, then as Typhoid and Para-typhoid and other kinds of fever of unknown origin.

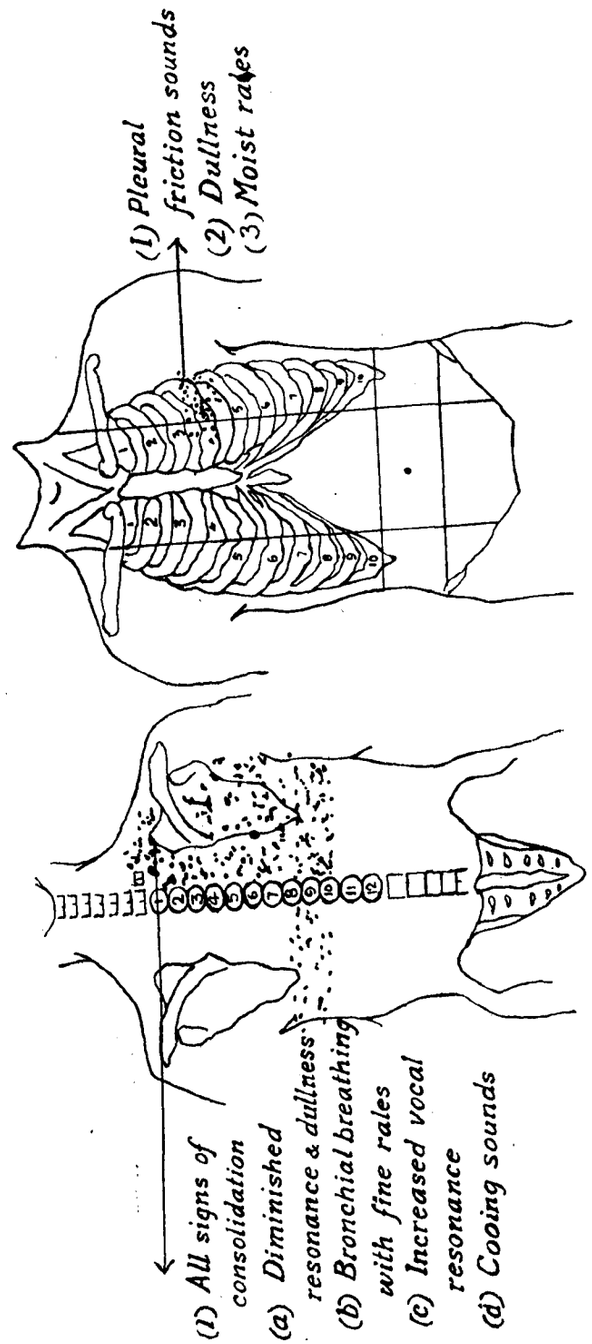
An examination of the lungs reveals physical signs of tuberculosis in both lungs but peculiarly enough there is no cough. There are cases of Tubercle of lungs particularly of the exudative type wherein cough as an early symptom of the disease is rarely present and this is one such.

Prolonged rest in bed coupled with open air treatment for nearly two months had some effect on the temperature though not of a very appreciable kind. Treatment by Sanocrysin has had a better effect though the full course of treatment has not yet been given.

Finally the effect of exercise on the temperature has been very suggestive. It has brought down the rather persistent temperature and has materially added to the course of events towards a cure. With the fall in temperature, the general tone and wellbeing of the patient has improved markedly. His appetite is better, sleep is very good and he has put on weight.

The indications of Gold treatment may be summarised as follows.

1. It is useful in pulmonary tuberculosis particularly of the exudative type of cases.
2. A certain amount of minimum general health is necessary since it should not be given to advanced cases of Toxæmic Cachexia.



ON 20—5—1931.

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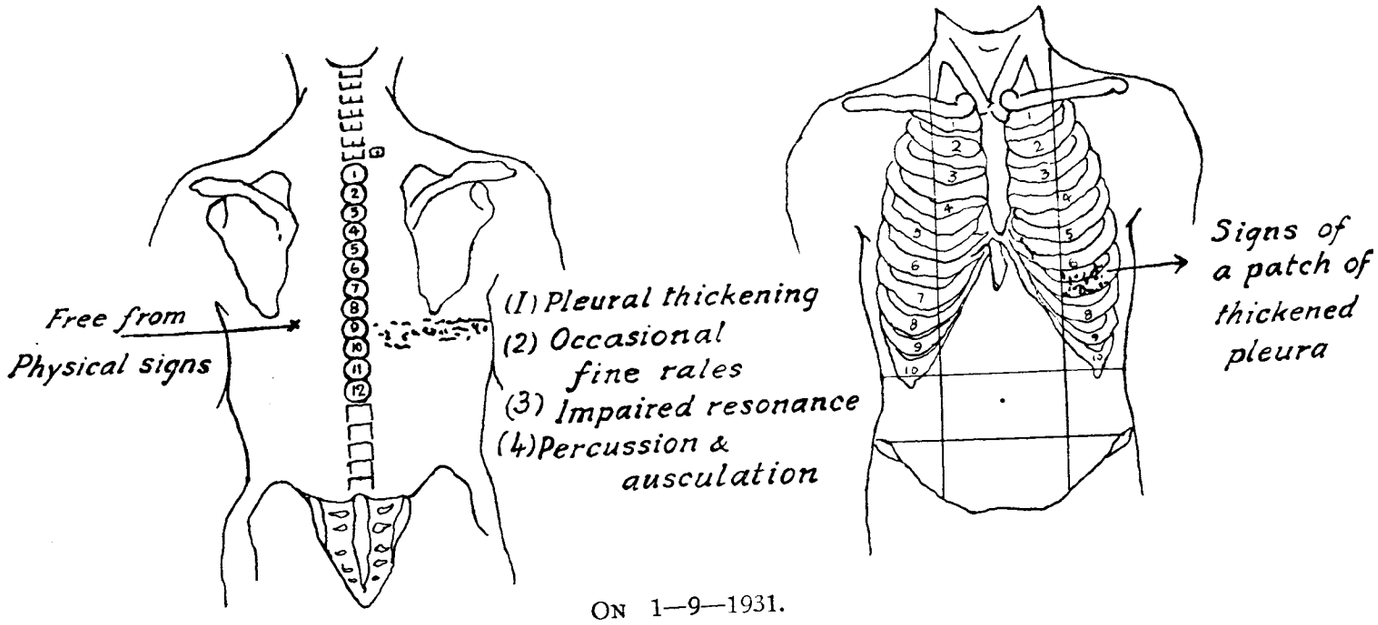

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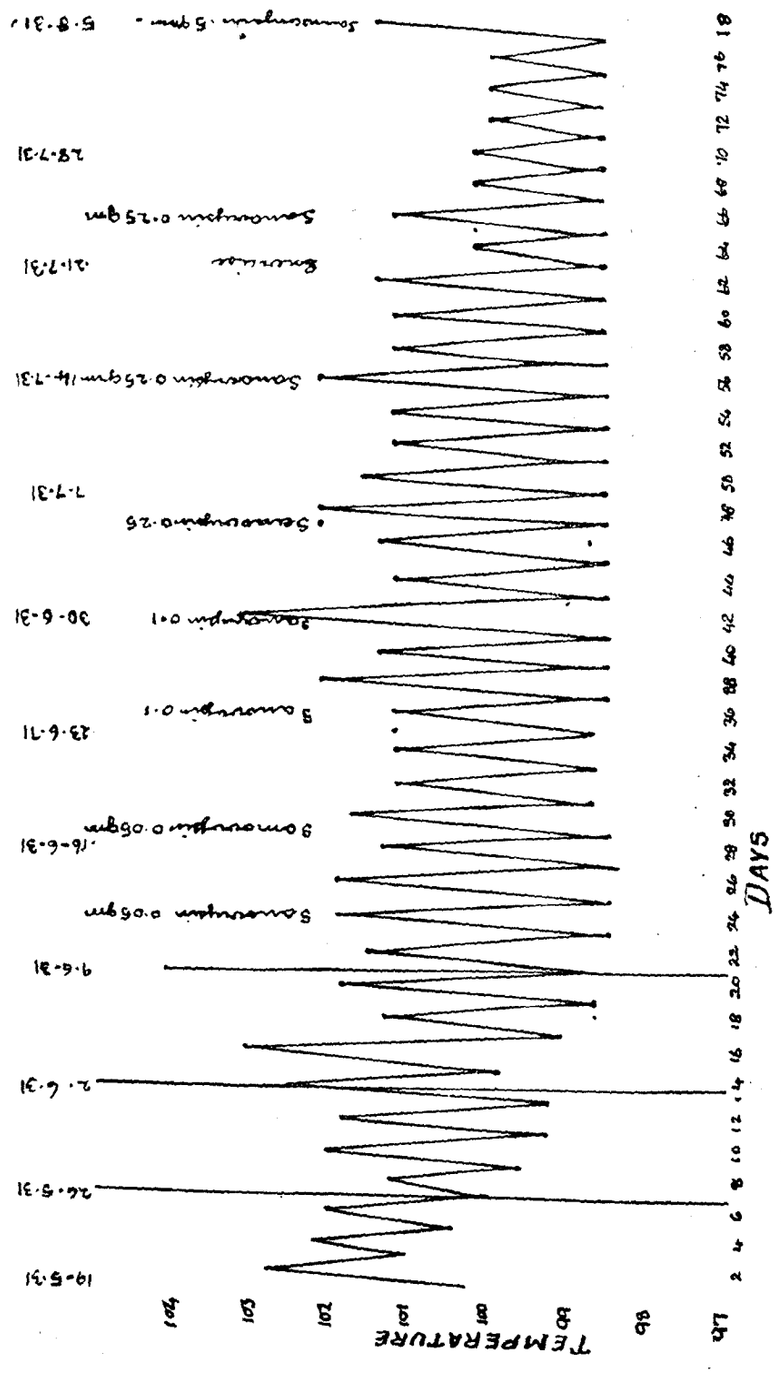

See Page 37.

3. Sanocrysin should never be given to cases suffering from kidney affections or from intestinal or abdominal affections.
4. A regular routine of urine examination is necessary both before and after the injection of Sanocrysin. Particularly after the injection, the urine has to be examined at least four to six hours after the injection and subsel quently after 24 and 48 hours.
5. Recurring injections should not be given till after altraces of albumin has disappeared from previous injection.
6. Sanocrysin is followed by a reaction. A rigor and a rise of temperature upto 102 or 103 either immediately or in about half an hour after the injection. Shock has been reported in some cases. Albuminuria, Hemoptysis, Nausea, Vomiting, abdominal pains, Enteritis and focal reaction have also been noticed

Total quantity given till now in this case.

12th June	...	...	...	.05 grams.
17th „	...	...	...	·05 „
24th „	...	...	...	·1 „
30th „	...	...	...	·1 „
6th July	...	...	...	·25 „
14th „	...	...	...	·25 „
24th „	...	...	...	·25 „
2nd August	...	...	...	·25 „
				1·3 grams.

Total quantity given till now is 8·5 grams by Dr. Pai.

Analysis of temperature record.

	Temperature record.		*Fortnightly average*
1.	19-5-31 to 4-6-31	... ...	103 to 101.
2.	4-6-31 to 19-6-31	... ...	102 to 101. Sanocrysin on 12-6-31.
3.	19-6-31 to 4-7-31	... ...	101 to 101. Loss of 5 lbs in weight.
4.	4-7-31 to 19-7-31	... ...	101 to 101. Increase of 5 lbs.
5.	19-7-31 to 3-8-31	... ...	100 to 100.
6.	3-8-31 to 5-8-31	... ...	100 to 99·4 Increase of 7 lbs.
	On 8-8-31	... ...	Total net increase 7 lbs.

Special features of the case.

1. Remarkable freedom from cough.
2. Very good condition of the alimentary tract. Appetite has been good throughout and bowels regular.

3. The marked effect of Gold treatment.

4. The distinctive effect of exercise.

5. The influence of open air treatment coupled with rest and nourishing diet.

6. The confirmation of X-ray pictures to the general condition and improvement noted by physical signs.

X-ray findings.

1st Plate taken on 8-6-31.

Rt. Lung:—Thickened peribronchial glands. The whole of the lower lobe involved and masked by dense thickened pleura. Deposits along the main bronchial branches in the upper lobes.

Diaphragm not made out in the dense pleural thickening.

Lt. Lung:—Deposits throughout the whole of the lung along the main bronchial branches. No pleural thickening in evidence.

Diaphragm rather flat and irregular, without evident fibrous bands.

Heart narrow and centrally placed, due to pull from right side.

2nd Plate taken on 5-8-31. (Note the following improvement.)

Rt. Lung;—Pleural thickening less dense. Note the contrast with the rib shadow. A bit more of lung tissue can be seen through the pleural thickening.

Note resolution of deposits giving place to fine fibrosis hilum and upper lobe.

Lt. Lung:—Note a similar improving condition around left hilum.

SOME INTERESTING ANATOMICAL EXHIBITS.

BY

DR. R. K. RAU, F.R.C.S. L.R.C.P. (Edin.)

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I have at present in my possession two skeletons one of ivory and the other of wood, which have now been temporarily housed in the museum of the department of Anatomy, Medical College, Vizagapatam. I hereby wish to express my sincere thanks to the Principal, Lt. Col. F.J. Anderson, M.C.M.B., F.R.C.S, I.M.S. who has been pleased to accord me permission to have them there. I can find no place more suitable than the Anatomy Museum as they are anatomy specimens, and as an opportunity is afforded thereby to the visitors of the College of seeing the rare and extremely interesting works of art. Vizagapatam is famous for its beautiful ivory, sandal-wood and tortoise-shell works of art. I sent the skeletons to a local

II

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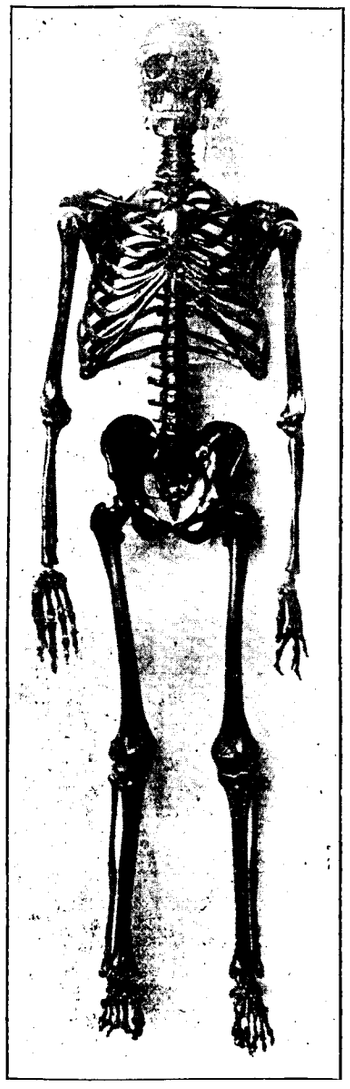
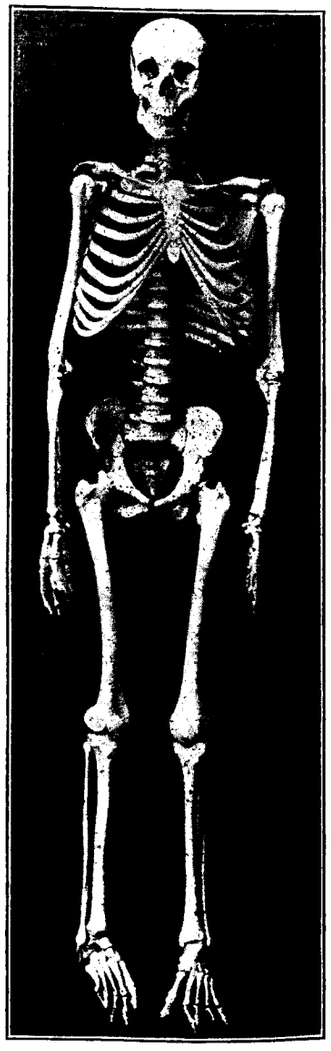


WOODEN SKELETON



IVORY SKELETON

To Face Page 39.

workman for being overhauled and polished up. He expressed his intense admiration and appreciation of the exquisite craftsmanship. It is an exceedingly difficult task to shape ivory and wood to resemble human bones. Some means of softening and moulding ivory was known perhaps to the ancients only, as evidenced by the colossal statutes of ivory of the Zeus of Olympia and Athena of Parthenon. But this work is one of simple carving. It is only those who are acquainted with the irregular and complicated contour of the bones of the human skull that can realise the superb nature and excellence of the work of art. The prevailing opinion of the local workmen is that it is well nigh impossible to execute specimens of a similar kind even if a fabulous sum is offered as there are no skilled workmen at the present day. The material again is very expensive. The long bones, femur, tibia, fibula, humerus, radius and ulna are all single pieces and whole tusks would have had to be used for fashioning these bones and there should have been such a waste of material in the course of their preparation. The ivory skeleton is 5 ft-6½ ins. in height and weighs 23 lbs.

Under strange and lucky circumstances did I come by these skeletons. I am sure they would have been seen exhibited in the spacious hall adjoining the famous Saraswathi Mahal Library of the Tanjore palace which is well-known in South India for its wealth of incunabula and rare and valuable palm-leaf manuscripts in various languages, by millions of visitors to the historic city of Tanjore. As a young boy, I have seen these skeletons myself but never knew then that they were made of materials other than bones and even well remember that the guide used to point them out with awe and reverence as the sacred remains of the distant cousins of the last Mahratta King, Ananta Sivaji. In fact they may be said to have formed a part of the valuable annexe to the library comprising models and specimens, obviously intended for instructional purposes. I am given to understand that the skeletons were made to order by the illustrious king Serfoji who was not only a brilliant scholar himself but a munificent patron of learning and fine arts. He had for his English tutor, the Danish missionary Schwartz whose memory has been perpetuated by the chapel located in the picturesque miniature Shivaganga fortress at Tanjore, to the east of the Shivaganga tank which is looked upon as a spa by the residents of Tanjore. It was during the reign of this king that considerable additions are said to have been made to the library at the suggestion of his exotic tutor. It would appear that the sovereign evinced a keen interest in the study of the subject of human anatomy and an articulated human bony skeleton was duly installed in the library. The presence of a bony skeleton—the remains of the human body within in the precincts of the habitation of the royal household is said to have been deemed sacrilegious and

strongly objected to by the queens and other conservative and orthodox relatives. Thereupon, the king out of deference and regard to the sentiments and feelings of his kith and kin is said to have placed an order for two skeletons made of materials which were unobjectionable. These specimens were executed by the skilled artists of Tanjore who flourished under the royal benefactors during the early part of the nineteenth century. From information that was furnished by the oldest descendants of the palace and from documents extant in the library, it is estimated that they should have been prepared some time between 1805 and 1810 A. D. The skeletons may be said therefore to be about a century and a quarter old.

The erstwhile descendants of the once magnificent puissant and valiant Mahratta kings were reduced to such a sorry plight that the art treasures, antique curios and expensive pieces of furniture came unfortunately under the hammer at the instance of the exacting creditors and many costly articles were sold away at just nominal prices. The two skeletons with the rosewood almirah for holding them were bought by a friend of mine who had an eye to business for about Rs. 75 !. He went in for them with a view to profit by the sale of ivory that could be had by dismantling the skeleton. He congratulated himself on having struck a veritable bargain and took the precious articles home but his wife and children got such a fright that he had to get them removed soon after to some other place in the neighbourhood. He wanted to effect a sale of them as quickly as possible. The local high schools were too poor to buy them for even the cost price for which he was prepared to part with them. I chanced to meet the gentleman who mentioned to me the details of his purchase. Interested as I was in anatomical specimens (I was then lecturer in Anatomy in the Tanjore Medical School), I expressed my wish to go in for them. I paid the amount straightaway and had them removed to my house during April 1926. Since then they have been with me.

Ivory sculpture and decorative arts have ever held an honoured place in all ages for the adornment of the royal palaces. Ivory has been used for making things too numerous to mention and but too well-known to all. The Kensington Museum has a very large and varied collection of Indian ivory carving believed to be little older than the seventeenth century but, this, I should consider, is indeed an unique use ivory has been put to. I think that these are certainly rare specimens of art. I should like to exhibit them in fine arts exhibitions here and abroad where connoisseurs of art can have an opportunity of seeing these excellent specimens of Indian craftsmanship and it is my ambition to make a gift of them some day to a centrally situated museum of anatomy in India.

A CASE OF PERNICIOUS ANAEMIA WITHOUT A RELAPSE FOR OVER 6½ YEARS*

BY

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AND

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The patient in this case is a Lady student, aged now 33 years. She was admitted into the Government General Hospital, Madras under the senior author on 30/1/24 for continuous low fever, debility and anaemia. There was no family history of any of the members suffering from a similar disease. Parents, brothers and sisters are quite healthy.

Her previous history was that she suffered from a severe form of dyspepsia in the year 1921, which made her thin and anaemic. She completely recovered from it within 10 months. She kept up good health until 2 months before admission. The present illness started suddenly with high fever 106° F which lasted only for 3 days. Her temperature has never since reached normal till the time of admission. It ranged from 99 to 100° F. With this fever the patient noticed anaemia, which became more and more severe. She had palpitation and breathlessness on walking and slight oedema about the ankles towards evenings. She had no cough. She felt numbness over both her legs; but deep sensation was not affected.

On physical examination she was found to be a fairly well-nourished individual, pale and very anaemic. No pyorrhoea alveolaris. Tongue was pale and flabby. A haemic murmur was heard over the pulmonary area. In respiratory system nothing abnormal was found. Spleen and liver were not palpable. Appetite was good and bowels were regular. Pulse ranged from 102 to 108. Temperature ranged from 98°. 5 to 101° every day.

On investigation she was found to have 45% haemoglobin 1,150,000 R.B.C. and a colour index of 1.5. Blood smear revealed marked leucopenia. Megaloblasts, myelocytes, poly-chromatophilia, anisocytosis and poykilocytosis were discovered. No parasite could be found to account for the fever. The following differential count was got.

Poly	31. 7%	
Large Mono	9. 3%	shows aplasticity of the bone
Lympho	43. 7%	marrow.
Eosin	14. 7%	
Mast Cells	. 6%	

Motion revealed no ova. She was extremely bad one day and was almost given up as hopeless. The lowest count recorded of

*A paper read at the Indian Science Congress, Nagpur 1931 and sent to the "Antiseptic" for publication.

R. B. C. during her stay in the hospital was 800,000 per cm. She made a progressive recovery from the disease and the blood count of R. B. C. before her discharge from the hospital was 3,487,000 per cm. From that time till to-day we had the occasion to watch the case from time to time. In 1924 –December she had 3,800,000 R. B. C. per cm. and 5,600 W.B.C. per cm. In August 1925 she had 4,200,000 R.B.C. per cm. and 6000 W.B.C. per cm. In June 1927 she had 3,900,000 R.B.C. per cm. in December 1928 Van den Bergh test was done and it was found to give a direct positive reaction. Indirect reaction was also found to be positive. Serum was slightly greenish yellow in colour. In October 1929 R.B.C. count was 4,150,000 per cm. and W.B.C. count was 5,600 per cm. A trace of urobilin was found in urine. On the 6th September 1930 her R.B.C. count was 3,980,000 per cm. W.B.C. count was 5,600 per cm. Gastric analysis showed no achlorhydria. Haemoglobin was 80 per cent. Colour Index was 1·00

The size of the R.B.C. was found to be 7·7 c.c. with the halomete (Eve's)

Discussion. Though the methods of diagnosis and the knowledge of Addisonian type of anaemia six years ago were meagre our case in question points out that it is a case of severe anaemia with a high colour index, no emaciation, no discoverable and known cause was found to account for such an anaemia with fever. She is now moving about and doing normal work without any fatigue. The last examination does not reveal any high grade anaemia. She is perfectly healthy-looking in every way. In this case there are two possibilities which require consideration.

1. That this case might be one of Addisonian anaemia with a prolonged remission or it may be.

2. An Addisonian anaemia with a spontaneous recovery. We are inclined to hold the latter view since the latest examination reveals nothing in favour of Addisonian anaemia. Acute Addisonian anaemia might either end fatally in a short time with the first attack or make a spontaneous recovery. It is the chronic case that more often has remission and intermission and develops Sub-acute Combined Degeneration.

Cabot's analysis of 524 cases quoted in Osler's Text book (recent edition) gives a duration of three months to four years for the remissions. In the same investigation the figures for complete recovery are given as 6 out of 1200 cases. These figures were open to objection as ours are that they were compiled at a time when the diagnosis of the disease was based almost upon the clinical features and the examination of blood film and when the more recent diagnostic methods were unknown.

In the more recent investigation of 101 cases by Maitland Jones the average duration of the remission is given as six months. Shaw in Guy's Hospital report page 294 July. 1926 quotes a case without a relapse for over three years.

Our case is one, that had either a spontaneous recovery or a very prolonged remission, such a long remission not having been reported so far.

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THE NEW YEAR, 1932.

One more year has gone by and A New year has dawned upon us. The usual convention on this occasion is to give a resume of the work of the past and build up fresh hopes and plan fresh activities for the future. The attempt made by the University of Madras last year to confer on the L.M.P. the degree of M.B.B.S., though hedged round certain difficult if not altogether impossible conditions, is a happy augury for the future of the Licentiates in this Presidency. The holding of the 7th All India Medical Conference in Poona in April last has helped to knit together the medical men of the various provinces in this vast sub-continent, to enable them to exchange scientific views and voice forth their professional grievances. The All-India Ophthalmological Conference held at Bangalore last July, was another important function intended to protect the blind and prevent blindness in its various phases and forms. The Committee appointed by the Government of Madras to extend the scheme of Honry. Physicians and Surgeons in this Presidency have come out with their report during the year which is brimful of hope and encouragement. The All-India Medical Council Bill which the Government had prepared and circulated for opinion before introduction in the Legislative Assembly, is another important event of the past year. It has however proved to be a very disappointing document and the *Antiseptic* has already animadverted on this Bill in its issue of Nov. last. The journal had brought forward a special number on Radium and Radiology during the previous year and the issue of a special number every year will be a permanent feature of

the journal. Trade depression affecting the Independent Profession and our Advertising friends here and abroad and the retrenchment axe heavily fallen on our official brethren are some of the deplorable incidents of the year.

Our policy for the future remains unchanged—viz., the protection of the rights and privileges of medical men, irrespective of class or grade, official or non-official and the advancement of medical science in all its branches. We hope and trust the medical Profession and our advertisers in India and abroad will give us the same warm support as they had extended to us in the past. We wish, in fine, all our contributors, subscribers and advertisers **a Happy and Prosperous New Year.**

Gleanings from Medical Press

SURGERY AND OPHTHALMOLOGY.

Surgical Treatment in Maxillary Sinusitis.—To close oral openings in the maxillary sinus—openings which might result in chronic infections and pansinusitis—Doctor Dunning (*Journal of the American Dental Association*, July, 1931) has found a flat operation to be of value.

A flap, extending from the median line at the junction of the hard and soft palates anteriorly to about opposite the bicuspid teeth, is thoroughly separated from the palate down to the periosteum. This palatal flap is very thick and well nourished because of the anterior palatine artery in its base. Then—in order that the labial flap can cover the opening without any tension when sutured to place—sharp edges of bone must be smoothed off; the alveolar process must be trimmed; and all soft tissues down to the bone must be freed from the opening to be closed. Next, the labial soft tissues are thoroughly undermined and freed, often upward to the extent of an inch or more on the anterior surface of the superior maxillary bone. A curtain of soft tissue is dropped to overlap the palatal flap; sometimes, the anterior border of this curtain is freed so that a labial flap thrown over the palatal flap can be tucked under the curtain or can be sutured over the curtain, after it has been sutured to place over the bony opening to be closed.

Doctor Dunning's secret of success is plenty of tissue, no tension and a good blood supply. He states that he has had no opening in the antrum fail to close when he has used the procedure outlined.—*I. J. M. S.*

The Treatment of Boils.—To incise a boil at any stage of its career is to lengthen its existence. A boil should not be poulticed; nor should a boil ever be sequeezed. The most efficacious treatment is by vaccine—autogenous or stock. Diphtheria antitoxin is a specific enemy both of staphylococci and Streptococci and, when administered promptly and in sufficient doses, it may be trusted implicitly to abort a boil or a carbuncle.—*Dr. Williams, London Practitioner.*

The Treatment of Common Injuries of the Knee Joint.—By Dr. Guy A. Caldwell. Shreveport, Louisiana, Southern Medical Journal, Volume 23, No. 12, December, 1930.

The following outline fully describes the various knee joint injuries:

1. Contusions, abrasions and bursitis.
2. Strains of the lateral ligaments.
3. Internal derangements:
   a. Displaced, torn, or loose semilunar cartilages.
   b. Pinched synovial tabs.
   c. Loose bodies.
   d. Torn crucial ligaments.
   e. Osteochondritis desiccans.
4. Fractures intersecting the knee joint from the patella, tibial plateau and femoral condyles.
5. Punctured wounds and foreign bodies.

Simple strain should respond to treatment within a short time, providing that proper physiotherapy is used and efficient productive measures employed.

Typical instructions for a patient with an injury of this type are as follows:

1. Wear the adhesive stripping and massive dressing until soreness is greatly improved and there is some motion without pain; usually two to four days.

Dermatitis Medicamentosa due to Ephedrine.—Samuel Ayres, Jr., and Nelson Paul Anderson, Los Angeles (*Journal A. M. A.*, Aug. 15, 1931), call attention to some of the cutaneous reactions produced by ephedrine and present some experiments dealing with attempted passive transfer of sensitivity of this drug. They present two cases of dermatitis medicamentosa due to ephedrine, in which there were both a local dermatitis at the point of application and a more or less generalized eruption, erythematous and purpuric in case 1, and erythematous and edematous in case 2. Emphasis is laid on the fact that the knowledge that ephedrine can produce such cutaneous manifestations may be of value in determining the cause

of obscure eruptions about the nose, face and elsewhere. The authors were not able to demonstrate passive transfer in two cases of marked hypersensitivity to ephedrine.—*Texas State Journal of Medicine.*

The treatment of Gonorrhœa in the Male with Intravenous Injections of Diamino-Methyl-Acridine-Chloride (Trypaflavin).

Neither urethral injections of silver salts, nor antiseptics administred intravenously, nor vaccine therapy will produce a cure in all stages of gonorrhœal infection. Thus the disease, particularly in the acute stage of increased secretion, can hardly be influenced by the above-mentioned measures. Disinfection of the peri-urethral glands is of primary importance, for which purpose only the intravenous methods of treatment deserve consideration. The authors, therefore decided to attack gonorrhœal infections chemotherapeutically *via* the blood-stream. In their search for a suitable remedy they chose for this purpose a well-known acridine dye-stuff, namely Trypaflavin.

Trypaflavin was used in aqueous solutions of strengths of 1 : 200, 1 : 100, and 1 : 50. At first 5 to 20 cc. of a ½ % solution were used, but experience soon showed that a smaller amount of a more concentrated solution (5 cc. of 2%) was preferable. It is advisable to mix the fluid to be injected with some of the patient's blood in the syringe. In private practice less frequent and, therefore, stronger doses (5 cc. of a 2% solution, three times weekly) are required, while treatment in hospital permits of daily doses of 5 cc. of a 1% solution or even 2 or 3 cc. of a ½% solution twice daily. Ten to 30 cc. such injections, according to the stage and degree of infection, produce the desired result even in the most resistant cases of urethritis : the fact that the dye is excreted in the urine simultaneously enhances the local effect of treatment. Of 67 patients treated by this method, 37 may be considered cured, 15 improved sufficiently to make an ultimate cure a practical certainty, 11 showed less marked improve, ment, while in 4 the treatment failed. These results are based on careful clincal and microscopic observations, and in judging the results it is important to remember that a large proportion were old and very chronic cases.

The action of Trypaflavin is very prompt in fresh infections, where one or two injections often suffice to cause disappearance of the germs.

Orchitis, posterior urethritis, cystitis, cowperitis, and also epididymitis and gonorrhœal iritis likewise disappear after six weeks' treatment with Trypaflavin alone. That failures occur with this method as with others cannot be denied, but they are rare. The injections must be given very carefully, as the yellow strains produced by Trypaflavin on skin and clothing are difficult to remove. Subicteroid

tinting of the skin may occur with prolonged use, but is always very slight. Paravenous injections are painful and cause inflammation which takes some days to heal. Occasionally an injection produces a mild state of shock ; frequently the injections are associated with such subjective symptoms as bitter taste, sensation of heat, and a feeling of oppression. These sensations, however, only last a few seconds. The occasional acceleration in pulse rate, which occurs after large doses. quickly subsides again. Visual phenomena, such as seeing streaks of light, are sometimes observed as a late result one to three days after large doses and are quite harmless. They may possibly be due to the fluorescence of Trypaflavin and the long wave rays, formed under the action of sunlight. 0.25 gm. (4 grains) of resorcin will prevent this symptom. All these subsidiary effects are of little importance. In the course of 1417 injections no untoward symptoms were observed even after large doses. One-tenth gm. (1½ grains) Trypaflavin is eliminated quantitatively in the course of forty eight hours, the greater part being excreted in the first two hours.

Trypaflavin is a good antiseptic and its intravenous use in gonorrhœal affections deserves wide-spread attention. Its action is prompt and unassociated with undesirable secondary effects.

This method of treatment should prove almost more valuable in the treatment of gonorrhœa in the female than in the male.—*The Journal of the Philippine Islands Medical Association.*

Stiff Joints.—The need to distinguish clearly between stiffness and true ankylosis before attempting to improve the mobility of a joint, or assessing diability, is emphasised by Dr. Laquerriere, Dr. Loubier, and Dr. Jaudel in a communication to the May-June issue of the *Revued D'Actinologie Et De Physiotherapie.* In true, ankylosis the articular ends are united by bone or fibrous tissue, and these cases are outside the scope of physiotherapy. In cases of false ankylosis, or joint stiffness, as the authors prefer to call them, X-ray examination shows the absence of bony union and the presence of a joint cavity. The stiffness may be due to a variety of causes, which must be investigated, but even after the condition has been correctly diagnosed the degree of improvement which may be expected to follow on a course of physiotherapy cannot be predicted. The author's experience, that apparently similar conditions show marked difference in their reaction to physical treatment, accords with that of other observers. When the articular ends of the bones have undergone definite changes in shape, the possibility of effecting some improvement in function must be considered ; the presence of a bony mass may frustrate any attempt to improve the usefulness of the joint by physiotherapy. In cases of joint stiffness following injury, when X-ray examination is negative, thickening of

the tissues surrounding the joint may sometimes be recognised on palpation. This thickening is at first due to oedema and congestion of tissues in the early stages of repair, and later to the development of fibrous tissue. In neglected cases, contraction of joint-capsule and ligaments, adhesions of tendons, atrophy of muscles, and in old-standing cases, decalcification of the bone and atrophic changes in the cartilage, have destroyed the functional capacity of the joint. In their early stages extra-articular lesions respond favourably to physiotherapy; later, prolonged treatment may give some functional improvement. A pseudo-stiffness due to intra or extra-articular causes of pain on movement must be recognised. It may be due to an inflammatory process or the presence of loose bodies and fringes. In cases of stiffness due to cicatricial contractions of soft parts, where destructions of the tissues was not too extensive, the authors have recorded satisfactory results from radiotherapy and ionisation. The use of the constant current is recommended in the treatment of stiff joints because of its properties of allaying pain, improving the blood-supply, and diminishing oedama and vascular stasis. These authors claim for it also a trophic action and a mild fibrolytic action, which they attribute to the liberation of sodium ions in the tissues. Ionisation has given good results in their hands; iodine and salicylic ions are most frequently employed. Local ultra-violet irradiations are recommended for the improvement of tissue nutrition, and infra-red radiations as sedatives. Faradic stimulation and diathermy are also recommended.

Many of the cases reported by Dr. Laquerriere and his colleagues were first seen weeks, or even months, after the primary injury to the joint, at a time when the most profitable stage for physical treatment has passed. This neglect is not altogether unknown in this country but fortunately most practitioners are beginning to realise that it is in the period immediately following the injury that the functional value of a joint should be safeguarded by adequate treatment. It is becoming more widely known also that the final disability does not depend entirely on the severity of the initial lesion. A momentary or even an incomplete, separation of the parts of a joint involving tears in the capsule and ligament, and separation or tearing of the cartilage, is no longer regarded as a trivial injury. Rest, under conditions approaching most closely to the physiological requirements of the tissues, and approximation of the lacerated structures during the early stages of repair are now considered essential for the attainment of good functional results. Splinting, massage, active movements, electrotherapy and irradiation all play their part in the attempt to establish the ideal conditions for repair. Rest, in the early stages of repair, inhibits the formation of excessive fibrous tissue and lesssens the risk of the

development of bone in the tissues surrounding the injured joint. Electro-therapy is directed in the early stages towards allaying pain, clearing up oedema, assistsng the blood-flow, and warming the tissues. Massage if it is gentle and superficial, relieves spasm. Subsequent treatment involves the maintenance of favourable local conditions of warmth and good blood-supply, and the encouragement of active movements designed gradually to increase the tone of the muscles, until ultimately full resumption of free voluntary movement is attained.—*Lancet.*

The Slit Lamp.—The slit lamp has done for the anterior half of the eye what the ophthalmoscope did for the posterior half. It is of real value to the clinician in the study of the minute anatomy and pathology of the cornea and neighbouring tissues. The apparatus consists essentially of a glowing filament in a tube at the end of which is a slit of variable width. Between the two there is a condensing system whereby an image of the glowing filament is projected in the slit. The slit lamp is used in conjunction with the Czapski corneal microscope. Originally the lamp was used merely as a source of illumination. The anterior half of the eye can be viewed in optical section, examination in three dimensions is possible, and exact localization can be achieved. When light strikes a highly polished surface it is reflected diffusely, regularly and irregularly, enabling the surface and any irregularities to be seen. There is no difficulty in mastering the apparatus after the beginner has become familiar with the method of simultaneously maintaining the focus of the microscope and the beam of light on the structure under examination. The endothelium of the cornea and sometimes the nuclei of the cells can be perceived with ordinary magnification. Besides the method of direct local illumination, examination can be made by transmitted light and the use of the area of specular light. Measurements can also be made of the extent of corneal infiltration and lens opacity.

With the narrow beam, the position of a foreign body in the cornea can be localized. A dark-adapted eye, with careful focusing, can detect any separation of the epithelium from Bowman's membrane. By the method of transillumination a translucent iris may be examined by the light reflected from the lens, especially if the lens is cataractous.

Many new and interesting facts have been noticed, some of them of the greatest importance in diagnosis. The enormous thickening of the cornea followed by thinning and ectasia is typical keratitis profunda in congenital syphilis. The first signs of inflammation may be detected by examination of the aqueous. The normal fluid is almost optically inactive, but when it becomes loaded with albumin,

the beam becomes visible as it traverses the anterior chamber; its density can be taken as a measure of the albumin content of the aqueous. Normally the particles in the aqueous show a streaming motion in the convection current, rising at the back and falling in front. This phenomenon is absent when the inflammation commences. In siderosis the optical section of the cornea shows a yellow discoloration. Epithelial bedewing is suggestive of glaucoma while a similar endothelial appearance denotes uveal disease. Various forms of pigmented lines and rings are proved to be associated with the absorption of metallic elements. Uveal pigment on the posterior surface of the cornea confirms the history of contusion of the eyeball. A frequent senile change, and one that is apt to be mistaken for a pathological condition is the disintegration of the iris pigment. A persistent pupillary membrane is detected oftener than by other methods.

Examination of the lens has simplified the classification of the great variety of opacities. The slit lamp emphasizes the previously known fact that the lens is not uniform in density. Remains of the hyaloid artery and posterior lenticonus are frequently seen. The commonest types of cataract are stellate, anterior capsular, anterior polar, and zonular. Several observers have been able to demonstrate a peeling off of the anterior layer of the capsule in glass blowers' cataract, while others claim to be able to diagnose the form of cataract associated with diseases such as tetany, diabetes, mongolism, etc.—*Prescriber.*

MEDICINE AND THERAPEUTICS.

Observation on Thiocyanate Therapy in Hypertension.—William G. Egloff, Lyman H. Hoyt and James P. O'Hare, Boston (*Journal A. M. A.*, June 6, 1931), state that their results with thiocyanate therapy in hypertension, interpreted in the light of conservative control and with due consideration for the disagreeble symptoms produced, were so nearly uniform that they should at least serve as a warning against too great enthusiasm for this drug. Of twenty-five patients only two reacted favorably to the administration of sodium thiocyanate and even in these two the reaction was not particularly striking or different from what is seen in many other patients who have had no treatment whatever. In remaining twenty-three cases, not only did the drug fail to lower the blood pressure or relieve the symptoms, but it produced very disagreeable side effects. —*Texas State Journal of Medicine.*

Hemorrhagic Encephalitis after Neoarsphenamine.—John W. Brittingham and Thomas Phinizy. Augusta, Ga. (*Journal A. M. A.*, June 13, 1931), report the case of a patient with sickle cell anemia, who died following an injection of neoarsphenamine. The sudden appearance of a severe headache, vertigo, excitation and rapidly developing coma relegates this patient to the group of cases described as so-called hemorrhagic encephalitis. At necropsy, multiple hemorrhages into the brain and other viscera were seen. Microscopic examination of the tissues disclosed the typical finding of fat embolism. The authors believe that, in all cases presenting this syndrome, stains for fat should be done at necropsy.—*Texas State Medical Association Journal.*

Feeding of Gastric Tissue in treatment of Pernicious anemia.—Sixty patients who have pernicious anemia have been treated by H. Milton Conner, Rochester, Minn. (*Journal A.M. A.*, Feb. 14, 1931), with gastric tissue of swine or with tripe. Two of these were given gastric tissue of swine after virtual failure with tripe and tripe constituted the sole form of gastric tissue given to two. Forty-six of the patients have been carefully studied under observation in a hospital. Raw and dried preparations, have given approximately equivalent results. The mucosa, the remainder of the stomach after the mucosa was removed, and whole gastric wall were used separately, and each proved effective in the cases treated. The presence of muscle meat was not required to obtain results in the two cases treated with mucosa without muscular coat or other mucle meat. Fundus and pylorus, each used separately, produced satisfactory if not equal results. The effects on the reticulatad erythrocytes, mature erythrocytes, hemoglobin and leukocytes are similar to and apparently equivalent to those obtained by feeding liver or liver extract. The effects on the general and neurologic symptoms are apparently about the same as those obtained with liver or its extract.—*North West Medicine.*

The Therapeutic value of Sugar.—Sugar is among the most important articles of diet. While several varieties of sugar enter into the composition of diet, for practical purposes they may be divided into two groups. The sucroses known chemically as the disaccharids, as cane sugar (sucrose), beet sugar, maple sugar, malt sugar (maltose) and milk sugar (lactose). The glucoses or monosaccharids as grape sugar (dextrose), fruit sugar (levulose) and [illegible] sugar a mixture of these two of which honey is the best known form. The history of sugar is given in a pamphlet issued by the United States Department of Agriculture *Farmers' Bulletin No. 535*, 191[illegible]

It is believed that sugar from the sugar cane was known in China two thousand years before it was brought into Europe.

When merchants began to trade in the West Indies it was brought westward with spices, perfumes, etc., and was employed exclusively in the preparation of medicines. In Hutchison's "Food and Dietetics" it is pointed out that there was an ancient saw to express the loss of something very essential as follows: "Like an apothecary without sugar."

Greek physicians several centuries before the Christian era refer to sugar under the name of "Indian salt." It was called honey made from reeds and said to be "like gum" white and brittle. It was not, however, until the middle Ages that Europeans had any clear idea as to its origin. They confounded it with manna and thought that it exuded from a stem of a plant, where it dried it to a kind of gum.

When in the fourteenth or fifteenth century sugar-cane from India was cultivated in Northern Africa the use of sugar increased greatly and as its culture was extended to the newly discovered Canary Islands and later to the West Indies and Brazil, it became a common article of diet among the well-to-do.

Hutchison states that in 1598 Hentzer, a German traveller, thus describes Queen Elizabeth, then sixty-five years of age, "her nose is a little hooked, her lips narrow, and her teeth black a defect the English seem subject to from their great use of sugar."

Now for the value of sugar from the therapeutic or nutritive standpoint. The prime factor which determines the digestibility of sugar is its chemical form. Sugar can only be assimilated by man as a monosaccharid. Therefore, provision is made in the alimentary canal for the conversion by means of ferments for all forms of sucrose (disaccharids) into dextrose and levulose, that is they are inverted.

It is evident, then, as Hutchison points out, that from the dietetic aspect sucrose may be referred to as undigested and the glucoses as predigested and the reason why sweet fruits are so important articles of diet is because the glucoses are in a form in which they are fit for direct absorption into the blood. The second factor which makes for the digestibility of sugar is the degree of concentration of its solution. In strong solution sugar is an irritant to the tissues. Into this phase of the question there is no space to enter further except to emphasize the greater digestibility of invert sugar.

Hutchison Robertson in making experiments as to the rate of fermentation of sugars, the results of which were published in *Edinburgh Medical Journal*, Vol. XXXIX, p. 803, 1894, drew the following deductions from his observations: 1. In dyspepsia the absorption of carbohydrates is delayed, and therefore all sugars tend to ferment. 2. In dyspepsia with lactic acid formation, one should avoid dextrose,

levulose and invert sugar, and use cane sugar, maltose in lactose in moderate amounts. 3. In butyric fermentation lactose should be preferred. 4. The alcoholic and acetic fermentation one should fobid invert sugar and levulose and give lactose.

With the assimilation of sugar in its various forms there is no space to deal here and the nutritive value of sugar will be considered briefly. Seeing that refined sugar is a pure carbohydrate, it is obvious that its food value must be high and as an energizer it is the cheapest food we have. Sugar being more rapidly oxidized than fat is thus a more efficient protein sparer. The relative value of sugar and fat in the human economy is in some respects unsettled, for instance, which is the better agent for fat forming.

It is as a muscle food that sugar figures high in the list of articles of diet. Regarded from this point of view sugar is supreme. It is allowed that the carbohydrates are the main source of musculer energy and it follows that the sugars owing to the rapid and easy absorption of all the carbohydrates afford the best means of supplying muscular energy. Experience both in experimental and practical form has proven that this is so.

And lastly, sugar ranks high as a stimulator of appetite and digestion. Although sugar eaten to excess is harmful because a less amount of other vegetable foods are consumed, which may result in an injurious diminution of certain mineral ingredients in the blood, especially of calcium, whence may proceed anemia and caries of the teeth. Hutchison also thinks that the greater consumption of sugar in recent years may have something to do with increasing commonness of the diabetes which many believe to exist.

On the whole, sugar is easily among the most valuable articles of food, that is from the nutritive or therapeutic aspect. Of course, its use should not be abused and should be eaten in the most appropriate and purest form obtainable.—*International Journal of Medicine and Surgery.*

Dosage of Diphtheria antitoxin.—During the past thirty-five years probably some millions of patients have been treated with diphtheria antitoxin, a medicament whose specific activity can be measured with reasonable precision; yet even to-day the proper dosage is unsettled. The clinician, with scientific humility, will wonder how firmly founded are many of our ordinary medical practices and beliefs if in this field, with its incomparable wealth of clinical data we have not reached agreement. In the treatment of diphtheria the dosage recommended ranges from 2,000 units in a mild infection (Goodall) to 300, 000 in a severe attack (Bie). What is the reasonable via media which the conscientious physician can follow?.

When faced with a patient suffering from diphtheria we are bound to ask how much of the specific toxin of the diphtheria bacillus is still in the circulation and therefore accessible to attack by antitoxin, how much is already intracellular and therefore wholly or almost wholly beyond reach of antitoxin. and, lastly, how much damage has already been done to tissue or function, and whether any of this damage is remediable. We know that very little antitoxin is necessary to prevent the ingress into the circulation of further toxin produced by the bacilli in the throat. A human being naturally immune and negative to the Schick test whose total blood contains perhaps as small a quantity as 200 units of antitoxin, is safe, even if virulent diphtheria bacilli lodge on the tonsil. There are a few observations which will help us to decide how much toxin a patient may have absorbed. It is known, as the result of unfortunate accidents in the early history of active immunization against diphtheria, that approximately thirty times the minimal amount of toxin that would be lethal for a guinea-pig will kill susceptible children in three to six days, and that about 300 lethal doses may kill children within twenty-four hours. This line of argument would suggest that a moderate number of units of antitoxin given intravenously would be sufficient to neutralize the total amount of toxin present in the average patient and still susceptible to attack by antitoxin. There still remains for consideration toxin already intracellular and united with the tissue. Here, a pretty series of experiments by Glenny and Hopkins are helpful. These workers injected intracutaneously into guinea-pigs a small dose of toxin sufficient to produce an inflamed area nearly an inch in diameter, appearing in about eighteen hours. They inquired what multiple of the amount of antitoxin (which would, if mixed with the toxin completely neutralize it) must be injected at intervals after the toxin in order to prevent the appearance of the skin reaction. If given intravenously seventy minutes after the toxin, 50,000 multiples would not completely prevent the reaction nor would 500,000 multiples when injected eighty-five minutes after the toxin. This amount of toxin, therefore, had entrenched itself impregnably in the cells within an hour and a half. In another series, 10 million multiples of antitoxin given intravenously four hours after the intracutaneous injection of toxin could not suppress the reaction. It proved impossible to save the life of an animal if antitoxin was delayed for two hours. It is reasonable, therefore to conclude that no practicable excess of antitoxin can overtake toxin which has had a few hours' start. The clinician cannot well avoid the thought that but little time is granted him for the immediate administration of the one effective dose which will neutralize the toxin—accumulated but still accessible—and save his patient, if he can be saved; and that

controlled laboratory experiment offers no justification for dividing the effective quantity of antitoxin into separate doses to be given at intervals. In the researches mentioned above there appears also a striking illustration of the well-known superiority of intravenous over subcutaneous administration. A dose of 1,000 units of antitoxin, if given subcutaneously half an hour before the intracutaneous injection of toxin, reduced the reaction to half the expected size, whareas one-hundredth of amount of the amounnt of antitoxin—that, is, 10 units—given intravenously even half a hour after the toxin was equally effective.

With a knowledge of these facts, and with the mass of clinical experience now available, how can we decide what is to be the effective dose? The route will be intravenous or intramuscular, and not subcutaneous—whether we agree or not with Banks that "a haphazard subcutaneous injection of serum is equivalent to postponing operation on a gangrenous appendix for three days." The experienced man with facilities available tends to choose the intravenous route in all severe and even moderate attacks, though the Ministry of Health with the general practitioner in mind, does not consider that there is justification for the general use of the intravenous method. The Ministry emphasizes early and adequate dosage, and suggests a minimum of 8,000 units in mild attacks seen early, and a maximum of 30,000 units for a patient severely ill, admitted late in the attack. American practice is represented by Stimson's range—5,000 in a very mild attack to 25,000 injected intravenously in severe cases. If this dosage is doubled for the intramuscular route, we approach the scale of 5,000 to 60,000 quoted by Kerr and by Park. Banks and McCraken have recently urged intravenous dosage up to 140,000 units in severe attacks, and Bie in Copenhagen has given 300,000. Probably the moderate man will conclude that the recommendation of the Ministry of Health is a good general guide, and will give 8,000 to 10,000 units intramuscularly to the patient with a mild attack, and 30.000 to 50,000 unit intravenously to the child desperately ill, the ever urgent indication being for early administration. The attempt to see what damage to tissue and function is remediable is outside our present discussion.—*B. M. J.*

Oats' Diet In Diabetes.—Some years ago a German author claimed that an exclusive diet of oats has value in severe cases of diabetes mellitus, and now Dr. Oberth, of Brasov, publishes some further observations on this method of treatment. He has treated about 100 cases with varying results. The diet consists of oats given in large quantities, in the form of oat flour or flakes, together with albumin and butter, excluding all other carbohydrates and meat. The usual daily allowance consisted of oats 250 g., albumin (vege-

table or from eggs) 100 g., and butter 300 g. This was made into a soup and given every two hours. Wine or light brandy was occasionally allowed, and also strong black coffee. Dr. Oberth details a number of typical cases in which this regime was tried, and says that it seemed to give more favourable results than did other diets recently proposed. He does not, however, advise its adoption without careful preliminary trial in any particular patient for he has observed cases in which it made the patient worse. The theoretical basis of this diet is under investigation.—*B.M.J.*

Correspondence.

ALL-INDIA MEDICAL CONFERENCE TO BE HELD IN JANUARY 1932.

The General Secretary of the All-India Medical Conference writes:—

1. It has been resolved by the Indian Medical Council Bill Committee appointed by the meeting of the Profession of Bombay held on the 27th November 1931, to call an emergency meeting of an All-India Medical Conference in January 1932, to mend or end the Indian Medical Council Bill drafted by the Government of India.

2. As it will take a lot of time to communicate individually with all important Medical Associations in India, I have to invite hereby the attention of the Hon. Secretaries of such Associations to inform me direct by wire or letter as to whether they will be able to send one or more representatives of their Associations to the Emergency Conference, to be held in January 1932. The date will be announced later.

3. A covering letter, together with a Memorandum explaining the purpose of such a Conference, and including the additions, alterations and amendments necessary to remove the objectionable features of the Bill to render the Bill acceptable to the Profession is being sent to the Hon Secretaries of all important Medical Associations of India whose addresses are known.

4. As there are several Medical Associations of Graduates and Licentiates, whose addresses are not known, the Hon. Secretaries of all such Medical Associations in India are hereby requested to furnish same to the General Secretary. It is unfortunate that there is no such Directory and the same will be published for the information of the Profession in the Medical Journals, if the Hon. Secretaries will kindly co-operate in this matter.

5. Those Medical Associations that have received the covering letter together with the Memoranda, mentioned in para 3, who cannot arrange to send representatives to the Conference, are requested to kindly communicate their assent, or dissent or any suggestions they may have to make in regard to the subject, as early as possible.

6. All replies are to be sent to Dr. K. K. Dadachanji, General Secretary, All-India Medical Conference, Blavatsky Lodge, Building, French Bridge, Bombay, No. 7.

Proceedings of Societies, Association, etc.

THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION.

(Madras Branch).

A large number of L. M. Ps. from all parts of the city attended the meeting held on Thursday the 10th instant at No. 98: Godown Street, when a long programme was gone through. Dr. U. Rama Rau presided over the meeting and expressed his satisfaction on the increased strength of the Branch and congratulated the Provincial Secretary on the success achieved in the sphere of his work and appealed to the younger doctors to take an active part in the conduct of the Association.

The Provincial Secretary sketched briefly on the working of the Association and its Branches and pointed out ways and means as to how best to promote the interests of the Association. He felt happy that younger men had rallied round him in his campaign and there was enthusiastic response everywhere.

The election of Office bearers took place and the following is the result:—

Dr. U. Rama Rao was unanimously elected as the President of the Branch.

Dr. P. Ramanjulu Naidu, ... *Vice-President,*
Dr. G. Subbarayudu..... ... *Joint Honorary Secretary.*
Dr. U. D. Gopal Rao..... ... *Honorary Secretary.*

1. Dr. V. A. Muthiah Thevar.
2. „ V. Rama Kamath.
3. „ T. Gopal Rao.
4. „ T. V. Ranganatha Rao.
5. „ S. Balasundaram.
6. „ A. C. K. Hebbar.
7. „ K. Rama Rao.
8. „ C. Ramachandra Ayyangar.
9. „ A. Visvanathan.

Members of the Managing Committee.

It was proposed by Dr. V. Rama Kamath and duly seconded that whenever vacancies arise in the Managing Committee, they may be authorised to coopt members.

The election of a delegate to the Conference was hotly discussed and several enthusiastic members offered their services. It was eventually resolved to request the President to be their delegate and in case of his inability to send Dr. A. Visvanathan to represent the Madras Branch.

The Provincial Secretary next read a number of urgent communications from the General Secretary for consideration and discussion by members. They were mainly subjects touching the Conference and Exhibition at Darbhanga the presentation of Exhibits and contributions of scientific articles for the Silver Jubilee, and the All-India Medical Council Bill.

There was a heated discussion about the Honorary system affecting the class, the movers being Drs. K. Venkat Rao and Gopal Rao and the following resolutions were then unanimously adopted :—

1. The Madras Branch recommends strongly to the Surgeon-General with the Government of Madras and requests him to reserve 50% of the appointments of clinical assistants in the Teaching institutions (Hospitals) to the Licentiates and the period of such appointments to be between two and four years.

2. It is the opinion of the Madras Branch that no Licentiates should accept the Honorary appointment now advertised by the Government for the Royapettah Hospital with the designation—Honorary Sub-Assistant Surgeon—unless it is so altered to indicate the nature of the work for which he is appointed.

3. That a deputatiou consisting of Drs. V. Rama Kamath, V. A. Muthiah Thevar and T. V. Ranganatha Rao do wait on the Surgeon General to represent and explain the grievances of the Licentiates with regard to the Honorary System and to place before him the above resolution of the Branch.

The last item of the programme was the resolution of the Branch recommending the re-election of Dr. D. V. Venkappa as Provincial Secretary for the coming year in recognition of his valuable services to the association for many years.

With a vote thanks to the chair the meeting came to a close at about 8 P.M.

Extracts from Proceedings of the Anniversary of the Trichinopoly District Medical Association, Held on 14-11-31.

The Anniversary was celebrated under a banian tree in the Upper Anicut, P.W.D Bunglow. 45 members of the Association, some with their families and about a dozen guests both local and others, were present including ladies.

The function began with a swimming competition in the river. Cauvery at about 11-30 A. M. in which 7 members took part. Doctor P. Jumbunathan won the prize—a Silver Cup for it.

After the Election of the office-bearers for the next year Doctor P. Venkatagri, M.D.,& C.M., Obstetricion, Rayapuram Hospital, Madras, delivered the Annual Oration on the "Treatment of Eclampsia" *which was masterly and instructive.

The President Major T. S. Shastry I.M.S. District Medicial Officer, Trichinopoly expressed his gratefulness to Dr. T. N. Subramanyam, L.M. & S., and other members of the celebration committee for the excellent arrangements they had made for the feast and recreation, and heartily thanked the members for re-clecting him, congratulated them on the successful working of the Association, and exhorted them to continue the same enthusiastic co-operation and sweet harmony which had marked their activities during the past year.

BOMBAY MEDICAL ASSOCIATION.

The following Resolutions were adopted unanimously at the Meeting of the Medical Profession of Bombay held on Friday the 27th November 1931, at the Hall of the Blavatsky Lodge Theosophical Society Building, French Bridge, Chowpatty, under the Presidentship of Dr. G. V. Deshmukh, M. D. (Lond.), F. R. C. S. (Eng.), L. M. & S. (Bom.).

1. That this Meeting of the Medical Profession views with great concern some of the Sections and Sub-Sections of the Draft Bill to establish a Medical Council for India. The composition of the Bill as also of the covering letter suggests, that it is drafted mainly to placate the General Medical Council of the United Kingdom. The Profession is emphatically of opinion that if the British Indian Medical Council is to be established under an Act, it should in no way be subservient to any outside body or authority. It should have the same powers, rights and privileges as those of the General Medical Council, particularly in matters of education and reciprocity ; it should be composed on democratic principles with a majority of elected members and an elected President. It should have the power to appoint its own Registrar, who should not be entrusted with the duties of an Inspector or of a Visitor.

2. That this Meeting of the Profession expresses its indignation at the restriction put on the free choice of the electorate, viz., to elect, as members of the Council, such men only as have five years or more of teaching experience. The Profession considers this restriction, which relegates the rights and privileges of 6,000 of its members

*Published in this issue.

to an insignificantly small body of about 500 medical men, as an insult to its intelligence and derogatory to its self-respect. The Sub-Section 3 of Section 5 pertaining to the restriction should, therefore, be expunged from the Bill, and the Medical Profession should be left unfettered to select its own representatives.

3. That this Meeting of the Medical Profession accepts for recognition qualifications granted by licensing bodies in the United Kingdom, in British possessions, and in foreign countries, as mentioned in the Register of the General Medical Council and described in the Second Schedule to the said Bill, upto the enactment of this Act only, but strongly objects to any further recognition of such qualifications, ipso-facto, as implied in Section 19 (1) of the Draft Bill, because such a recognition would practically deprive the British Indian Medical Council of its power of exercising or arranging schemes of reciprocity with these licensing bodies, and make the Council indirectly subservient to the General Medical Council of the United Kingdom. Under no circumstances is the Profession prepared to accepct the creation of such a Council. The Sub-Section 1 of Section 19 should, therefore, be expunged from the Draft Bill or modified as under :—

> "The medical qualifications granted by medical institutions outside British India, which are included in the Second Schedule, shall be recognised medical qualifications for persons enrolled or entitled to be enrolled on the Provincial Medical Registers upto the enactment of this Act."

4. That a Committee called the Indian Medical Council Bill Committee consisting of the following members be appointed to co-operate with all important Medical Associations of the Independent Medical Profession of India for the purpose of carrying on an united agitation for the removal of all objectionable features of the Bill, to render it acceptable to the Profession, or otherwise to have the Bill rejected by the Central Legislature, when introduced therein. The names of the members proposed are as follows :—Dr. G. V. Deshmukh, *President*, K. K. Dadachanji, (Mrs.) Dossibai Dadabhoy, S. B. Gadgil, M. D. D. Gilder, S.N. Navalkar, P.T. Patel, S.J. Popat N. A. Purandare, V. G. Rele, J. E. Spencer and H. V. Tilak.

5. That this Meeting authorises the President of the Meeting to send copies of these Resolutions to :—

> (1) All the Medical Associations and Universities of India, (2) The members of all Legislatures, (3) The Government of India and all Provincial Governments, (4) The Secretary of State for India, and (5) The Press.

COONOOR MEDICAL ASSOCIATION.

A special meeting of the Medical Licentiates of the the Nilgiris was convened in Coonoor, at 4 P.M. on 13-12-'31, under the presidentship of Dr. A. L. Meganatham and the following resolutions were passed unanimously :—Resolved :—(1) This meeting of the Medical Licentiates resident in the Nilgiris, convened in Coonoor, views with great concern the proposal in the All-India Medical Council Bill to exclude the Medical Licentiates from the would be All India Medical Register and, therefore strongly protests against such a measure and at the same time urges on the Government the necessity of including in the All-India Medical Register all the Licentiates (i.e. L.M.Ps, I.M.Ds and other qualified Medical men whom the Bill intends to exclude) who form the majority among medical practitioners practising the Allopathic system of medicine in India. This request of theirs is in no way against the interests of the State or of the Medical Graduates but is, in fact, in keeping with the policy of the State in other countries where no invidious distinctions are made between University and non-University men in the matter of registering their qualifications.

(2) This meeting of the Medical Licentiates of the Nilgiris requests the Madras University to exempt the non-University qualified Medical Practitioners of five years standing from appearing for the priliminary arts examination, in order to study for the University Medical degree.

(3) This meeting authorises the President to despatch copies of the above resolutions to (1) The Secretary, Local Self Government Department of the Madras Government (2) The President of the Madras Medical Council (3) The Registrar of the Madras University (4) The General Secretary of the All-India Medical Licentiates' Association and (5) The Editors of "The Indian Medical Journal," "The Medical Practitioner," "The Antiseptic," "South Indian Medical Union Bulletin" and other journals so as to stimulate activity in members of other similar Associations in other districts.

TO ALL THE RURAL MEDICAL PRACTITIONERS IN THE MADRAS PRESIDENCY.

DEAR DOCTOR,

The sixth year of the life of our Association would have come on us by the time this appeal is in your hands. It is to be admitted that the year, which has just passed out, did not see much of activity on our part ; such, however, was not due to any slackening of our

enthusiasm, but that we had banked all our hopes on, and deferred further action, till after, the deputation we had requested permission for, to wait on the Honble the Chief Minister, in company with the Surgeon-general. In fact, the Hon'ble the Minister was pleased to fix a day in August last to receive our deputation, but it could not come off, as Surgeon General Sprawson had to suddenly leave the country for reasons of health. I am glad to tell you, however that the Minister has again kindly signified his pleasure to receive our deputation in February next, when the permanent Surgeon General would have returned from leave. It is hoped that with the return of Major-General Sprawson (than whom it will be difficult to find a more fair-minded and sympathetic patron for our cause), in full health, we would be able to remove our grievances and begin a new era.

It is a matter for satisfaction that some districts have acted on my suggestion to form District Rural Medical Practitioners' Associations to serve as an auxilliary to the Provincial Association, and that they have done some real spade work. It is my earnest wish that every district should have such an association, if we really want to achieve our ideal and deserve it. It is true that we have achieved something, but there is far more to be achieved and I would therefore make no apology for requesting the continuance of your sincere co-operation, of which the early remittance of your subscription would be an earnest.

Assuring you always of my best services and wishing you a prosperous and happpy New Year.

I remain,
Ever sincerely yours,
S. RAMASUBBÚ,
Secretary,
The Madras Provincial Rural Medical Practitioners' Association.

Viraganur,
Salem Dt.
18-12-'31.

Book Reviews.

"Leprosy Review" July 1931. Published by the British Empire Leprosy Relief Association, 29, Dorset Sq., London, N.W.I.—Price 2 sh.

This number of the 'Review' is a very important one, as it deals with the recently held International conference on leprosy under the auspices of the Leonardwood Memorial Fund, at Manila (Philippine Islands). This conference was long overdue as the previous Strassburg conference was not a conference of the real leprosy experts but predominantly of a handful of European dermatologists whose knowledge of leprosy was derived from one or two stray cases treated by them. Whole time leprosy workers in different lands have each adopted a system of classification of the various types and stages of leprosy which agreed best with his or her own ideas of the disease. Consequently, different methods of classification have been proposed and used, with the result that considerable confusion has prevailed in the literature on leprosy. No two workers, would classify the same case in the same way. Thus, for want of uniformity in classification the results of different workers cannot be compared. This has naturally led to stagnation and has impeded further progress in Research work.

It was felt by all the actual workers in leprosy, that an International conference to settle the problem was a *sine qua non.* The generosity of the authorities of the Leonardwood memorial fund enabled such a conference to be held at Manila (Philippine Islands) in January 1931. Only, leading wholetime leprosy workers from each country were invited to this conference; and Dr. E. Muir, the leading leprosy research worker in India attended the conference. Dr. John Lowe of the Dichpali Leprosy Hospital (Nizam's State) also attended the conference. Dr. Graham, the Public Health Commissioner with the Government of India also attended the conference, as the highest health authority of the country. The conference lasted for a fortnight and much useful work was accomplished within such a short time.

To the Reviewer it appears that the most practical and tangible outcome of the conference is the formulation of a system of classification which can be used all over the world. This is no small achievement for a conference, composed, as it was, of active and leading leprosy experts of different countries, who had each evolved a system of classification that suited best, his own experience of the disease. In fact, as was pointed out, by Dr. H. W. Wade, the chief pathologist of the world famous Culion

Islands Leper Colony and the Medical Director of the Leonardwood' memorial fund, while discussing the subject of the new classification and its practical application with the present reviewer, here in Purulia, the conference had to reconcile the views of experts who were diametrically opposed. Thus, on the one hand there were experts who would rely exclusively on clinical signs for designating the various types and subtypes; and on the other hand there were experts who considered that the microscope should play the decisive role in the diagnosis of the different degrees of the cutaneous cases. Fortunately for the workers, at large, these two extreme viewpoints have been reconciled, and a system of classification that is as easily adoptable by the pure clinician as by the more fortunate microscopist, has been evolved. Of course, it is not suggested here that the new classification is the ideal one or better than some of the older ones in use. With regard to this point individual opinions of different workers may vary. Personally, the Reviewer feels that with all its alleged inadequacy the older classification of Dr. E. Muir. so long in use, (in India at any rate) is more descriptive and practical. Be that as it may, the new International nomenclature evolved by the conference has to be used by workers all over the world in the interests of medical science.

The conference has also recommended the use of some new technical terms as being more scientific than some of the older ones, the use of which has only caused considerable confusion in the literature. For the first time in the history of the disease, a clear definition of the different types of lesions produced by the disease, has been laid down by the conference.

A longfelt need for an International association of active leprosy workers from different countries, on the lines of the League of Nations' Health Organisation, which alone might be able to pool experiences of different workers and act as an authoritative body whose counsels would be eargerly sought after, by workers in leprosy as well as by lay administrators of different countries, has been fulfilled by the formation of the "International Leprosy Association". All active leprosy workers can become regular members of this association on payment of an annual subscription of £1 sh. 1; and non-medical workers who are in sympathy with the objects of the association, can become associate members on payment of the same amount annually. An international journal of leprosy will also be published in English, French and German.

Only a general review of the report on the conference is attempted here. But, in view of the importance of this conference the Reviewer proposes, shortly, to critically review the recommendations of the conference and the new classification of leprosy formulated

by it, for the benefit of those readers of "The Antiseptic", who are not wholetime or active leprosy workers, but who wish to keep their knowledge of leprosy, up to date.—*G. R. RAO.*

"**A Year's Development**"—Published by the British Empire Leprosy Relief Association London. As the title itself suggests, this booklet records the developments of the British Empire Leprosy Relief Association during the calendar year 1930. As one, who has had the privilege of watching the birth of and the subsequent growth of this Association, the Reviewer notes with satisfaction the slow but steady progress made by this Association from year to year. This annual report seems to be a distinct improvement on its predecessors in that there are photos which depict the actual conditions under which, the noble object of the association, is being carried out in the different parts of the British Empire, particularly in the so-called "Dark continent" (Africa). That this report should devote almost all its available pages to the leprosy problem as it affects the so-called "Dark continent", is only too proper, as the medical world at large (in India at any rate) is in utter ignorance about the affairs in far off Africa. Even a cursory glance through this booklet cannot fail to impress upon the reader, the magnitude of the problem, and the inadequacy of the resources of the Association to tackle it successfully. But the Association has been making a noble effort to carry light and hope to the dark corners of the "Dark continent."

We, in India, have been a little fortunate in that we have slightly better resources to tackle the leprosy problem; and official and non-official agencies, are both evincing a fairly keen interest in the problem of leprosy prevention. But in some parts of Africa, the public do not seem to evince as keen an interest in tackling this problem as they should, as is evident from the Secretary's report. The administrative authorities seem to be doing their best, but public support, does not seem to be forth-coming in any large measure. British West Africa particularly the Gold Coast and Nigeria, seem to have advanced far ahead of the other provinces; and the report on the antileprosy activities in these parts, affords a striking and salutary contrast to the reports from other parts of Africa.

A special wholetime leprosy officer with adequate training in leprosy is absolutely necessary, if a successful campaign against leprosy is to be carried on, in any province or district, anywhere on the globe. But this cardinal fact does not seem to have been understood properly in some parts of Africa. As a result of the moving appeals (cleverly interspersed in the text of the report) by the Secretary, it is hoped that the necessary public support will be forth-coming.

A map of Africa showing areas where some sort of antileprosy work is being carried on, is appended which shows that there are larger gaps to be filled in.

A brief account of the antileprosy activities during the year under report, in India, is also included. It is evident from this account that some tangible results have been achieved by the combined efforts of those connected with the Indian Council, and so far, the problem has been tackled along right lines.

Considering the magnitude of the problem, the inherent difficulties to be surmounted, and the inadequacy of the resources, even a little progress has to be taken into account in judging the usefulness of this association. Needless to say that the association richly deserves the support of the commercial and the moneyed classes particularly in Africa.

This is a report which should be perused by all administrative officials, and the educated public, without whose active and enlightened support, no public health problem, can successfully be tackled. The Secretary of the British Empire Leprosy Relief Association, may be addressed, for a free copy of the report. The address is 29, Dorset Sq. London, *N. W. I.—G. R. RAO.*

Creative Mind.—By Professor Spearman. Published by Messrs. Nisbet & Co., 22, Berners St., London W. I. Price 5/- sh.

It is with considerable diffidence that one approaches the task of appraising the merits of a book by such a distinguished psychologist as Prof. Spearman. His two previous volumes "Principles of Cognition and Abilities of Man" rank high almost as classics in Psychology. His third contribution 'Creative Mind' is less ambitious in design. It forms part of the "Contemporary Library of Psychology" meant essentially for the lay reader, and attempts a critical analysis of the mechanisms and processes that underlie contributions to human culture and progress termed "Creative."

Some years ago William James in a moment of dispair at the chaos then prevailing in psychology wrote of it thus "A string of raw facts, wrangle about mere opinions, classification on the descriptive level; not a single law in the sense that the physical sciences have laws. Psychology is not a Science, it is only the hope of a Science." Spearman's answer to this damnatory verdict of James was his noegenetic principles, and the same principles he wants to apply in his elucidation of the Creative Arts & Sciences.

The book is mainly divided into three parts. The first concerns itself with enunciation of his laws and principles. They are three qualitative—the apprehension of experience, relation finding and correlate education; five quantitative—constancy of mental energy (G) Retentivity, Fatigue, Influence of the Will and the Law of Primordial tendencies—also the three processes of reproduction, disappearance and clearness, variation. This part forms an admirable summary of his earlier chapters in his rather tough book "Principles of Cognition".

The second part deals with the application of these principles to various Arts and Literature. He first starts with Pictorial Art and emphasises that the salient features of really effective painting are Truth, Beauty, Emotionality, Exaggeration, and Self-expression. He illustrates it with reference to the Dreamers of Moore, David's Portrait of Madame Recamier, Botticelli's Birth of Venus, Descent from the Cross by Rubens, the Golden Stairs by Burne Jones etc., Analysing these factors further he attempts to show that the noegenetic laws are at the back of them all. But what is of great interest to us is his definition of Beauty as "perfect Energising." He next considers Architecture, Sculpture, Music and Literature and shows with many illustrations how the elements that preponderated in painting, function here also in a similar manner.

In the third part of the book, he deals with great scientific Hypothesis and discoveries of Archimedes, Newton, Einstein, etc., In his concluding chapters he pays a tribute to Cox's work on Texts of Mechanical Ability, Laycock and Strasheime's Tests on Adaptability to new situations, analyses the mechanism of Hallucinations and Delusions and closes the book with a few words on our knowledge of the World external to ourselves.

The book is very interesting and holds our attention throughout; while it is quite true that Spearman's principles and processes play a very important part in the Genesis of Creative Arts and Sciences, they do not seem to be all. One feels that there is something else wanting to complete the picture, and the indefinitely understood primordial tendencies must have a great say in the matter.

It is with feeling of regret we notice, that scant justice has been meted out to the Gestalt and the Psychoanalytic School. The contention of the Gestaltists, that the whole is more than the sum of its parts has never been better instanced than in the Creative Arts and Sciences. Suppose we see a splendid opera; behind the scenes it is all paint and powder, mechanics of scene shifting, perhaps with some music. But the effect on the beholder is more than all this. Again, different individuals react in different ways to the same situation. Many permutations and combinations are possible each capable of providing considerable aesthetic satisfaction to the spectator. The question arises whether there are many ways of 'perfect energising.'

The Gestaltists have also conceived their configurations in terms of energy distribution, and the second law of Thermodynamics has

been extensively used in all its mathematical variations to explain the stresses set up in pattern formation, and how the most permanent configuration is the one with the least available free energy.

Secondly, however much one may look askance at the Psycho-analytic School, because of their insistence on the bestial side of man, yet one must concede that it is the medical men and the Clinicians who have contributed most to the Psychology of Conation. The drives, urges and wishfulment not only of an individual but of the whole race crystalises often into great poetry and works of Art. Mythology, in fact, has been termed the Dream of a people often out of the phantasies which even inferiority provokes, constructive psychotic activities emerge, which come nearer to the real than that from which it has been separated. Attention is drawn in this connection to the degenerative predisposition in Mozart's ears, to Beethoven's Otosclerosis, and to the stigmatising of Bruckner's ear by a naevus. In this connection, the writer feels that Jung's Conception of the psyche, his primordial images and his archetypes, however metaphysical our conceptions might be, will eventually play a great part in the proper appreciation of the Creative Arts and Sciences.

The work on the Experimental Aesthetics by Valentine and others has mostly been confined to Colours and to symmetry of shapes and figures and to a few musical tones. No fundamental points however have been cleared so far.

In conclusion we might say that Professor Spearman's book supplies a much needed want. It is highly thought provoking, and his mastermind has succeeded in rendering a very stiff subject clear and lucid.—*M.V.G.*

Practical Nursing. By Herbert E. Cuff. M. D. F. R. C. S. Rewritten and enlarged by W. T. Gordon Pugh, M. D. B. S. Published by William Blackwood and Sons Ltd. Edinburgh Price 1 sh. 6d. net.

The book is a third impression of its seventh edition and this by itself speaks eloquently of its deserving popularity as a text book for nurses. It is comprehensive and deals with the nursing of all types of patients, surgical medical, gynaecological and parturient. It is in our opinion an ideal text book because the information which it gives is reliable, exhaustive, precise and free from fads and prejudices. It will be no less useful as a book of reference as it undoubtedly is as a text book on practical nursing. As the intrinsic nature of the subject is not susceptible to the building up of an attractive and arresting style we cannot blame the author for giving us a dry book of details on nursing. Yet nowhere within 737 pages of this volume

could we find an ambiguous expression, meaningless repitition of words or grammatical inaccuracies. That is an achievement by itself in writing a book of this nature.

We are inclined to believe that the medical practitioners rarely read a book on nursing and it will pay them well if they read this book to enable them at least to set right an egregious nurse, apart from the usefulness of knowledge gained which is as essential as, we may boldly say more essential than, the actual treatment by drugs.

William Blackwood & Sons have done ample justice to their work as publishers in presenting this book in an attractive get up with paper that looks like resisting the onslaught of repeated use and with print that is clear, bold and free from compositor's error.—*A. V.*

Books Received.

The following books have been received and the courtesy of the publishers in sending them is acknowledged. Reviews will be published from time to time [Ed. A.].

A Practical guide to the Edinburgh F.R.C.S.—Mary Keith-Thompson. Thacker Spink & Co. Ltd., Post Box 54, Calcutta. Rs. 2.

The Nature and treatment of Stammering.—E. J. Boome and M. A. Richardson. Methuen & Co. Ltd., 30 Essex St., London W. C. 3 sh. 6 d.

The Thyroid and Manganese treatment—Its History, Progress and Possibilities.—H. W. Nott. William Heinemann (Medl. Books) Ltd., 99, Great Russell St. London W. C. I. 7sh. 6d.

Modern Medical Treatment Vols. I & II.—Bellingham Smith and A. Feiling. Cassell & Co. Ltd., La Belle Sauvage, London. 30. sh. net.

Medical administration of Teaching Hospitals.—E. B. Bay. University of Chicago Press, Chicago, Illinois. $ 2. 00.

Food Poisoning and food-borne infection.—E. O. Jordon. University of Chicago Press, Chicago Illinois. $ 2. 50.

Report on the working of the Punjab Mental Hospital, Lahore for the year 1930.—Supdt. Govt. Printing Lahore. Punjab. Rs. 2.

The Psychoanalysis of the Total Personality.—F. Alexander. Nervous and Mental Diseases Publishing Co., New York and Washington. $ 3. 50.

Brain and Personality.—P. Schilder. Nervous and Mental Diseases Publishing Co. New York and Washington. $ 3. 50.

Psychology of Early childhood.—W. Stern. George Allen and Unwin Ltd., 40. Museum St. London. 2nd Ed. 18 sh

Social control of sex expression.—Geoffray May. George Allen and Unwin Ltd.. 40. Museum St., London. 12 sh. 6 d.

The Psychology of Insanity.—Bernard Hart. Cambridge University Press, London. 4th Ed. 3 sh.

Anatomical Terminology Part I, & II.—N. S. Sahasrabudee M. S. Oppo. Normal School, Sitabardi, Nagpur C. P. As. 4 each.

Leprosy, summary of Recent Work No. 23.—Bureau of Hygiene and Tropical diseases, Keppel St. Gowe St. London W. C I.

Practical Nature Cure Vols. I, II & III.—K. L. Sharma, Nature Cure Publishing House, Pudukottah, S. I. Ry. Rs. 4.

More from the Primeval Forest.—A Schweitzer. A. C. Black Ltd., 4, 5 & 6, Soho Sq. London. 6 sh.

On the Road to Health—3 lectures—Indian Red Cross Society Qrs. New Delhi.

Annual Report of the Institue for Medical Research for 1930.—A. N. Kingsbury, Govt. Printing Office, Kualalumpur F.M.S.

Report on the Public Health administration of Burma 1930.—Supdt. Govt. Printing & Stationery, Rangoon.

Personel Hygiene and the Care of the Skin—Experience, J. C. Basak, 363, Upper Chitpore Rd. Calcutta. Re. 1-8.

Manual of Human Physiology 3rd. Ed.—L. Hill. Edward Arnold & Co. 41 & 43 Maddox St., Lodnon. 6 sh. 6d.

Anual Report and Statistics of the Govt. General Hospital, Madras 1929.—Supdt. Govt. Press. Madras. Rs. 2-12.

The Cause of Cancer.—Gye and Purdy. Cassell & Co. Ltd., La Bella Sauvage, London E.C. 30 sh.

Fertility and Sterility in Marriage.—H.H. Van de Velde. William Heinemann (Medl. Books) Ltd., 99, Great Russel St., London. W. C. I. 25 sh.

Sex Hostility in Marriage.—H. H. Van de Velde, William Heinemann (Medl. Books) Ltd., London. 17 sh. 6 d.

The National Medical Journal of China—Aug. Oct. 1931.—Parasitology, Number—P. U. M. C. Peiping. (Peking) China.

Tropical Hygiene for Europeans and Indians—4th. Ed.—Lukis & Blackham. Thacker Spink & Co. Calcutta. Rs. 5.

Surgery Vol. III—Surgery and Pathology of growths.—S. K. Sen, The Surgical Education Society Ltd., 11, Esplanade Row East, Calcutta. Rs. 7/8.

The special Merits of Surgery.—S. K. Sen, The Surgical Education Society Ltd., Calcutta As 6.

Rockfeller Foundation Annual Report 1930.—61 Broadway, N. Y.

My Host the Hindu.—Muriel Lester. William & Norgate Ltd., 38 Great Ormond St., London W. C. I. 5sh.

Bapu Gandhi.—A. B. Paddington. William & Norgate Ltd. London. 2sh. 6d.

League of Nations: Health organisation, Social and Humanitarian Activities 1931.—Information Section, Room 197, Geneva.

Report on the Work of the Conferences of Directors of Schools of Hygiene.—Publication Department, League of Nations. Geneva, 5sh.

Administration Report of the K. E. VII Memorial Hospital and the Seth G. S. Medical College. Bombay 1930-31.—J. N. Mehta M. D.

Anaesthesia, Elementary and Advanced.—K. E. Madan. 72 Lamington Road Byculla, Bombay Rs. 5.

Report of Research Institutions and Museums founded by Henry S. Well come.—The Wellcome Foundations Ltd., London.

Experimental Tropical Typhus in Laboratory animals.—R. Lewthwaite. Institute for Medical Research, Kualalumpur F. M. S.

An Introduction to Hygiene.—W. Roberton, E. & S. Livingstone 16 & 17. Teviot Place, Edinburgh. Indian Agents. Butterworth & Co., Ltd.,. P. B. 25 Calcutta.

Synthetic Biology and the Moral Universe.—H. Reinleimer. Rider & Co., Paternoster Row, London E. C. 4sh, 6d.

Disease of Stomache.—H. Morten. Edward Arnold & Co., 41 & 43, Maddox St., London W. 1. 10sh. 6d.

Functional disorders of gastro-intestinal Tract.—W. G. Morgan, J. B. Lippincott & Co., 16, John St., Adelphi, London. 21 sh.

The Science of Signs and Symptoms.—R. J. S. Mcdowall. William Heinelmann (Medl. Books) Ltd., 99. Great Russell St., London W. C. 1. 21 sh.

Surgical Pathology of the genito-Urinary organs.—A. E. Hertzler, J. B. Lippincott & Co., 16 John St., Adolphi, London W. C. 2. 21 sh.

Anorexia Nervosa.—Langdon Brown & others. C. W. Daniel & Co. 46, Bernard St., London, W. C. 1, 2sh. 6d.

Deliverence from Cancer.—H. Reinheimer. Rider & Co., London, 5sh.

Posture: its relation to Health.—Dickson F. D. Lippincott & Co. 16, john St., Adalpin London W. 1. 6sh.

Midwifery for Nurses.—Miller E. Arnold & Co., 41 & 43, Maddox St., London W. 1. 6sh.

Introduction to Mental Hygiene.—Groves & Blanchard. Gerald Howe Ltd., 23, Soho Sq., London. 16 sh.

Tuberculosis—Its treatment and cure with the help of Umckaloabo.—An English physician. B. Fraser & Co., 62, Pepy's Road, Cottenham Park, London, S. W. 3sh. 6d.

The Treatment of Pulmonary and Surgical Tuberculosis with Umckaloaba 2nd Ed.—Adrien Sechahaye. B. Fraser & Co., London. 5sh.

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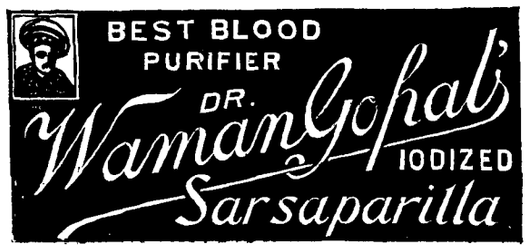

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Press Opinions :—See The Indian Medical Journal January 1927; Practical Medicine April 1927; Madras Medical Journal June-August 1927; The Medical Review of Reviews August 1927; Indian Medical Record September 1927; The Quarterly Journal of Medicine October, 1927; Antiseptic November 1927; Indian Medical Gazette May 1928 and Journal of Association ot Medical Women in India August 1928—all of these speak very highly of it. Full Copy of the reviews on application

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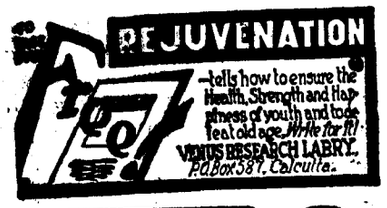

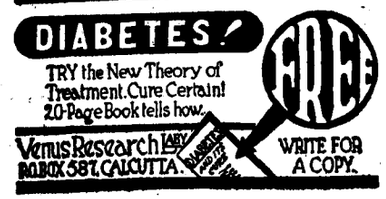

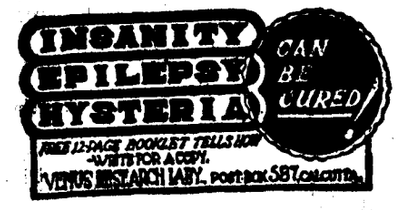

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A Monthly Medical Journal

EDITED BY

Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

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Original Articles.

LITHAEMIA AND ITS MANAGEMENT. *

BY

MAJOR P. V. KARAMCHANDANI, M.B., B.S. (Bom.) M.R.C.P. (Edin.)

A. I. R. O., *Dadu, Sind.*

(1) By lithæmia is meant excessive formation or accumulation of uric acid in the blood or the system. Uric acid is a subject which has special fascination for the lay mind and the physician should be well acquainted with all the aspects connected with this question.

(2) Uric acid is merely one and one of the less toxic purin bodies. Fischer gave the name of purin to bodies containing the nucleus $C_5 N_4$ which will yield two urea molecules on oxidation. Twelve purins are known to exist in nature more important of which are:—

Oxypurins.....	Monoxypurins...	" Hypoxanthin "...	$C_5 N_4 H_4 O$
	Dioxypurin.....	" Xanthin ".....	$C_5 N_4 H_4 O_2$
	Trioxypurin.....	" Uric acid ".....	$C_5 N_4 H_4 O_3$
Amino purins.....		" adenin ".....	$C_5 N_4 H_4 NH$
	Amino-oxypurin.	" Guanin ".....	$C_5 N_4 H_4 O NH$

* Specially contributed to the 'Antiseptic.'

Methyl purins...Theobromine.....$C_5 N_1 H_2 (CH_3) O_2$
Caffein and Thein.....$C_5 N_1 H (CH_3)2 O_2$

(3) Uric acid which is excreted in urine comes from two sources in healthy people. (I) Exogenous source (II) Endogenous source.

(I). Exogenous source comprises of foods containing :

(*a*) free purins *e.g* Xanthin, hypo-xanthin in meat extracts.

(*b*) methyl purins *e.g.* theobromine, caffein and thein in tea, coffee and cocoa.

(*c*) bound purins from decomposition of nucli in nuclein containing substances like liver, kidney, and pancreas.

The following table from Walker Hall will give an idea of purin percentage of different foods:—

Fish.....	Cod.....	4·07	purins in grains per pound.				
	Salmon.....	8·15	,,	,,	,,	,,	,,
Meat.....	Mutton.....	6·75	,,	,,	,,	,,	,,
	Beef.....aver.....	11·22	,,	,,	,,	,,	,,
	Chicken.....	9·06	,,	,,	,,	,,	,,
	Liver.....	19·26	,,	,,	,,	,,	,,
	Pancreas.....	70·43	,,	,,	,,	,,	,,
Vegetables.....	White bread, rice,						
	Cauliflower, lettuce	0	,,	,,	,,	,,	,,
	Potatoes.....	0·14	,,	,,	,,	,,	,,
	Peas.....	2·54	,,	,,	,,	,,	,,
	Beans.....	4·16	,,	,,	,,	,,	,,
Beverages.....	Milk.....	·0014	,,	,,	,,	,,	pint.
	Beer.....aver.....	1·18	,,	,,	,,	,,	,,
	Tea China.....	0·75	,,	,,	,,	,,	Tea cup.
	,, Ceylon.....	1·21	,,	,,	,,	,,	,,
	Coffee.....	1·7	,,	,,	,,	,,	,,

It may be remarked that depriving a gouty patient of his red meats like mutton and giving him white meats like chicken apparently looks unsound because the percentage of purins is higher in the latter but the principle on which this is advised is the fact, that white meats lose their extractives more readily on cooking than do red ones (*Adler*).

II. Endogenous source is believed to come from the breaking down of cell nucli of body *i.e.* were tear. Plummer however believes that it is not the disintegration of leucocytes but it is their excessive activity which increases the output of uric acid and he brings forth the instance of pneumonia where increased output of uric acid runs parallel with leucocytosis *i.e.* before crisis and not with large destruction of leucocytes *i.e.* after crisis. This is disputed and the current

notion is that all the organs contain enzymes which break nucleoproteins of the tissue nucli into uric acid as follows:—

(*a*) 'Nuclease' frees adenin and guanin from nuclein.

(*b*) 'Deamidase' converts adenin and guanin into xanthin and hypoxanthin.

(*c*) 'Oxydase' converts xanthin and hypoxanthin into uric acid (while in animals 'uricase' finally disposes off uric acid as CO_2). In man absence of uricase explains his difficulty in disposing off uric acid.

(4) In gout there is considerable increase in the amount of uric acid in blood and before the attack blood may contain 4-6 mgm% of uric acid, the normal figures being 2-3·5 mgm%. This increase in uric acid may be due to increased production, but since uric acid is increased in some people who never had gout *e.g.* in leukaemia, and severe cases of nephritis, it disproves this theory. The other theory is of decreased excretion thereby leading to the retention of purin bodies. This retention may be due to (i) increased destruction in the body, (ii) retention by the kidneys, (iii) metabolic defect. There is no evidence of increased destruction in the body as the blood of the patient before an attack may contain 4-6 mgm% of uric acid.

Retention by the kidneys is discredited because when cincophan is given to a gouty patient there is great increase in output of uric acid in urine and a decrease of uric acid in blood. Besides after excision of dog's kidneys, no uric acid or other purins can be found in blood even on a diet rich in purins. This seems fatal to the theory of retention.

On the other hand if liver be excluded from the circulation uric acid in blood and urine is increased. This suggests that something, probably intracellular ferments in liver destroy purins. The fact that extracts of liver cause uricolysis in vitro and vivo further supports this contention, and proves the last theory. The kidneys can't excrete uric acid, not because there is primary defect in them but because there is metabolic defect. The whole reveals a deficiency in the capacity of the body to katabolise purins and that uric acid circulates in an abnormal form.

(5) The next question is what is this abnormal form? Von Noordin thinks that in normal blood purins are combined with proteins from which kidneys can separate and excrete uricacid, but in gout either this combination is deficient or abnormal, hence uric acid retention. Sir William Robert thinks that in gouty patient uric acid accumulates as less soluble biurate salt hence its deposition in joints and various parts. Langdon Brown however thinks that a man who is readily poisoned by purins is in the same line as cysti-

nuria or alkaptonuria, all lacking a link in the chain of protein katabolism. Thus then there is something circulating in the blood which in its endeavour to escape projects itself upon any organ or tissue. The reason why big toe particularly is first affected in acute gout is due to: (i) high per cent of Sodium salts around joints, (ii) the big toe being more liable to trauma, (iii) low temperature favouring diposition. The chemical pathology of acute gout may now be summarised as below:—

1. Uric acid and purins circulate in blood in abnormal form.
2. Kidneys are unable to separate and eliminate uric acid from this combination.
3. Uric acid salts therefore accumulate in the blood.
4. They alter from soluable to less soluable form and blood becomes saturated.
5. This causes irritation and mechanically inflammation = gouty paroxysm.
6. After deposition of the 'something', blood is temporarily under saturated and the patient feels well.
7. Saturation then slowly commences and the cycle repeats.

(6) While one associates lithæmia with the classical condition above described and more gross renal and hepatic calculus, one should not lose sight of various gouty manifestations like gouty neuritis where the 'something' projects into the sheaths of nerves; gouty eczema, psoriasis and furunculosis where the 'something' projects itself on to the integument; gouty pharyngitis, laryngitis, bronchitis, and asthma where 'it' attacks the air passages; gouty dyspepsia where 'it' settles in the stomach; and gouty irritability, somnolence and disinclination for work, where 'it' selects the brain.

(7) The management of this condition provides two cardinal indications:—

I. Check the source of this poision by altering dietary.

II. Hasten its elimination by increasing metabolism and invoking aid of emunctories.

I. DIETARY:

(*a*) In dietary alcohol comes first. Whilst with malt extracts *i.e.* beer there is actual intake of purins, in all cases alcohol leads to diminished solution of purins. Again while the beer drinker is more liable to suffer from the obvious forms of the malady, the spirit drinker suffers from more inexorable, though insidious forms like artero-sclerosis and granular kidney. Therefore absolute abstention must be insisted upon. Unless the raw material is stopped, the manufacture of article will continue.

(*b*) Next to alcohol come nitrogenous foods. Those nitrogenous foods which are obtained without causing sacrifice of life *e.g.* milk, eggs, pulses, cheese, are less harmful than flesh, poultry, fish and game.

(*c*) Sugar if thoroughly insalivated is less liable to cause gout because efficient mastication makes it less liable to upset the stomachs of lithæmic patients. Undue indulgence should however be forbidden.

(*d*) Salt is one of the commodities which is excreted with difficulty by an inadequate kidney, thereby leading to accumulation of chlorides in the system. We know that œdematous fluids contain high percentage of chlorides, which are excreted as soon as the œdema disappears. And because the amount of sodium chloride in blood is same, irrespective of the amount ingested, if kidneys be not able to excrete sodium chloride, it passes out of the blood vessels into the tissues, where,by attracting fluid causes œdema. This œdema is at first visceral and deep seated, and kidneys are one of the first viscera so affected. Thus to renal inadequacy for chlorides is added general inadequacy leading to a viscious circle. Thus chlorides though not poisonous in themselves lead to retention of other poisons. According to Widal, the amount of chlorides in urine is a fair gauge of functional renal capacity of the patient and is an early test of renal inadequacy.

II. EMUNCTORIES:

(*a*) Water is of prime importance because abundance of water alone can wash out the poisons from the system and 2½ pints of water daily should be prescribed as the minimum amount. Best time to take this is about half an hour before food. My practice is to prescribe still water with fresh lemon juice, the quantity of the latter being half an ounce in 24 hours. It renders the blood more fluid by precipitating calcium salts, thereby rendering it more mobile and more fitted for bathing and flushing various tissues, thus promoting efficient excretion. The question of water being cold or hot should be left to the individual taste.

(*b*) In addition to adequate supply of water there are some time-honoured drugs which render the process of elimination more easy and out of these potassium iodide is most important. My usual practice is to start with potassium iodide and pul: guaiacum each grains ten in a catchet three times a day. If pul: guaiacum causes diarrhoea grains five of bismuth salicylas are added to each catchet. Where potassium iodide and pul: guaiacum catchet fail dilute phosphoric acid has been found to succeed.

(*c*) Excretory organs require to be worked to hasten elimination of the poison. So far bowels are concerned pul: guaiacum is

usually enough to set them working; failing it I add grains ten of sodi sulph: to each catchet. The action of kidneys requires to be augmented and importance of water in this connection has already been emphasised. As aids to it diuretics which stimulate kidneys without raising blood pressure are necessary. Salts of potassium, infusum buchu and theobromine are recommended. Theobromine can be given in ten grain doses in a catchet three times a day, while infusum buchu and potassium citrate may be combined with potassium iodide in a mixture form if guaiacum catchet is discontinued.

The best way to increase the action of skin is by means of exercise or baths. Exercise should be in open air and just sufficient to induce perspiration because too much exercise produces tissue purins while our object is to reduce them as much as possible. Bath should be hot and followed by massage. Start with a bath of 100 F temperature lasting 10 minutes, and increase gradually till temperature of 105 F lasting 20 minutes is reached. Bath should be followed by massage. Hot bath in addition to excretion causes vascular dilatation which counteracts the effect of lithæmic poison that causes contraction of arterioles, high arterial tension, and ultimately arteriosclerosis. These then are the general indications for management of lithæmic states.

(8) To sum up:—

i. Uric acid is merely one and one of the less toxic purin bodies.

ii. Purins come mainly from the foods and partly from the tissues.

iii. The food purins are largely destroyed by the liver in health.

iv. Tissue purins are increased by leucocytosis and muscular activity.

v. We can control iii but have little control over iv.

vi. The lithæmic subject is unable to metabolise his purins properly, while his kidneys excreate them too slowly, Former leads to toxic symptoms and the latter to uratic deposit.

vii. The physician therefore should diminish the purin intake because the system's power of metabolising purins is defective; and dilute and wash the uric acid accumulation because this favours its deposition.

THE USE OF BELLADONNA IN MEDICINE.*

BY

DR. EDWARD PODOLSKY, M. D.

166, Rockaway Parkway, Brooklyn N. Y.

There are drugs which attain great esteem. This is because of their great worth and usefulness which even the most rabid of drugless healers cannot deny. Some have served mankind faithfully from the earliest of times; others have but recently found their true place in the scheme of therapeutics. Of the former one may mention belladonna. This is undoubtedly one of the major drugs at the service of the modern physician.

In the olden days belladonna sailed under many different names. It was the Dircion of Dioscorides, the acknowledged Father of Pharmacy: it was the valed mandragora plant of Theophrastus, the great reformer in medicine in the last decade of the Middle Ages. It was much esteemed by the ancient Egyptians and Syrians particularly in fighting insomnia. Magicians of those times also used it as a favorite ingredient in their love philtres, and for this reason attained the appellation "the sorcerer's herb." Saladinus of Ascoli mentioned quite prominently the leaves of solatrum furiale which many believe was belladonna.

The first undubitable reference to the plant, however, is to be found in the *Grand Herbier* which was printed in Paris, probably about 1505, and in 1542, Fuchsius was fully acquainted with bellladonna and its poisonous properties. According to Fluckiger and Hanbury's Pharmacographia, the definite introduction of belladonna into British medicine is of recent date and is due to Mr. Peter Squire of London, about 1860.

Mathiolus, an Italian physician, in a commentary in six volumes dated 1576 mentioned belladonna under the name of Solatrum Majus. He was well acquainted with the fact that it was a poison. During the 16th and 17th centuries this drug was extensively studied by Pena Faber and Mardoff who used it in cases of epilepsy and cancer. It is interesting to recall that the first to use belladonna in cancer were Galen and Avicenna.

Physiologists began to evince an interest in this unusual drug and among them Bouchardat, Stuart-Cooper, Brown-Sequard, Claude Beranrd and Schiff showed the difference in action of atropine on human beings and animals. Among chemists it was Brandes, in 1820, who isolated the basic principle of belladonna and called it atropine. Mein, Hesse and Gieger found methods of extracting this active principle. Lubekm isolated another alkaloid from belladonna which he called belladonnine. Regnaud and

* Specially contributed to the "Antiseptic."

Valmont showed that atropine consists of two isomers: one the atropine identified by Ladenburg and the other hyoscyamine.

In superstition and witchcraft the plant played an interesting role for centuries, and in this connection had a considerable vogue in Europe under the name of mandrake. Its poisonous properties led to its use as a convenient means of removing an enemy. Says Pultney: "There is none more memorable than the destruction of the army of Sweno. It is said that the Scots mixed a quantity of the juice of these berries with the drink, which by their truce, they were to supply the Danes with, which so intoxicated them, that the Scots killed the greatest part of them while they were asleep."

The manner in which the drug acquired the name of belladonna is an interesting one. Belladonna is derived from the Italian meaning beautiful women. This is in accordance with the fact that Leucotam a famous Italian poisoner, made use of the drug to destroy beautiful women. It was also used by beautiful women to enhance their beauty further by imparting a pleasing lustre to their eyes. The old English name for this drug was Dwale, or sleeping nightshade, which is described in John Gerarde's Herball or General Historie of Plantes (1633) as a plant "which causeth sleep, troubleth the minds, bringeth madness if a few of the berries be inwardly taken, but if more be given they also kill and bring present death."

Linne, the great systematizer of botany, applied the name atropia to the species and, as he prefered to have but one word to designate the genus also, he converted the two words bella donna into a single name. Atropia evidently seems to have been a specially suitable name for the species because Atropos, one of the fates, had the power to cut the thread of life.

In this country it was introduced by the Pharmacopoeia of the Massachusette Medical Society in 1808 and Thatcher's Dispensatory in 1821, and has since then enjoyed a reputation among American physicians as a drug of many virtues.

Atropi belladonna contains varying quantities of laevo-hyoscyamine, hyoscine in different isomeric forms, and sometimes atropamine and belladonnine (both anhydrous atropines) starch, coloring matter, etc. Atropine does not pre-exist the plant and has been proved to be a racemic hyocyamine. In the majority of galenical preparations of belladonna the methods hithertofore in use have failed to prevent the racimization, or partial racemization, of the hyocyamine and the consequent formation of atropine.

As with a few other notable drugs the composition of belladonna preparations cannot be accurately determined by any quantitative estimation of the total alkaloidal content based on a purely chemical method. It must be determined largely by qualitative as well as quantitative estimation of the alkaloids extracted, as ascertained by

physiological tests. Investigations by such men like Cushny, Rapp, Rothlin, Loffler, Lemay, Jaloustre and Liversay have proved that although a galenical preparation may show a high gravimetric content of alkaloids (particularly inatropine) such preparations frequently show comparatively small activity when tested physiologically. The varying physiological activity and consequent contradictory results are further complicated by the presence of colloidal substances which probably play a part in inhibiting the alkaloidal activity.

Researches carried on by Stoll, the great Swiss pharmacologist, developed a protective method of preaparing belladonna in which the formation of the less active atropine is avoided. This preparation, termed bellafoline, which has been found to represent the integral alkaloidal complex of belladonna leaves in a pure, soluble and absolutely stable form of malates, represents at the present time the greatest refinement in the presentation of this popular and very useful drug.

The nervous system has been termed the master tissue of the human body. Its functions are all important. When it fails completely life cannot go on. When it becomes deranged, life, in many instances, does not become worth living. It is on the nervous system that belladonna exerts its remarkable influence and exercises some of its most marvellous palliations.

Belladonna has found its place in the treatment of quite a few conditions. Sore throat, where the mucous membranes are very much engorged yields readily to belladonna medication. In eye work atropin has been used as a means of dilating the pupil to permit a better examination of the interior of the eye. It has also been used therapeutically to bring rest to inflamed and tired eyes.

Persistent vomiting is quite often very favorably influenced by this drug. Whooping cough is also benefitted. In meningeal inflammations, in post diphtheritic nephritis, in the rash of scarlitina, in night sweats, belladonna has done yeoman service.

Parkinsonian's Syndrome or disease was first described by an English doctor by the name of Parkinson in 1817. It is a disease of the extrapyramidal tracts of the central nervous system and is characterized by a rigidity of the extremities, a constant trembling of the fingers of the hands, a peculiar scanning tone to the speech, a to and fro rolling of the eyes and a mask like expression of the face. The victim of this disease is indeed in a bad way. Hithertofore all drugs have proved of little or no avail in bettering the patient's condition. Belladonna and its derivatives is thus far the only drug at the present time which has any effect at all, and these are quite gratifying.

The vagus is the longest nerve in the human body. It controls the heart, the lungs, the stomach, the intestines; in fact, there is scarcely an organ which it does not influence. When it is excessively stimulated by some poison a veritable block of these organs takes place, and if it persists long enough brings about death. A specific in overcoming vagal block is found in belladonna.

In addition to its action of the vagus belladonna also exhibits an inhibitive action on the nerve terminations of the parasympathetic system. Thus by paralyzing the peripheral endings of the vagi in the bronchioles, relief is obtained in asthmatic attacks. By inhibiting in the same manner the nerve endings of the salivary glands excessive salivation is diminished, a very desirable thing in certain cases of poisoning and disease.

Belladonna also has the faculty of paralyzing the terminations of the nerves which enervate the involuntary muscles and in consequence of this exerts some very wonderful therapeutic effects. By virtue of this fact belladonna by controlling excessive activity of the stomach is useful in alleviating stomach spasm in any part of the organ as well as exercising a moderating effect on the secretion of the gastric juice and HCL, thus reducing excessive acidity and disagreeable heart burn. Belladonna is a drug par excellence in controlling the pain of ulcer of the stomach.

The action of this drug may extend further down the digestive tract and exercises a calming influence on the intestines by inhibiting a too great activity and motility of the intestinal walls. In this manner spastic constipation is very effectively relieved by this drug, Spasms as well as colic are immediately put under control. That very troublesome and refractory intestinal ailment mucous colitis yields to the action of belladonna.

The identical soothing effect also becomes apparent on the uterus and in cases of dysmenorrhea (spasms of the uterus) due to various causes belladonna may be administered with relief to the patient. The uterus, the stomach, the intestines as well as the bladder are involuntary muscles, not under the patient's will and control, and when these become unduly active belladonna may be used as a break to control their abnormal motivity.

Enuresis, or bedwetting is a very troublesome condition, due to a hyperexcitability or hypermobility of the bladder. Belladonna in this disease is a very useful and effective drug and is very popular among physicians as a means of controlling the enuresis until the basic cause is found and removed.

Many remedies have been used for epilepsy and among the oldest is belladonna which in many cases has been used with some benefit to the patient. As an antidote to opium belladonna is well known and frequently taken advantage of. In rundown individuals

where there is an indisposition to exertion, where the extremities are cold, in nervous debility, and when a good general stimulant is desired belladonna is frequently called for. Neuralgic conditions are also favorably influenced by this drug.

Of the many interesting drugs now serving mankind faithfully and efficiently belladonna is one of the most interesting. Its debut was as an aid to those very expert Italian poisoners of the Middle Ages from which association it emerged with a rather fanciful name. As the therapeutic art grew and developed belladonna came into its own as the great antispasmodic in controlling unwonted activity of the various organs composed of involuntary muscle. Particularly valuable has it proved itself to the gastro-enterologist almost as valuable as opium to the surgeon. To the neurologist belladonna and its alkaloidal components is a godsent in the treatment of nervous affections which seem so intractible to other forms of treatment. To the eye specialist atropine has been the eye drug for many years. Belladonna can truly be said to be one of the really important drugs at the disposal of suffering humanity.

CHEMOTHERAPY OF ANTIMONIALS. *

BY

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The potentialities of Antimonials as therapeutic agents have recently been very well demonstrated and extensive research work is being now carried here in India as elsewhere in connection with this metalloid with the hope of preparing medicaments for combating some tropical diseases. These researches have already yielded much encouraging results. The fate of Antimony regarding its therapeutic value hanged in a balance for many decades and its use in therapy after much advocacy of its value by Basil Valentine and others fell into disrepute gradually. The use of Antimony goblets in taking wine as a result of such advocacy soon culminated in disastrous consequences and toxicities of this metalloid preparations became plainly apparent. It is only during the recent years, as a result of extensive and careful researches, the place of this element in modern therapy has been re-established without doubt.

In tracing this development, the first compound which drew attention of scientists for many years is undoubtedly the antimonial Tartar Emetic which was studied from the early part of the seventeenth century though it must have been known many years before as it was produced when wine was allowed to stand in Antimony

* Specially contributed to the "Antiseptic."

the case of Tartaremetic "Sb" is directly attached to the oxygen atom which joins it to the carbon atom. Antimony exists in the trivalent state here and the physiological activity is believed to be due to its splitting of Sb=o in the blood serum, which then acts upon the parasites of Kala-azar. Another compound allied to it is the corresponding sodium salt *viz*, sodium antimonial tartrate, which has attained a greater success than the previous one and moreover can be injected by the intravenous route. Suspensions of antimonious oxide have also been used with more or less success. A glycerine antimony compound (probably glyceryl antimonate resulting from the action of antimonious oxide and glycerine) has also been utilised with considerable success. With the synthesis of aromatic antimony compounds, specially the synthesis of aryl stibinic acids by the Chemishe Fabrik Von Heyden from diazonium compounds and sodium antimonite, quite a new outlook was created. Since these discoveries, compounds have been placed at our disposal which are really organo-metallic in nature, containing the antimony directly attached to the aromatic nucleus. As a result of these researches, there have been produced such compounds as stibenyl, stibosan, Neostibosan, Urea Stibamine etc. All of these compounds are readily soluble in water and can be administered intravenously without any untoward reactions. Stibenyl which is the sodium salt of p-acetyl amino-phenyl-stibinic acid, is not now much in use due to its unstable nature, thereby causing considerable pain and much undesirable after-effects. Stibosan which is a German product has been now replaced by Neo-stibosan prepared by the same company, which is well tolerated by patients. Chemically it is the diethyl-amine salt of p-stibanilic acid. However an important and successful of the pentavalent aryl antimonials is the Indian product, urea stibamine (Stibol or Stiburea). The composition of this is still a thing of dispute. Some regard it not as a pure compound but as mixed with various components. It was originally supposed to be the urea salt of p-stibanilic acid and was afterwards regarded as the ammonium salt of carbamino-stibanlic acid and has now recently been considered to be principally s-diphenyl carbamide-4:4'—distibinic acid, mixed with other components. Whatever might be its composition, it has worked marvels in eradicating the fell disease from some places while in others, the percentage of death roll has been reduced to a negligibly small figure. The phenomenal success of this compound which can be administered intravenously only, has turned the attention of many workers to this field. Now attempts are being made to prepare antimonials which can be introduced intramuscularly without causing pain. This latter method of administration has many advantages over the intravenous one as the injunctions can be carried out with ease and by men without any great

technical skill and on a large scale. Moreover as in the intramascular way, the absorption is slow, the parasites are exposed to the action of the metal for a longer time and are therefore more extensively destroyed. Until now, the principal compounds which have been tried intramuscularly though with little success are:—(1) Sodium antimony tartarate (2) Stibenyl (3) Neo-stibosan (4) Martindale's injectio—Antimoniioxidii (5) Castellani's preparation. However a most successful of such preparations of recent years is the antimony analogue of Tryparsamide *viz.*, the glycinamide derivative of p-stibanilic acid (Cf. Brahmachari and Das-Gupta, J. A. Soc. Beng. Vol. XXVI, 1930-1, New series) Success of this compound is a further advance in the antimony treatment of Kalaazar. With advaneement of research works, more and more useful compounds will be available and antimony compounds, which can be administered orally without any ill-effects, will be ultimately available. In this direction also few attempts have been made but nothing worth recording has been found. Another way of administering antimony is the use of the finely divided metal in an oily medium. This simple method has also been of considerable success and it is supposed that in the system, the metal is gradually taken up as 'Sbo', which acts on the parasitss and thereby destroys them. These shortly represent the most recent developments in the chemo-therapy of antimony compounds. We may here, in passing, refer to another type of compounds which are said to have some therapeutic value, though not extensively investigated as the above. These compounds contain the metal linked through a sulphur atom to a carbon atom and are so not truly organometallic. An example of this type is the 'Antimonyl thioglycollate. These compounds are said to have produced good results in the treatment of African sleeping sickness. Colloidal preparations of the metal or its sulphide are also in vogue.

In conclusion, we may summarise the advantages of antimonials as such and in comparison with Arsenicals. Except in Trypanosomiasis, in the many dangerous diseases we have referred to above, its action is almost specific. Its potentiality as a therapeutic agent, is in fact greater than that of Arsenic. These already attained successes and many more, which we hope will soon follow, would go much to satisfy the dreams and preaching of the German monk, Vasil Valentine, who looked upon the metal with revered awe, just as mercury was once during long by-gone days held with great esteem in India by the then sages.

ADENOID FACIES AND HOW TO DIAGNOSE ADENOIDS.*

BY

DR. C. V. C. RAO DIP. *Vienna University*,

Eye, Ear, Nose and Throat Surgeon, 3/155, Broadway, Madras.

ADENOID FACIES.

A child with Adenoids presents invariably the following picture. The facial expression or configuration is typically modified and in its typical form is very characteristic. The nose is stopped narrow and pinched, upper lip is generally short, swollen and often excoriated from constant nasal discharge. The mouth is nearly always open with exposure of upper teeth, which become irregular, projecting and discoloured. The eyes are lustreless and the general effect is to give a dull, stupid and vacant expression. There is almost a constant running from the nose. The mouth is kept open during sleep and the breathing is noisy or there may be loud snoring. The noise of an adenoid child tends to betray him. It is lacking in resonance and woody in effect and the articulations are imperfect due to impeded movements of the palate. A few skeletal malformations are also typical due to mechanical effects of obstructed breathing at a time of life when the chest is flexible. What is known as "Pigeon chest" deformity is very common. Children with Adenoids are likely to be anæmic, ill-nourished and underdeveloped and as they have invariably glands in the neck, the tendency is to give them the appearance of "Scrofulosis."

Effects of Adenoids.—The existence of Adenoids is fraught with the most serious consequences to the health of the individual. In so many and dubious ways can adenoids produce their ill-effects upon the human system that there is scarcely any part of the body that can escape surely and no organ that will be wholly exempt. Adenoids disorder the functions, robs him of his vitality, paralyses the faculties and generally impairs the physical mental and even moral status of the unfortunate child that happpens to be subject.

Effects on Respiratory system.—Chronic Rhinitis. The attacks of cold follow each other so closely that what is called a "state of snuffles" is established. Mouth breathing with all its evil effects—Catarrhal inflammation of Pharynx, Tonsils, Larynx, Trachea and bronchial tubes. Frequent catarrhal attacks naturally make these parts less resistant and the lungs naturally are likely to become a prey to Tuberculosis.

Effects on Ear.—The proximity of eustachian orifices to the Adenoids explains these complications. Ear ache is very common.

* Specially contributed to the "Antiseptic."

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In fact if a child complains of earache frequently, suspect at once Adenoids. Later this develops into impairment of hearing (partial or complete), abscess in the middle ear resulting in middle ear catarrh, and middle ear suppuration with its consequent evils and dangers to the hearing and to the brain etc., when neglected. A large number of cases of deafness in adults is due to neglected adenoids in childhood. A chronic middle ear suppuration in a child is invariably due to Adenoids excluding Tuberculosis.

Effects on nervous system.—Derangement of mental faculties sometimes leading to insanity is not a rare complication of Adenoids. Mental faculties can be seen much affected and the child not only looks stupid but is actually in a state of mental lethargy. These children are conspicuous by their lack of memory and inability to concentrate their attention. They are fretful, peevish, excitable or morose—chorea, nervous cough and spasm of the Throat are also not rare. Hoarseness, loss of voice and spasm of glottis are a few of the local symptoms.

Toxæmias and acute general infections are believed to have their origin in Adenoids. At any rate there is no doubt that a child with adenoids by reason of lowered vitality becomes an easy prey to infectious fevers peculiar to childhood.

Diagnosis—I.—Of course there is no better and more certain method of diagnosing Adenoids, than by observing them with posterior Rhinoscopic Mirror. This method is not very easy and sometimes impossible in younger children, who refuse to open their mouths or fail to respond surgeon's instructions. When such is the difficulty for a throat surgeon, it can be understood how much more difficult will this method be for general practitioners, who are either not adepts in the use of mirror or perhaps have not got the proper equipment

II. Palpation with fingers.—Adenoids can never be seen with the naked eye, due to the arched soft palate coming in the way. The method of palpating with fingers of course will give an idea of their extent, size and location. But it must be done quickly to avoid discomfort to the patient. As a matter of fact more than 10 seconds is unnecessary. Stand behind the patient while some one holds the hands of the patient, and while the child is opening the mouth press the cheeks of both sides with your left hand, between the two rows of teeth. In this position the mouth is forced to be kept open and the child can never bite. Quickly introduce the second finger of your right hand into the mouth, just behind the soft palate and feel the posterior wall of the Nasopharynx thoroughly. A soft doughy and sometimes nodular feeling is felt at once, estimate its extent etc., by feeling also the bony posterior end of the nasal septum. All this is

done in a couple of seconds and the hand removed. This method can be done in such a short time and without the least pain whatever that before the patient realises what we are doing the examination is finished.

III. The above given description of the evils of adenoids must leave no doubt whatever in the minds of the doctors about the advisability or otherwise of operating in a particular case—Every soft mass in Adenoid region need not necessarily be removed. In fact there is normally lymphoid tissue there which is called "the Tonsil of Luschka". Only when this is enlarged it is known as "Adenoids" and it is removed especially when it is infective. So if the child presents an adenoid facies or some of the above symptoms and signs, don't hesitate and use your influence to get the child operated, if the child is to be saved from further deterioration of health. Constant earache, frequent running from the nose, mouth breathing, sleeping with mouth open and snoring, nocturnal enuresis frequent attacks of nose, throat, (Tonsilitis in children or peri-Tonsilar abscess) are almost sure signs of the presence of Adenoids.

IV. By examination with the posterior rhinoscopic mirror and reflected light, one can see Adenoid mass as irregular fleshy masses in the nasopharynx covering the Eustachian orifices also, when they are extending to the sides. The posterior part of nasal septum and posterior nares normally visible can't be seen when the Adenoids are present. If they can be seen, in spite of irregular masses in nasopharynx, 90 per cent of the cases do not require an operation.

V. Examination of the nose with nasal speculam will also help in the diagnosis of Adenoids. With nasal speculam and reflected light, one can normally see the movements of the posterior wall of nasopharynx. For these movements ask the patient to say ninety nine when the up and down movements of nasopharyngeal wall can be seen clearly. There is no movement of this wall when the adenoids are present.

THE PRE-SCHOOL CHILD.*

BY

DR. MRS. ANNA THOMAS, *Karachi*

(Continued from page 33, January 1932.)

MENTAL DEVELOPMENT.

Most of the sounds which make up the language have been formed by the end of first year. Many words can be understood before the child can speak. Noisworthy and Whitley in their "*Psychology of childhood*" say that "intonation, inflexion and accent are noticed by children and responded to earlier than words." By the end of the 2nd year the mind has acquired most of its principal faculties; progress will consist in perfecting existing functions. Memory does not develop rapidly until the 3rd year, however, retentiveness of memory is weak during the first 4 years. Imagination has fuller sway in play and all affairs. Confusion between precepts and images often arises between 3 and 6 years. Up to 3 years imagination is usually reproductive, not creative. Emotions are overpoweringly intense but short-lived. At 3, tears are shed from grief, not alone, from anger or annoyance and the child is moved by all-embracing sympathy and affection. At 6, the child can usually state or count age and understand simple instructions and show comprehension and attention.

IN WHAT WAY DOES HE FAIL TO ATTAIN AND MAINTAIN THE PROPER STANDARD OF HEALTH.

The growth and development of a child both physical, mental and moral depends chiefly on the social economic and civic environment and influence in which the child grows up and which may be put under the following heads:—

1. Home and environments,
2. Bad housing,
3. Wrong feeding, irregular meals and malnutrition,
4. Want of proper mental and physical recreation and open playgrounds,
5. Neglect of Personal Hygiene,
6. A low standard of living,
7. Illiteracy of parents,
8. Want of proper attention and proper facilities to prevent or treat common infantile diseases.
9. Want of proper scientific mental training.

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(1) HOME AND ENVIRONMENTS

Home is more often said the very nucleus or kernal of life for all our activities are centred round it or rather emanate from it. It is the training ground for every individual and all that one can do or does in after life is all the outcome of his or her home training. "Home in one form or other is the great object of life," says J. G. Holland. Hence the responsibility of maintaining such an important institution in as ideal a manner as the times require it, rests with the man and woman who represent in unison the unit of a nation.

The home is the foundation of social improvement (and the evidence so far is overwhelmingly in favour of the home) and the moral and intellectual fibre of the next generation, depends upon home conditions and therefore the honest citizen has to do everything in his power to maintain the home in the proper way. One writer says that "perhaps no word in the English language rises so easily and so frequently to the lips as 'Home.'" It has been sung, it has been told in story and verse, it has been lisped by children and has been among their earliest words. The little child as soon as he is tired of play says 'I want to go home.' When lessons are over and the sun begins to cast long shadows upon the playground the feet too naturally turn homewards, and all the millions of the world's workers with the poor "plough-men home-ward, plod their weary way" after the day's toil. Home is the last place of shelter even to the staggering drunkard. The strains of "Home, Sweet Home" may be hackneyed but the words remain as fresh and fair as though written last night. The home is the place where childern receive their first and necessarily the most important portion of their education. It is the home where the nation gets nourishment for the body as well as for the mind. If the homes are bad where is the prospect of national progress? "Civilization, social opinions, laws, moral principles can all be traced back to the homes—the brooding place of individual character," says a writer. When we find our childern growing up into good—for—nothings, some people blame the Government or some other agency. But if we look deeper we will be convinced that our homes—the most potent educational institution of childhood—is unfit to turn out first class individuals. In the home the mother is the teacher. In India, the mothers of the race are ignorant almost to the limit and are therefore frightfully bad home makers. Women's first duty is homemaking. It is she who looks after the pre-natal and post-natal health of infants. It is she who feeds and clothes, determines the value of conduct and satisfies ouriosity, gives ideas and character to the childern. Home is the cherished spot in the whole world. In ordinary usage, it is the house in which we

live, be it cottage or a mansion, a castle or a palace. But it is more than this: not the bricks and the rafters, the roof and the walls above but a living soulful entity. Home has a touch of the Divine.

ENVIRONMENT.

Mr. R. Murray Lesli M.A.,B.S.C., M.D., Physician in charge of the childern's department, Prince of Wale's General Hospital, writes in his article on *Child Study* as follows:—

> "A suitable environment is just as important as a sound heredity, inasmuch as favourable external conditions are often potent enough to counteract inherited defects."

After birth, environment becomes all important in the growth and development of a child. The new-born-child becomes in contact with the great external world—atmosphere, sunlight, climatic conditions, sense impressions and a host of beneficent and malevolent agencies. The correctly adjusted environment should differ with each age period. Thus an infant requires constant and unremitting attention. The child grows by observation and thereupon the parents can help its growth in an intelligent way if they wish. Indeed, it is not too much to say that the parents are (and more especially the mother) the first teachers and the future of the child depends, to a large extent, upon the thoughtful and sympathetic way in which they draw out the power of observation in the child by taking particular care about the environment in which the child grows. The objects presented to the child should be carefully chosen. They should not be ugly things or ugly colours and the surroundings of the child should ever be clean, pure and beautiful and this is equally important when the child becomes conscious of his surroundings, for when the child's tender mind once grasps ugly impressions in these early stages, he has great difficulty in eradicating them and more often than not they remain, Thus the power behind the mind goes in a wrong direction and the parents become the cause of the creation of a wrong channel in childs life. A child who becomes accustomed from the beginning to see ugly things and ugly colours and also disorderliness, fails to grasp beautiful things or beautiful colours in nature when he grows up. Nature seeks harmony and disorderliness as a great obstruction to the mental growth of the child towards harmonious perfection. Reaching to the bad environment, the child becomes rude and hard in nature and loses all the power of appreciation. He cannot learn to express love, and compassion if early impressions are distorted and ugly. It therefore, becomes a necessity for parents to keep very careful watch over the objects, emotions and thoughts and also over the surroundings of the child on which he exercises his power of observations

through which he will have to appreciate beauty in Nature. Dr. Annie Besant writes that "each babe brings with him his character, his temperament, his body predisposed to health or fragility, surroundings into which they come, exert an immense influence upon all which each little one brings with him; it is here that knowledge or ignorance, healthy or unhealthy environment, may largely make or mar the growing life."

Dr. Harry Roberts in his book on '*A National Health Policy*' writes that "evil environment not only checks the development of the good in society but it also fosters the growth of the depraved and explains that by providing bad environment for the nation to grow up in, we not only allow the good to die out but also put a premium upon the worst elements." Dr. Roberts writes "A healthy environment cannot be contemplated merely from the standpoint of air, space, drainage, unadulterated food, or even mortality rates. And the best environment is that which best fits with the pleasant and satisfying exercise in due proportion of those natural impulses of man which we know to be necessary or conceive as admirable. An environment that provides no outlet for constructive thought, that provides no restful and satisfying fitness and beauty, that stultifies originality and makes hopes farcical, is an unhealthy environment, no matter how low may be the infant death rate nor how completely infectious disease may have been stamped out."

The home and environments of a great majority of the Indian children are not at all what they ought to be. They come into different surroundings, some into happy homes of refined and righteous parents, welcomed with gladsome smiles, received into tender arms; these are to be surrounded during the plastic year of infancy with everything the little body needs, the drawing emotions crave, the opening mind requires. Some will be shielded from all harshness from all impunity, from every evil influence; their ears will hear no angry or corrupting word; their eyes will meet beauty of every kind; others come into ugly surroundings, have only ugly things to look at and harsh words to hear; they grow in an unhealthy environment which mars the growing little life in every way. A great majority of our pre-school children in India are "dragged up" (not brought up) in unhealthy environments and which greatly affect the mental, moral and physical growth of the child.

2. Bad Housing.

A great majority of Indian children live in bad houses. There will be little or no ventilation in many houses. Most of the houses are dirty, ugly store-rooms made fit for cattle to live in, than beautiful sanctuaries for man. In few cases if they are not dirty and ill-ventilated hovels, they are poor grotesque imitations of western

houses. Poverty can never be an excuse for lack of neatness and beauty in the home. It is at least within the province of the poor to keep their walls free from ugly time and charcoal daubs, to have them whitewashed, to throw open the doors and windows wide to purifying influence of the sun's rays—this is seldom done—and to arrange whatever furniture there is in such way that there is a place for everything and everything has its proper place. The writer once went to see a wealthy young *Vaisya* woman suffering from tuberculosis. The house was a fairly big one but it had only one big room with one door and one window. In a shed attached to the house, a rice machine was working day and night. One corner of the room was used for cooking and in another corner a pair of big bulls were kept, while in the 3rd corner the patient was lying in a dirty cot and in the 4th corner, just opposite to the patient, sacks filled with paddy were piled up. In the court-yard of the house a few milking buffaloes were kept and at the entrance on a raised verandah two people were busy frying peas and selling the same. The only window of the house was closed tightly. It was in this atmosphere the unfortunate rich woman of about 18 years of age was lying as a patient. She was in her sick bed like that for about 2 months under the care of quacks and wizards. When all of them failed, the allopathic practitioner was called and it must be mentioned here that the quacks will give up their patients only when they (patients) will be collapsing, and when the Allopathic practitioner returns without effecting a cure, the quacks will boast to the patient's people that no one could cure that particular disease. The poor people will resign themselves to fate and will tell their relations and friends that even the English (Allopathic) doctor could not do anything. In the particular case above mentioned, the patient was collapsing when she was visited and in a few hours she left the land of the living. This is the way houses are kept by the rich and the poor in this country. In the industrial areas, in the congested towns and even in villages, houses are dirty and ill-ventilated. There is nothing mysterious about good housing. The details of building houses small or big so as to get enough light and air and to give privacy and convenience are within the reach of poor and rich alike. In the report of the *Children's Bureau Conferences*, Mr. Eva wrote that "the longer the bringing in the era of improvement in housing is delayed, the more does society and the State pay the bill in the broken lives of many a woman and man." The moral effect of bad housing is not often as apparent as the physical. It is said, however, that two-thirds of delinquent children come from homes that no towns or city should permit to exist. The following parable of the tenements tell its own story. "A little girl living in a Court in an Eastern City planted a window-box in all

hope at the beginning of summer. She nursed her seedings with great care and was elated when the first shoots appeared. From day to day she watched her plants and vines grew, but with each day they grew weaker and more sickly without symmetry and beauty. Finally they died altogether in the vitiated atmosphere. Yet the child was expected to develop into womanhood under precisely the same conditions."

3. WRONG FEEDING, IRREGULAR MEALS & MAL-NUTRITION.

One of the most important factors in the well-being of any individual is right feeding in childhood—of the chief causes of sickness among children, wrong feeding is one. "Not only the general health of the individual but also the quality of teeth, the efficiency of digestive system, the stability of nervous system, the quality of mental activity, power of will, strength of character, happiness or misery of everyday living, are profoundly affected by the foods and regime of foods during childhood." The average infant is a thriving young animal, growing and developing mentally and physically day by day. The diet is all important. But this is not an easy matter. It requires careful and earnest study of food composition, food values, physiology of digestion, dietetics cooking and then patience, thoroughness and practicability to put that knowledge into use. Some one said 'a well balanced diet meant a well-balanced baby.' The first lesson for all those who provide and prepare food for little children is the lesson of *balance*, that is the study of food in relation to the child's needs in relation to other foods. What we were fed as children may not be at all the diet that we should give our children to-day, in the light of the study of and investigations of nutritional problem. Food is made up of certain chemical substances. The little child's body is made up of certain chemical substances and in both cases the substances are similar. There are 15 to 20 such substances the most abundant being Oxygen, Hydrogen, Carbon, Nitorgen, Calcium, Phosphorus, Sulphur, Potassium, Sodium, Chlorine and Iodine. And the body of the child and the food we give him contain these substances in a great variety of compounds and the most important of these compounds are protein, fats, carbohydrates, mineral matter, vitamins, water and cellular (fibres). We must provide the child with the necessary material for building up the new body cells as his growth develops, in all his organs and tissues and we have to provide him with the materials for repairing any wastes. We have to provide the materials for furnishing the child muscular power and energy and to supply heat for maintaining the body temperature. This is our *food* task. Leafy vegetables and milk must be in abundance in the child's diet. The amount of milk is not so easily agreed upon but from experience many have suggested

a quart of milk a day is never too much for a child under 6 years and may often be too little and it must always supplement a carefully chosen diet of solid food. In the matter of milk, great care ought to be taken to get pure milk. Because Rounan says "the milk problem commences with the cradle and ends with grave. Sometimes it leads to an untimely grave." As a rule, a great majority of Indian parents are ignorant of the proper food for their children during the different stages of their lives and therefore they feed them with wrong quality and quantity of food, at irregular intervals and consequently children often get sick, die premature and if survive simply grow up as emaciated and weak human beings. One writer aptly puts it as 'they live in death.' Some out of poverty are unable to give nutritious food to their children and some mothers out of ignorance feed their babies whenever they cry and thus babies get too little good food and some babies get too much of good food and both are equally detrimental to the health of the child. After 2 years, the number of articles of food suitable for children becomes increased every few months and therefore the meals can be a little more varied. At this age, children often acquire the habit of picking up things from the ground and putting them into their mouths. Such dirty habits are fruitful sources of many serious disorders. The child should, therefore, be taught not to put anything into the mouth except from a clean dish or other kind of vessel and as early as possible the training of washing hands before and after eating also must be given to the child. As a rule, eating first and drinking afterwards must be taught to the child. But in the case of children with dry throats a sip of water before meals may be necessary. Regularity and punctuality in the matter of taking meals are very necessary for good health and children must be trained in this. During early years as well as in later years, many people suffer from serious systematic disorders owing to irregular habits in taking meals. Food is permissible at meal time only, and the constant eating of sweets, biscuits, etc., between meals is unwise and cause much harm. From 2 years of age, children need judicious instruction upon correct way of eating and drinking. A certain amount of firmness is required with those children who habitually play with their food, to make sure they finish their meal in reasonable time, have sufficient to eat and that the warmed food has not become cold or unpalatable. The appetite and digestive power of a child are very susceptible to mental influences and the child should never be disturbed during meals. The fundamental principles of feeding children are the following :—

(1) Protection of food from dust, dirt and insects.

(2) Preparation of food under sanitary conditions.

(3) Regularity—meals should be served promptly and at regular intervals. If a child is regularly hungry between meals, the cause may be, insufficient quantity at meals, eating too rapidly so that food is not well chewed and therefore not well assimilated and too long intervals between meals.

(4) Simplicity—Foods simply cooked require less work of the digestive organs and they cultivate simple tastes with contentment.

(5) Cheerfulness—Real happiness and laughter (not silliness or horseplay) should be encouraged at meals. The child should not be fed when excited, angry, cross, crying, unhappy or overtired. Under emotional stress no gastric or intestinal juices are formed and food cannot be digested.

(6) Sufficiency—This applies to the total quantity of energy and fuel foods, what is technically called a balanced ration. Vitamins are essential in the foods, Cooking at a high temperature or for a long period, usually diminishes the vitamins in foods and this is the reason why children do not thrive sometimes. Some fresh uncooked food such as fruit juices and uncooked vegetable are recommended. Hard food requiring work of the jaws is needed daily especially from 1 year to 7 years of age while the 1st 2nd teeth are coming.

Common faults in feeding children are :—

(1) Over-feeding.
(2) Irregular feeding.
(3) Allowing child to choose or refuse food.
(4) Giving too large a portion of bread
(5) Too much mushy food.
(6) Insufficient hard food.
(7) More than one and a half pints of milk a day.
(8) Coaxing child to eat when not hungry or when tired or ill.

Right feeding in childhood is one of the most important factors in the well-being of the preschool child and many preschool children do not grow up to the proper standard due to bad and irregular feeding. A little child's food habits, therefore are to be as carefully formed as other physical habits, as upon his food habits so often rests the source of trouble, and especially is this true in the condition of the undernourished child.

MALNUTRITION.

Malnutrition is caused by various factors, such as some definite disease or some abnormal condition. Tuberculosis is the most common condition that results in malnutrition and usually without giving marked symptoms. The disease is not pulmonary but is usually in the lymph nodes such as the glands in the neck and may be active or latent. The diagnosis is most difficult to make, as often only the positive skin reaction test will reveal the condition. Some of the most common conditions which cause malnutrition are those of diseased tonsils, adenoids so large as to be an obstruction to breathing, difficult feeding or severe intestinal attacks. Serious illness like measles or whooping-cough or a series of acute infections in a short period of time may cause loss of weight for several years. India owes her poor physique to her habitual underfeeding which is the inevitable result of poverty. Lt. Col. MacCarison in his evidence before the Agricultural Commission said as follows :—

> "Malnutrition thus pursues its harmful cause in ever-widening vicious circle ; the cultivator is too often ill-nourished and ravaged by disease which is commonly the result of ill-nourishment; his beasts are alike ill-nourished ; while both toil wearily in a heartless effort to extract from the ill-nourished earth enough to keep them from starvation. The solution of the problem of malnutrition is thus, to a great extent, one of improvement in methods of agriculture."

More than 90 per cent of Indians are agriculturists and therefore a vast number of Indian children are born of ill-nourished parents and live in an atmosphere of manutrition ill-fed on poor quality of food. Malnutrition may be caused by bad hygiene and faulty diet. Insufficient food is the cause of much disaster. Insufficient food is not alone the portion of the poor, but often occurs when there is abundance. Children of the wealthy sometimes leave half the food and run away to play. In addition to the freakish habit in eating, some children eat too fast, or at irregular hours, and some wash down the food with water or milk and these cause underweight. The wrong food, like tea, coffee, fried stuffs, pastry, sweets and meat in excess is always a cause of this condition. Constipation or irregular bowel habit make it almost impossible for a child to gain proper weight. Lack of proper sleep and rest also will cause underweight. Regular and systematic weighing, monthly or bi-monthly, is the first requisite in both determining and preventing malnutrition and a thorough medical exami nation that will both reveal and

present defects in the second. A fairly safe index of thecondition of malnutrition is the following.

1. Below weight for height and age,
2. Below height for age: sometimes too tall for age and height,
3. Overfatigue, easily tired on slight exertion.
4. Poor general physical development,
5. Flabby musculature: incorrect posture,
6. Secondary anaemia, poor circulation; pallor of ilps and skin: cold hands and feet
7. Moderate enlargement of the lymphatic glands is frequent,
8. Nervous habits; sleep disturbances: night times; irritability of temper
9. Slow mentality or sometimes mental paucity.
10. Constant activity: nervous tension
11. Feeble powers of digestion and assimilation
12. Poor resistance to infections; frequent colds.

The amount of food for the undernourished child is sometimes 3 or 4 times that necessary for the normal child and should be given at regular intervals and more frequently. The chit should be arranged for the undernourished child so that he will eat all the food given him and not fool with his meals and become fussy. Time, patience and an atmosphere of happiness are absolute essential in getting a little child to eat the food necessary for his return to proper weight. To nag, scold, threaten, is to use only temporary and flitting methods. Meals become a torment to both child and parents and little weight is gained. But to get the child's interest by making a game of it, or by arousing his competitive instinct to be as big as brother is a better and surer method. The golden mean in the field of activity is very difficult to find. The pre-school child must not eat too much or too little, too slowly or too quickly, too often or too infrequently, too much of this or too little of that; he must not be of over-weight or of underweight or too tall or too short. But as the nursery rhyme goes "when our little child's right he is very very right and when he is wrong, he is horrid."

INFLUENZA AND ITS PREVENTION.*

BY

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This is a pretty common disease amongst the human beings—they suffer and sometimes get cured without having any special treatment for that. In many cases we find that if they are neglected at the beginning serious consequences may develop in future when it will be a difficult task to eradicate them.

There is no seasonal prevalence in Influenza. Mankind may be infected at any time and the disease will spread throughout the city. When it first appears in the city almost every house and its inmates become a prey to such infectious disease. The disease is of an infectious nature caused by Pfeiffer bacilli which affect the nasopharynx and gradually spread down to Larynx, Trachea and Bronchi. The onset is characterised by fever, catarrhal affection of the respiratory and digestive system, and extreme prostration associated with the nervous disorders of various types. The prostration is very much marked and is quite out of proportion to the degree of fever he suffers.

In an epidemic time I was called for the simple fever and almost all the places where I visited I found many had succumbed under such specific infectious type of disease. Many of them under proper care came round within a week's time and in some simple and fatal complications followed where the disease was neglected. I remember that in the year 1918 and 1919, Influenza ravaged the whole of India. During this year there was a heavy death toll simply due to Influenza epidemic. In India more than one and a half crore of people died and this amounted to nearly the double of the total number of persons that were killed during the last Great War. The popular belief among the persons that it is a simple cold and fever and will pass off within 5-6 days and it is no wonder that due to their sheer negligence they suffer from the relapse of these fevers with their untoward happenings. The word influenza comes from an Italian word meaning the epidemic disease due to influence of the heavens.

The ushering symptoms of a person supposed to be suffering from influenza are not sudden and the infected person will feel lethargic and indisposed for two to three days previously when afterwards he actually finds himself down with influenza with the symptoms of prostration, fever and bronchial troubles.

These latent 2 days are the incubation period and this period varies from 2-5 days. During this incubation period the influenza

*Specially contributed to the "Antiseptic."

bacilli sum up together, multiply in amount and create toxins which circulate in the blood causing fever and depressed condition of the humanity.

The bacteria have got special affinity to invade the naso-pharynx and where there is lowered tissue resistance and the defensive mechanism of the body is below par the bacilli gradually spread down into the trachea, bronchii and the Lung capillaries. Thus we find that a person suffering from Influenza may easily become a subject to Broncho-pneumonia, pleurisy and Pneumonia.

There is no much age incidence as regards its infection. It may attack young and old alike. By far the common victims are the young men between the ages of 20-30.

As regards the severity of the disease it may be grouped under two divisions—

1. Mild case *2. Serious case.*

Mild case—The infection is localised in the upper respiratory passage that is in the mucous membrane of the throat and nose. It is a case of pure toxaemia.

Serious case—The infection travels through the first line of defence—enters the blood stream and various internal organs causing a septicaemic condition.

How to understand the nature of Influenza. The person will complain of headache, pain in the eyeball, pain in the limbs, backache. His tongue is slightly coated, tonsils are slightly inflamed and occasionally hoarseness of the voice is present. His eyes are angry-looking and face will appear flushed. He will sneeze and cough frequently. The nose may become stuffy and there may arise difficulty of breathing. There will appear a sense of tickling in the throat, feeling of heat over the head. The temperature is often present and it ranges from 102°F–103°F for three days. He sometimes complains of sense of tightness in the chest, difficulty in breathing, palpitation of the heart and occasionally certain gastric disturbances such as nausea, vomiting, more often epistaxis is present but rarely any enlargement of the spleen, very rarely we can find certain eruptions on the skin and these are evident on the fair skin.

On auscultation of the chest we find presence of dry rales and moist sibilant rhonchi and crepitations, we find the rate of respiration is hurried and the nail beds look slightly cyanosed. This disease may sometimes simulate malaria and the truth may be definitely diagnosed by blood-examination. In the blood of a malaria patient the malarial parasites can be actually seen under the microscope.

The infallible signs of influenza are—

General pain and neuralgias, headache, congested conjunctiva, cough, scanty expectoration, flushedface, coated tongue and extreme prostration.

The expected cases may turn worse if we find the symptoms are protracted. Such as if the tongue remains thickly plastered for long time, if the cyanosis appears early, if there is rapid prostration, if the high fever continues for certain time and if the signs of Broncho-pneumonia and pneumonia develop within a short time. The very young, the very old and the alcoholics stand very badly against it.

The complications in neglected cases are—

(1) Influenza with Pneumonia—There will be a second rise of temperature after it has become normal. There will be a rise in the rate of respiration. Presence of dry hacking cough with scanty expectoration and haemoptysis, the colour of the suptum is rusty and frothy.

(2) The most common complication is acute otitis media—pain in the ear, discharge of pus and slight deafness.

(3) Heart complaints such as pericarditis, myocarditis and dilatation of heart—pain in the chest, difficulty of breathing and exhaustion.

(4) Nervous complaints such as vertigo, meningities, Peripheral neuritis, Abortion in pregnant women.

(5) Conjunctivitis, Albuminuria and Diarrhoea are occasional complications.

Pathological changes are noticed in the trachea, Bronchii, and Lungs which remain congested during the whole period of the disease. Spleen is sometimes enlarged.

Blood examination Shows the character of Leukaemia-white blood corpuscles are diminished in the total count and the power of resistance against external infection is thus lowered.

PREVENTIVE MEASURES TO BE ADOPTED.

(1) Spread of infection to be arrested—infection spreads by the vehicle of droplets from the infected nasal and bucco—pharyngeal mucous membrane. They are broadcast by sneezing, spitting and coughing to which people are accustomed.

(2) Avoid the contact of the infected persons—when you find that cases are cropping up in the neighbourhood be careful in cleansing your nasal and pharyngeal mucous membrane by antiseptic lotions and gargles. These are the two pretty easy channels for carrying the infection. Antiseptic mouth washes with (*a*) Listerine (*b*) Glycothymolin (*c*) Alkathymol (*d*) Thymol (*e*) Hydrogen peroxide or it can be prepared safely and at a cheaper cost by yourself at home.

Take one pint of hot water—add 1 teaspoonful of common salt and 1 teaspoonful of alum into it and a few crystals of thymol—shake and mix thoroughly—use this as a gargle twice daily for at least 10 minutes.

Nasal wash—mix together equal parts of sodium Bicarbonate and Boric acid—add a few drops of carbolic acid into it and sufficient amount of water. Take the lotion in your palm -dip your nostrils into it and draw the medicine inside into the nose -do it for 8 times both in the morning and the evening. Potassium permanganate can be used in a very weak solution as gargle. The colour will be just as pink to be used for the purpose.

(3) Avoid crowded places, ill ventilated spots, stop visiting cinemas, theatres, and dining restaurants for the time being when the infection is raging in the city throughout for these are the places which may be called the hot beds of the disseminating germs.

(4) Inoculate yourself by means of a special influenza vaccine to ward off the impending attacks. Children under 3 years should not be inoculated with prophylactic vaccine. Inoculation of a vaccine of combined bacilli of Influenza, Pneumococcus and streptococcus is usually given. One or two doses may be necessary. The 2nd dose is generally given at an interval of 10 days. The dose is 5 cc. for each injection.

(5) Prophylactic drinks.—Take in the early morning for at least one week one ounce of decoction of *Tulsi leaves* and a few drops of ginger squash added.

(6) Antiseptic lotion in handkerchief consisting of a mixture of oil cinnamon, Formalin and alcohol. Inhale freely by putting few drops at a time.

(7) Steam inhalation.—In a kettle of boiling water, add 1 teaspoonful of menthol and eucalyptus oil inhale the vapour that comes out and thus try to keep the nasal and oral passages perfectly clean devoid of unhealthy germs.

(8) Wearing of masks amongst the persons who are in touch with the patients—There are instances at San Francisco where the disease was averted by careful wearing of masks and face guards by all persons. Expecting a threatening out-break of pandemic influenza the authorities promulgated the compulsory rule of universal wearing of masks by children, young and old alike. They by doing this for 9 days, were at last able to dispel the epidemic completely from the country.

(9) Disinfect the excreta of an infected person completely—the sputum, urine and stools are mixed with Phenyle, Lysol or Electrolytic chlorine and thrown to distant corners or for the safety of the public, these can be burnt away completely. Patients' clothings, draperies, towels, handkerchiefs, and other utensils should never be used by any other person.

(10) Influenza tablets sold in the market may be used as a preventive measure—These mostly consist of Aspirin, Cinnamic acid and Benzoic acid, two tablets are used daily sometimes three.

(11) In case of development of catarrhal symptoms within you—take hot drink of sugar-candy solution, hot lemonade, Tepid water with ginger solution. One hot foot-bath on retiring will be much beneficial. Take sufficient rest and in the beginning take a good saline purge to relieve the offensive matters of the abdomen.

(12) An infected person will be careful in avoiding exposure to cold draughts for where the lung is devitalised with the toxins the chill may bring further untoward results in making it more congested and produce Pneumonia. At the same time never close your windows of the room for in the obstruction of the entry of the fresh air the lung tissues cannot be properly aerated. You should lie yourself properly covered up with the face open and the windows open.

(13) You should lay special attention to your diet regimen. Live mostly on fruits, liquid drinks such as cocoanut milk, buttermilk, whey water, barley water, sugar candy solution, raw and boiled vegetables. Alkaline beverages such as Soda water, Lime juice and Lemonade can be used without any harm. You should not drink enough quantity of liquids at a time but small quantities at frequent intervals.

(14) Deep breathing exercise to encourage the free healthy action of the lung tissue. In the early morning stand in front of your window of the room keeping the mouth closed, draw gently and deeply the air within as far as you can, then pause for a few moments and next breathe out the inhaled air slowly. This will give more oxygen to the system and give further energy and power to counteract the toxins and infection from outside.

(15) Diathermy to the chest—It is an application of heat. The source of heat is the electric energy in which high tension waves are used. The heat passes through the skin into the internal organs. One electrode on either side of the chest is placed and a current is passed through the affected lung—this heats the Lung parenchyma and helps in getting rid of the inflammatory affection.

(16) Alkaline mixture such as Pot. citrate, Pot Bicarb, in 15 gr. doses thrice daily will be effective.

(17) Analgesic remedies such as Veramon, Aspirin, Caspin, Nanala, Antikamnia, Allonal may be tried for the relief of the generalised pain of the body and the temperature to a certain extent.

(18) Symptomatic remedies for cough and fever—(a) Dovers Powder (b) Tr. Quinine Ammoniata.

I just put the mode of preventions in short, as it will require longer space if I go on, in detail writing about the treatment of all the attendant symptoms that sometimes crop up.

Cases and Comments.

SURGICAL TREATMENT OF BONY ANKYLOSIS OF THE LOWER JAW (TEMPERO–MANDIBULAR JOINT).

By

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Patient's name:—V. *Sex*:—Male. *Age*:—12 years.

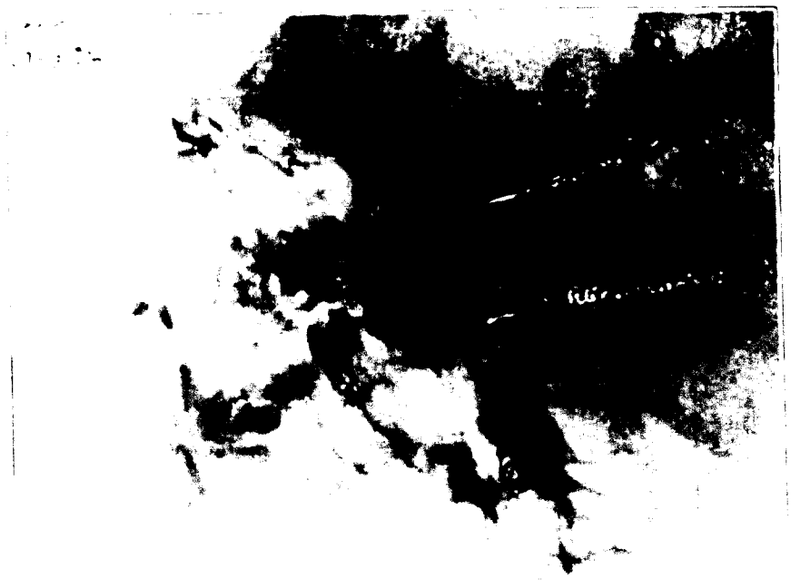
History:—The patient had a severe attack of Small-pox eight years ago. Since then the patient was not able to open the mouth. In about two months' time after the onset of the trouble the lower jaw became completely set and the jaw could not at all be moved.

He has been brought up only on liquid diet all these eight years. An attempt was made some years ago to forcibly open the jaw with the hand of a spoon and one of the lower incisors was knocked out in the process thus allowing a longitudinal slit through which the fluid was taken in.

On 14-8-31 he was admitted into the Clinic and an X-ray photograph was taken. It revealed a completely ossified right tempero mandibular joint and the left looked apparently so.

Operation:—Operation was performed on 16-8-31 under chloroform anæsthesia. A perpendicular incision about 2 inches long was made in front of the ear having its centre over the root of the right Zygomatic process and a horizontal incision at right angles to the perpendicular one was made along the lower border of the Zygoma for a distance of 1½ inches. The right tempero mandibular joint was completely ossified. The joint was left intact and the bone was divided about ½ inch lower and parallel to the Zygoma, right across the whole breadth of the bone after dividing the masseter muscle. When once the bone was chistled through completely, it was possible to move the jaw fairly freely. A big flap of temporal fascia was dissected by extending the perpendicular incision and the same was turned over the upper bony piece so that the cut ends may not come in contact and thus prevent union. The wound was closed with silk worm gut sutures after the masseter muscle was put in proper position. The wound healed by first intention. Passive and active movements of the jaw were practised from the third day after the operation.

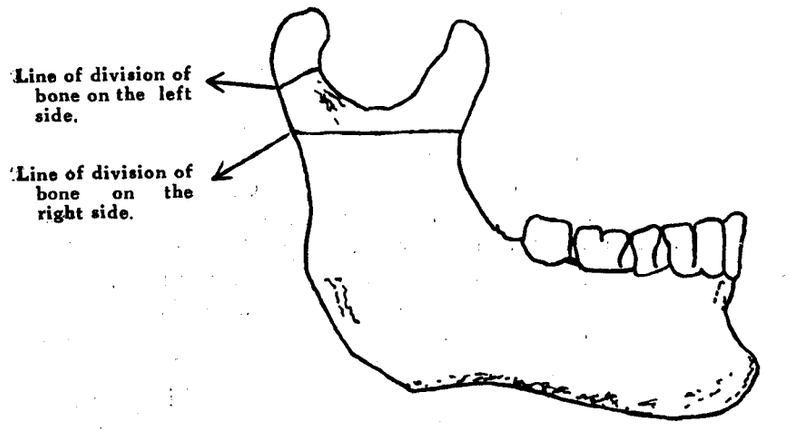
Exactly a week after the first operation on 25-8-31, the left tempero mandibular joint was opened. There was no bony ankylosis on this side. But the joint could not be freely moved. An amputation of the ascending ramus (mandibular process) was done



Before operation

Fig 3. Lt. Side
Lt. shows condyle sawn across with flap of temporal facia interposed showing as a lighter area around the condyle. 11 9 31.

at its neck and the stump was covered over with the articular cartilage and the wound was closed after the necessary toilet to the masseter of this side. The wound healed by first intention.



Now for the first time after a lapse of eight years the patient is able to take solid food.

Development deformity due to the ankylosis :—

Gray's anatomy does not give any fixed measurements of the lower jaw of a boy of this age. I have therefore, measured a normal jaw of a boy of the same age and height and found these differences :—

	Normal.	*Patient.*
Full length of the mandible (angle to angle) round the chin	9″	6½″
Angle to angle across	7″	5½″
Angle to Zygoma	2″	1½″

1. Now I am led to think this all round diminuition is due to certain amount of atrophy due to disuse at a time when the bone is growing rapidly. The boy was quite mum though he managed to speak or rather squeak through his teeth with the tongue bottled inside.
2. Another noticeable thing is the small oval opening of the mouth. This is also due to the ankylosis. It is even now difficult to open the lips commensurate with the movement of the lower jaw. The buccinator and labial muscles get tightly stretched when the jaw is opened.
3. The inability to approximate the incisors (upper and lower) in front. This is due to the operation. When once the masseter resume their function he will be able to close them without a gap which is now about ½ inch.

4. The facial nerve paralysis on the right side. This is due to a fairly long horizontal incision on that side necessitated by cutting through the whole breadth of the bone. The fibres supplying the Orbicularis palpabram and the other small muscles of the face have been cut across. But I expect in about six months from now the nerve ends would have grown and joined their older trunks and the paralysis may disappear. He is now having electric massage for that side. No such accident occurred on the opposite side.

The points to be noted in this case are :—

1. The early age at which bony ankylosis occurred as a sequelæ of an attack of virulent small-pox. In any case this is the first case of septic arthritis of the lower jaw I have seen.
2. The ankylosis was bony on one side and fibrous on the other. It is quite likely that the arthritis after small-pox affected only the right tempero mandibular articulation and the left one was due to disuse and hence fibrous.
3. That ankylosis of the type in early age affects the development and growth of the jaw and also the opening of the mouth.
4. That a false joint with live fascia interposed can effectively function.
5. The risk of cutting fibres of the Facial nerve is present in long horizontal incisions which disfigure the patient though it may be only temporary.
6. Results after sawing the whole length through the neck of the condyle and coronoid process are better than sawing through the neck of the condyle only.
7. It is now nearly three months since the operations were done and the jaw is functioning without any restriction of movement indicating recurrence of the trouble.

The case was produced at the Clinical meetings of the Trichinopoly District Medical Association.

TETANUS AND ITS TREATMENT WITH ANTITOXIN SERUM.

BY

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Treatment with Anti-toxin serum has been found to be a very useful and satisfactory remedy in urgent cases. Nothing is so charming and positively marvellous as to see patients improving with a few injections when all other resources at our disposal have failed. This is undoubtedly true with many sera but with Anti-Tetanic serum—it is different. Opinions of eminent physicians and well-known research workers go to assert that this particular serum to be of any use— must be injected before any signs or symptoms of Tetanus have manifested—in other words to say—limits the action of the serum, as a Prophylactic one. So that now-a-days this serum is injected in almost all cases of street accidents and patients with filthy wounds. The reason is evident and no one should question the good purpose for which it is given nor can the good intentions of the physicians who give it demand any criticism. But in these cases, the necessity of introducing a foreign serum in the system is not confirmed by any laboratory finding nor can one claim that the serum has been of positive value in any one case. That the patient did not develop tetanus whereas other cases of like nature do develop Tetanus in certain percentage of cases is not sufficient evidence that the serum was necessary and of particular value in any case.

The reasons which are put forward to prove that Antitoxin Serum cannot be of any use in a developed case of Tetanus hold equally good against its prophylactic value and use. The reasons are two, viz. :—

(i) The toxin of tetanus ascends by way of Axis Cylinder and the Antitoxin being in the circulating fluid and having very little power to pass through the choroid structure cannot reach it and thus cannot neutralise the toxin.

(ii) The toxin of Tetanus has greater affinity for nerve cells than for antitoxin.

If these factors are true it is not only useless but positively harmful to introduce a foreign serum in the system. When, however, Bacteriological Examination of the material from a suspicious wound shows tetanus, the use of Antitetanic serum may find its justification and that in consideration of the facts that there is no treatment at our disposal which will cure Tetanus and that Antitoxin

Serum may perform its action in a different way from what we know. This is the subject on which I would like to touch in this article

I would here describe a few cases of Tetanus and then discuss the subject.

I. One day one of my Sub-Assistant Surgeons on K. A. duty sent a case to me with the following history. The patient had been receiving treatment for K. A. with partial benefit. In their village a man appeared and professed that he could cure all diseases and could administer such a medication that it would create a marvel and was a panacea for all diseases and dangers alike. Not only all their diseases would be cured but that they would be free from all diseases in future from infestation by supernatural beings and from attacks of tiger, snakes and the like. This man with 5 other young persons of the village subjected themselves to the treatment. Some of them were quite healthy. The treatment consisted of making a pea sized wound over the deltoid muscle of each person with a knife and stuffing the wound with some powder. On the 5th or 6th day, five out of six developed lockjaw: One of them being the patient mentioned above reported himself to the Doctor for help and narrated the whole incident to him. The Sub-Assistant Surgeon forwarded the case to me. When I examined the patient he could partially open his mouth and take his food with some difficulty. His condition on the whole was such that it was difficult to say whether the partial lockjaw was due to Tetanus or the effect of some drug used. Immediately the matter was taken to the notice of the magistrate with a request to induce the other patients to come up to hospital and also to produce the quack so that if possible some idea could be made as to the nature of the drug used. On the same day, I had to go away elsewhere and returned after 3 days. On returning, I found that the 1st case had fully developed tetanus with complete lockjaw and typical spasms at intervals. The one thing that was peculiar in this case was that during the three days I was away the patient's condition gradually developed and that between the attacks the patient had comparative rest and that the attacks were not very frequent.

Among the other four cases who developed Tetanus two died in the village, one died in the hospital of Tetanus soon after admission and the fourth showed symptoms identical with the case described above. Both the patients were immediately given injections of Antitetanic serum. As our stock of serum was rather poor, I gave them each 10 c.c. morning and 10 c.c. evening. It was gratifying to notice that the patients perceptibly felt better after each injection and as time for the next injection drew nearer, they expressed their eagerness for it. After treatment was continued for 6 days the 1st case could sit up on bed and the 2nd one was also very much

advanced on the way to recovery. The patients were quite free from all symptoms after ten days and discharged cured from hospital after a few days more, I have seen the patients subsequently and found them quite fit.

One of the persons however never developed any signs of Tetanus at all.

Microscopical Examination of material taken from the ulcers which were nearly healed up at the time of their admission to hospital was negative to Tetanus. Also the viscera of the patient who died in hospital was reported as free from trace of any poison after chemical analysis.

Reviewing the circumstances it is easy to say that the patients suffered from Tetanus and that it was introduced by the quack either through his knife which was very dirty or the powder containing spores. That all the patients were not equally affected some more acute than the others and one case not being affected at all may be attributed to difference in their individual resistance or that the dose was not equal in all the cases.

II. A boy aged about 10 years fell down from a tree and fractured his right elbow which however became compound. He was brought to hospital after 5 days with highly inflamed and swollen arm and high fever. The part was put in a bath and subsequently incised to ensure proper drainage. In the afternoon, I noticed that the boy would cry out after certain interval and watching his condition could just detect some slight contraction of the muscles of his own simultaneously as the boy cried. To be on the safe side, I ordered 10 c.c. Antitetanic serum to be injected into the abdominal parieties. At 10 o'clock at night I was informed that the boy had definite spasms of the muscles of his arm when another injection was given. Next morning the affection became generalised and the boy showed all the signs and symptoms of Tetanus. Further injections were given intravenously which however were of no avail and the patient died within another 18 hours.

In the above cases the points for consideration are: —

(i) In the 1st group of cases the two patients who were cured by Antitoxin Serum showed symptoms of Tetanus 3 days prior to the injection being started and that not before the cases were fully established ones of Tetanus.

(ii) In the 2nd case the affection was localised and limited to the muscles of the arm and that also very faint indication of a spasm when treatment was commenced. In spite of that, the disease spread up and developed rapidly terminating ultimately in death.

From the above facts it is essay to see that (i) Antitoxin Serum of Tetanus could produce its effect on the toxin by neutralising it even when the central nervous system was affected. (ii) That the action of antitoxion serum was possible when the toxin was slow in its action and the toxicity of mild degree. (iii) That in another case even when the action of the toxin had not extended up to the central nervous system and was limited to the upper extremity only, nothing could check the progress of the disease and antitoxin serum was of no assistance in neutralising the poison.

The natural inferences one can therefore draw are :—

(1) That the Toxin of Tetanus ascends by way of axis cylinder and that antitoxin can pass through the choroid structure and has power to neutralise the toxin even when the nerve cells are affected.

(2) That the statement —"The toxin of Tetanus has greater affinity for nerve cells than for the Antitoxin" is not absolutely true, else the two cases cured would not have reacted with the injections and finally cured indicating thereby that the toxin was fully got rid of by means of neutralisation though the process was a slow one and naturally took time.

(3) That one can confidentally hope to cure a case of Tetanus but that only when the case is a subacute one.

(4) That the prophylactic value of Antitetanus serum is very doubtful when the toxin is of a virulent nature. It may however be sufficient to avert an attack when the poison be of a mild nature.

A CASE OF INFECTIVE ARTHRITIS.

By

Dr. Paramanand Ahuja, M.B.B.S., *Karachi.*

I was called on 8-2-31 to see an adult Hindu male aged 37 yrs. bed-ridden for the last two months and a half.

Previous History :—Patient was married about seventeen years back and has four children. He has been suffering from bleeding piles for the last ten years or so. He has consulted for a painful swelling in the anal region which has appeared and disappeared several times during the last two years and has been discharged to be fistula-in-ano. He denies all history of venereal disease. Patient has been a teetotaller and a vegetarian all his life, rather sedentary in his habits, without much active exercise except for an occasional evening walk. No history of tuberculosis or rheumatism in the family. His father and mother are both alive, the former is about sixty years old and had a stroke of paralysis one year back but has recovered since from the same, the affected arm and leg being still weak and tremulous.

Present History :—He was operated upon for piles and fistula-in-ano about the 25th December 1930 and has been confined to bed ever since. The operation was successfully performed, so was he informed by the surgeon in-charge and the healing of the wound progressed uneventfully for a fortnight or so. By the middle of Januray 1931 he got an attack of fever with rigors and the temperature shot up to 104° and has continued remittently ever since, going down to 100° or 101° in the morning and again rising to 103° or 104° in the evening. Fever was accompanied with severe pain in both the shoulder joints which became stiff, immovable and hypersensitive to slightest touch or pressure of attempt at movement which elicited excruciating pain. Patient passed restless days and sleepless nights and "preferred to die rather than linger in this agony" as he sadly put it. He had been treated on allopathic and homeopathic lines without much benefit.

Physical Examination :—Patient appears to be a broad built man passed the meridian of life, much emaciated because of recent illness, with pale shallow hectic look, eyes sunk behind the sockets, white lusterless conjunctivae; tongue coated with dry fur, gums congested and readily bleeding on pressure, skin dry and hot. Temperature at the time of examination about 11 a. m.—101; pulse weak and thready, beating 110 per minute.

Gastro Intestinal System :—Liver slightly congested and enlarged about two fingers' breadth below the costal margin; spleen palpable and soft; bowels constipated and move on alternate days with the aid of purgatives. General contour of the abdomen is flat and sunken.

Respiratory System :—Percussion and auscultation do not reveal any abnormality; breathing is normal.

Nervous System :—Mind is worried and agitated over long continued illness and evil forebodings for the future due to uncertainty of employment. The unbearable pain has overstrained the nerves and the patient is restless and dismayed.

Cardio-Vascular System :—There are haemic murmurs in the aortic area and slight pulsation in the veins in the neck. Pulse is low tensioned, easily compressible but regular in rhyme and rhythm.

Genito-Urinary System :—Urine is scanty, high coloured with specific gravity 1020. No albumin or any other abnormality detected.

Loco-Motor System :—Movements in all the joints are free except in the two shoulder joints which are immobilised and painful. The two joints are tender to touch, hot to feel but without much swelling or redness to observe; the pain radiates down to the arm and forearm. The patient lies flat in the recumbent posture and can neither turn right or left; passes urine and stool in bed. He frets and fumes at any attempt to raise himself even passively from bed. Movement in

the lower extremities is unrestricted and free, though the muscular appendages there share in common the general emaciation of the rest of the body and trunk.

Examination of blood shows leucocytosis of moderate degree with relative increase in polymorphs. No malarial parasites detected on repeated examination of different blood slides.

The wound in the anal region is mostly healed up with the exception of 1 inch or so of raw area and two or three masses of piles still protruding at the margin.

Several injections and medicines orally had been given under expert medical supervision which unfortunately had failed to produce the desired effect. His confidence had been considerably shaken and I was called in, as his towns man, just to advise him how to proceed further if there was any hope of recovery or, as an alternative, to leave Karachi altogether in dire despair and despondency.

After thorough examination and sifting enquiries as detailed above, I came to the tentative diagnosis of infective arthritis resulting from septic emboli in the venous sinuses in the rectal region subsequent to operative interference.

But to restore the confidence and raise him from the slough of despair to which he had succumbed, even to the level ground of probable hope and expectancy in the amelioration of his acute condition, was the real rub. It required no inconsiderable persuasion, pleading, perseverance and even at times indulgence in plausible platitudes, to induce the patient to permit me to try my line of treatment for a week or ten days.

Treatment :—I gave him at first Iodine intravenously, and after mild purgation put him on the following mixture :—

℞

Ammon Chlor.	gr. 90
Tr. Iodine Rect.	m. xl
Tr. Ferri. Perchlor.	dr. ii
Spt. Chlorof.	dr. iss
Glycerine.	dr. iv
Aq.	ad oz. viii

M. Ft. Mist.

Sig :—One eighth part in water every four hours.

To my great surprise temperature came down to 99.6° within the first 24 hours. Encouraged by this therapeutic result, the patient was given two injections of Iodine on alternate days. This resulted in complete disappearance of fever, amelioration in the symtpoms of pain etc. Patient's confidence being restored with the ray of hope enlivening his erstwhile encircling darkness, he heartily co-operated in the further stages of the treatment, and, with faith and cheerfulness as his allies, contributed materially to a successful issue.

To expedite the restoration of normal mobility in the joints, the iodine injections were replaced by 'Yatren Casein' injecton in gradually increasing doses and the patient was put on a tonic line of treatment. He took about five weeks to regain the free movements of the shoulder joints which were topically massaged with Lint. Pot. Iodide C. Saponis to assist the absorption of exudative material and to readjust the parts to the former state of activity. With the exception of development of a small abscess in the left upper arm in its upper 1/3 which was subsequently opened and dressed, the recovery was uneventful though prolonged. He was, when able to move about, sent away to a dry place for change and recuperation of health and the last step proved very beneficial and restorative.

POINTS OF INTEREST.

1. Rather uncommon nature of the complication.
2. Claim of Iodine as a remedy of no mean value in infective conditions, once again established.
3. Hopeful mental attitude helped in achievement of happy results.

INFANTILE RICKETS.

BY

R. K. KOMBRABAIL, L. M. & S.

Medical Practitioner, Zenith Pharmacy, Gamdevi.

Rickets, as we know, is one of the most common diseases prevailing among children in India and also one of the most refractory to treatment. During my practice extending over fifteen years, I was called upon to treat a very large number of rickets cases, but I was never before so much impressed in spite of the varied form of treatment I tried as within the last few months. Perhaps my brother practitioners would benefit by my experience if they have not already struck on it. The general public will also find this instructive. "Vigantol" (Bayer-Meister-Lucius) and "Baby's—Juvenol" (Paragon Products Co.,) were the two prescribed for *simultaneous administration* in Infantile rickets and marasmus, and the results were very gratifying and consistent. The one is a standardised Vitamin D preparation and the other is a vegetable compound containing besides the necessary Vitamins, Calcium Lactate and other things. In a strange manner, the East and the

West meet together and it is also curious that the two which make such admirable twins to counteract children's ailments have their names ending in "OL". The latter preparation is gathered from some of the well known indigenous drugs it and ought to protect against diseases of the liver and lungs also. I would suggest to my brother practitioners to now and again record their extraordinary experiences gained from the use of similar preparations as such a course would be in the interests of the lay public generally and the Medical Profession particularly. I intend doing likewise if the press would occasionally accord to me their usual courtesy.

A CASE OF IRREDUCIBLE HERNIA TREATED WITH ATROPINE.

BY

SISIR KUMAR GUPTA, L.M.P.

Jamalpur, Burdwan.

I was called upon to see a patient suffering from severe pain in the abdomen. On examining the patient I found a hard swollen mass occupying his right side of the scrotum. There was no impulse on coughing. The patient was suffering from hernia for a long time and used truss for this purpose. Patient got this trouble while coughing. He (Patient) tried to reduce it in the manner he did whenever it descended but this time he failed. I also tried taxis but failed to reduce it. Then I gave an injection of atrophine sulph gr. $\frac{1}{100}$ in 1 cc. subcutaneously, and again tried taxis twenty minutes after the injection in vain. So I advised the patient to go to Calcutta for operation and while advising him about operation, I found to my utter surprise that the hernia had returned to the abdominal cavity without taxis. The patient was relieved of his symptoms immediately.

A QUERY.

Dr. Y. Sitaramiah, M. O., Barpali writes :—A friend of mine is suffering from Chyluria for the last one year. His urine was examined by expert doctors and he was advised to take Tinct. Ferri in small doses. But he is not finding much relief by taking it.

As it is a very rare disease and not even described in text books, I request my professional brethren who have got much experience in treating that disease to publish a detailed account of its Aetiology, Pathology and treatment through the medium of your esteemed journal.

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THE DRUGS ENQUIRY COMMITTEE REPORT

The Drugs Enquiry Committee have concluded their labours and have since published their report. It is a very exhaustive and interesting document covering over 400 pages and we take this opportunity of congratulating Col. Chopra and other members of the Committee on their success and sympathetic handling of a rather intricate and complicated problem. The recommendations made by the Committee are neither radical nor re-actionary and the Committee have no doubt taken into consideration the present political and economic crisis in the land as well, which rendered drastic changes well-nigh impossible. In a word, the Committee were cautious. We have already in our Editorial of Nov. 1930 discussed in detail the aims and scope of the Committee and it is needless for us therefore to reiterate them here. We shall now content ourselves with a statement of the findings and conclusions of the Committee and their recommendations showing how far they meet with popular approval.

(I) Drugs of British Pharmacopoeia

Findings:—"The Committee has considered the problem in all its aspects, and feels convinced that it is justified in coming to the conclusion that the drugs in the Indian Market are not above reproach and that many of them are of impure quality and defective strength. The evidence points to the conclusion that the traffic in such drugs is extensive and indiscriminate and that the strong language used by some of the witnesses in characterizing the situa-

tion is by no means undeserved or exaggerated. It is not possible to estimate the exact extent with greater precision."

Recommendations :—

(a) Importers should be licensed.

(b) Samples selected and tested by the Customs Chemist at each port, assisted by the Medicine Appraiser and if found spurious, sent to the Public Analyst for analysis to be made at the Provincial Laboratory. This procedure, though it might entail some delay and lead to duplication of work, would tend to uniformity in practice and would seem to be the most satisfactory arrangement.

(c) With regard to adulterated or misbranded drugs coming through land from Indian States, the provisions as regards, licences inspection, sampling and analysis regarding imports by sea may be made to apply *mutatis, mutandis* to such articles also.

(II) BIOLOGICAL PRODUCTS SUCH AS SERA, VACCINES PHAGES, HORMONES AND PREPARATIONS OF OR FROM ANIMAL GLANDS.

Findings :—The biologic products offered for sale in India are derived from two sources (*a*) those imported into India from foreign countries and (*b*) those manufactured in this country.

"The variations in the activity of such products imported into India may be due to several reasons, firstly, the drug may not be up to the prescribed standard. Owing to the unprotected condition of the Indian Market, the facilities and the temptations for the sale of all kinds of inferior and deteriorated products are many and irresistable. Some of the importers do not hesitate to descend to the vile practice of getting hold of time-expired biological products and selling them to dealers at a very cheap rate. Secondly the products when sent out by the manufacturers may be perfectly sound and up to the standard but may lose their activity during transit or storage." As regards indigenous products, "the evidence goes to show that products such as Vaccines and Sera have given entire satisfaction. Many of the practitioners preferred them to imported products and urged that biological products prepared in India are better than the imported products. The claims were supported on these grounds namely (1) that they are likely to be fresh (2) that the animals and organisms from which they are made have lived under the same climatic conditions as those under which patients themselves live and (3) that they are probably cheaper than those imported from abroad."

(III) ORGANO-METALLIC COMPOUNDS.

Findings :—"Many of the witnesses complained that some of the Organic Compounds of arsenic which they had occasion to use produced toxic effect and were therapeutically inactive. It was represented that recently a large consignment of toxic arsenobenzol compounds had been imported by a firm which had bought large quantities of the condemned product from the European market where it was declared unfit for sale. Specimens of this consignment were actually bought and, on test, were found to be unfit for use".

"Complicated compounds of antimony as well as arsenic are now being manufactured in India by any one who may choose to do so and these potent compounds are put on the market without their strength being properly tested. Their standardization is left at present entirely to private enterprise and to manufacturers—the toxicity of each batch of such complicated and potent compounds is carefully tested in other countries before they are allowed to be sold to the public. No licence is granted to any firm until the licensing authority is satisfied that the personnel and equipment of the firm is qualitatively and quantitatively sufficient for the purpose for which the licence is sought. In addition to this licensing system samples of finished products are tested by the Laboratories under State control. While in other countries careful watch is kept over these potent compounds, the Indian public is entirely unprotected. The position is indeed discreditable to the country and is a source of great danger to the public."

Recommendations in respect of II, III, above :—"Samples to be tested as in the case of (1) above but the consignment, may, pending analysis, be detained or delivered to the consignee on such conditions as may be prescribed. If on analysis, the article is found adulterated or misbranded, such articles and others of the same kind may be treated as having 'false trade description' and may be confiscated and prohibited entry and disposed of according to the prescribed manner."

"Biological products and organometallic compounds require special protection. The manufacturer, importer and the seller as well as the place of manufacture or sale should be licensed. The standards of strength, quality and purity should be formulated and prescribed as well as the tests to be used for determining whether such standards have been attained. The testing should in every case be in the Central Laboratory.....Articles should not be imported which do not comply with prescribed standards of quality, strength and purity. Sale or being in possession for sale of any article, knowing it to have been manufactured or imported in contravention of the provisions of the Act or of the rules or of the conditions of the licence, should be made an offence. Samples of each lot of manufactured or imported products should be sent to the Central Laboratory for testing and, in the case of the latter, shipments should not be delivered to the consignee until the tests are made and certificates and licences are issued permitting delivery."

IV. MEDICINES MADE FROM INDIGENOUS DRUGS.

Findings.—(1) That many of the crude single drugs as well as the compounded medicines used in the indigenous systems of treatment and offered to the public for consumption are adulterated and of poor quality.

(2) That, in the interest of the majority of the public in this country who use them, they should be brought under some control.

(3) That, in the absence of standards, these drugs cannot be controlled on the same lines as drugs and chemicals recognized by the British Pharmacopœia and other western preparations.

(4) That the drugs and preparations of indigenous systems of treatment should be kept entirely separate at present.

(5) That, before any step can be taken to control the purity of such drugs and preparations, the systems of Indian medicine should organize themselves, by having an uniform curriculum worked out for the instruction and training of the practitioners throughout the country.

(6) That the practice of Indian medicines should be restricted to properly trained, qualified and registered practitioners.

(7) That only persons with expert knowledge of these systems can initiate steps to standardize the drugs and preparations they use with a view to bring them under control."

Recommendations :—No recommendations have been made in this behalf, as the terms of reference preclude the Committee from so doing.

V. PATENT AND PROPRIETARY MEDICINES.

Findings :—"That a control of some kind should be exercised over the import, manufacture and sale of proprietary medicines is the opinion of 95% of the witnesses. We are emphatically in favour of control and would strongly condemn the policy of *laissez faire* advocated by some of the witnesses."

Recommendations :—(*a*) Control to be exercised over both indigenous and imported proprietary and patent medicines.

(*b*) Provisions to be made for registration and the issue of a certificate after the mention of each medicinal ingredient to the department concerned on the lines of the Patent and Proprietary Medicine Act of Canada.

(*c*) The registration of proprietary medicines should be on payment of a prescribed fee and need be only once.

(*d*) The proportion of ingredients, such as Alcohol over 2½% and Belladonna should be given to the department concerned and mentioned on the label.

(*e*) Opium and its derivatives in medicines for internal use and Cocaine and its salts in any medicine, whether for internal or external use, should be prohibited.

(*f*) Drugs must be designated by their commonly used names.

(*g*) The provisions relating to inspection, seizure &c., are also applicable to proprietary medicines.

(*h*) Strict survillance in the field of advertising and the imposition of restrictions on it, suggested.

(*m*) Advertisement relating to aphrodisiacs, venereal disease, remedies for the diseases of women, cures for cancer, leprosy and tuberculosis to be prohibited.

(*n*) No false, misleading or exaggerated claims to be made on the labels, wrappers or advertisements.

(*o*) Patent medicines, imported into the country, should in addition to the customs duties already levied, bear a special duty of 20 per cent. *ad valorem*.

(*p*) Patent medicines manufactured in India should bear a revenue stamp of not less than 2 annas in each rupee of its market value. This stamp should be affixed in such a manner that it should not be possible to open the package without distroying or defacing it.

(*q*) Medical men to refrain from prescribing patent medicines as far as possible.

(*r*) The following restriction to be placed on the sale of proprietary drugs, if they become popular :—

I. The name to reflect the composition of the product and not the clinical use to which it is put.

II. The provisions as to advertisements of patent medicines with secret formulæ to be made applicable to these also.

III. The formulæ to be exhibited on the label of the actual container, if a simple chemical substance, the scientific name and chemical formulæ ; if a mixture, the details of its composition with actual quantities of active ingredients.

VI. THE PROFESSION OF PHARMACY.

Findings:—"The weight of evidence is, therefore decisively against the competency of the present day compounders. We are convinced that acute dissatisfaction is felt by the public and the medical men all over India in respect of the profession of pharmacy in general and of the work of the compounders in particular. The reason for this is not far to seek when it is remembered how intimately connected the profession is with the health and well being of the people at large. We have no doubt that the condition of the profession is deplorable and its degenerate state cannot be exaggerated or overemphasized. There is no pretence at the cultivation of the science

of pharmacy *as such*. Pharmaceutists of the Western type who are conversant with the science of pharmacy and are able to carry on the duties of manufacturing and analysing drugs have not received recognition as a class. The mere compounders who mechanically carry on the art of dispensing have neither the general education nor the special training to befit them for the efficient discharge of their responsible duties. It is no wonder that they are found wholly unequal to their work. The surprise is how they carried on thus far and how their condition and work failed to attract earlier notice or eluded vigilance and reform until now."

Recommendations :—(*a*) No person who is not duly qualified and registered should be allowed to carry on compounding, mixing and selling of drugs and chemicals.

(*b*) A firm or company or a person who is not properly qualified may be permitted to own a drugstore or pharmacy so long as the management is undertaken by or under the supervison of a qualified registered pharmacist.

(*c*) The creation of a General Council of Pharmacy as a central controlling body with Provincial Councils in the different provinces linked with it.

(*d*) The Provincial Pharmaceutical Councils might exempt small dispensaries from engaging qualified pharmacists but the dispensing must be done under the careful supervision of a medical practitioner.

With a view to promote the drug industry in India, the Committee have made the following recommendations :—

(1) That the Universities in India should be required to give training in advanced pharmaceutical chemistry and institute a degree on the subject.

(2) That the quality of crude drugs, both imported and those grown in the country, should be strictly controlled.

(3) That the import duty on manufactured drugs should be increased by 5 per cent.

(4) That the import duty on crude drugs not available in India should be abolished or appreciably reduced.

(5) That the imposition of export duty on raw materials obtainable only in India should be considered.

(6) That the question of supplying solvents at reduced prices should be seriously examined and that duties on such solvents used, at any rate, for *bonafide* medicine purposes should be abolished or reduced.

(7) That the restrictions upon the free transit of spirituous preparations between the different provinces in India should be removed.

(8) That the Excise regulations should be modified so as to remove the hardships referred to and they should generally be worked in a sympathetic spirit.

(9) That the question of reduction of railway freights on raw materials and indigenous drugs manufactured in India should be considered.

(10) That the drug industry in India should be encouraged by the Government by the purchase of the required supplies of medicinal preparations, surgical dressings, chemicals. etc., from Indian manufacturers as far as possible.

(11) That the Central Laboratory should be staffed by experts who are capable of giving sound advise to all interested persons on manufacturing processes, the requirements as to machinery and general plant that may be necessary for carrying on the industry, and the technical difficulties which may arise in relation to it.

(12) That every encouragement should be given to promote the cultivation of medicinal plants and herbs.

With regard to the compilation of an Indian Pharmacopoeia, the Committee recommend that :—

(1) Steps should be taken to compile an Indian Pharmacopoeia without delay.

(2) This work should be on the lines of the British and United States Pharmacopoeias including only drugs of known composition, of definite pharmacological action, of well established therapeutic properties, with the toxicity fully worked out and the necessary standards of chemical and biological assay for determining the safe maximum doses.

(3) The draft should be compiled on the model of existing pharmacopoeias, and should contain (1) such of the therapeutically active substances and pharmaceutical necessities as are found suitable for India, and (2) substitutes and additions for the indigenous *Materia Medica*.

(4) The desirability of entrusting the work of compiling the Indian Pharmacopoeia to the officers of the Pharmacological Laboratory, Parel, Bombay, may be considered."

We think we have said enough to convince our readers of the honest and earnest attempt made by the Drugs Enquiry Committee to revive the drug Industry in India and to make India self-supporting, if not immediately at least in the near future, in the matter of supply of drugs and medicines, pure and unadulterated and at minimum cost, to the suffering millions of India. We are in entire accord with the views and recommendations above set forth. It now rests with the Government of India to take up the necessary legislative and other measures and thus give them a practical turn or shelve the report in the archives of the Secretariat at New Delhi. What they will do, we are unable to divine. Meanwhile let us wait and watch.

A DEPUTATION THAT ENDED IN DISAPPOINTMENT.

Elsewhere we publish a summary of the proceedings of a deputation of Licenciates headed by Dr. U. Rama Rau, that waited on the Hon' The Chief Minister with the Govt. of Madras recently, to impress on him the necessity of including the Licentiates of this Presidency in the proposed All-India Medical Council Register. The Hon. Sir Mohamed Usman Sahib Bahadur, Home Member, the Dy. Secretary of the Local Self-Government Department and the Ag. Surgeon General with the Govt. of Madras, were also present. The Hon. The Chief Minister, having already prejudged the issue, was obdurate and refused to accede to the demands of the deputation while the Home Member was sympathetic and the Dy. Secretary suggested the *via media* of separate registration. It is an irony of fate that the Chief representative of the people in the Cabinet of the Govt. of Madras should have so far allowed himself to be drawn by the noose-strings of officialdom that he was forced to turn a deaf ear to their strong and earnest representation. It is now as clear as day light that the Licentiates have not even the ghost of a chance to get themselves enlisted in the would be All-India Medical Register, and unless they constitutionally agitate and agitate and show a united front, their fate is practically sealed.

Medical News & Notes

SUICIDE BY SWALLOWING MICROBES

(From our own German Correspondent.)

A curious case of unsuccessful attempt at suicide by a novel method, attracts considerable attention in scientific circles because it upsets or at least shakes, a universally held theory.

In the small German town of Lindau lived a master butcher who, for some reason or other, decided to put an end to his existence. He happened shortly after taking this fateful decision, to be present at the veterinary examination of a carcass whose superificial inspection had led to being suspected of disease. The veterinary surgeon established beyond doubt that the carcass in question was infected with millions of a peculiarly noxious and poisonous microbe known to science as "bacillus enteridis Gaerner". Heart, kidneys, liver and the other organs of the animal, all told the same tale.

The veterinary surgeon said to the butcher: "It is a good thing this beast did not come on to the market. It contains enough poison to kill off the entire population of Lindau." Quick as lightning, the

butcher seized a large piece of the infected liver and swallowed it down at one gulp, adding "That's fine. I have decided to die."

The worst of it was that, while the poisonous effects of this microbe were well-known, the remedies are considerably more obscure. Moreover the butcher, a strong man, opposed vigorous resistance to attempts to take him to hospital or do anything to try and mitigate the effects of the poison. He simply waited for the poison to take effect. And he is still waiting. For apparently, the few million microbes he gulped down must have suited his constitution quite well. He felt not the slightest ill-effect.

The meat was subjected to re-examination at the hands of experienced experts, but they all endorsed the opinion of the original inspector. By some strange process which medical science knows nothing of, the body of this particular butcher appears to have been immune. The leading medical reviews are devoting attention to this problem, for which there is no precedent in medical history.

VEGETABLE POISON AS CURE.

The effects of poisons are among the puzzling sides of medicine. In the Lindau incident, the poison was one generated by a living organism. But there are cases in which the administration of other kinds of poison not only leave no ill-effects, but are actually beneficial. Dr. J. Braun, a well-known German specialist in toxology, in his recently published work "Archiv fur inneae Medizin," gives a striking instance of this, which incidentally furnishes a new method of treatment for an insidious and fairly widespread disease.

The heart disease known as "Basedow's Ailment" is very difficult to treat. Or at least was, till Dr. Braun discovered that a violent vegetable poison administered in frequent minute doses was able in most cases to achieve a complete cure. In West Africa there is a plant of the climbing order, the seed of which, called popularly the Kalabar Bean, yields an exceedingly virulent poison variously known as Eserine or Physostigmine. It has been found that a dose of two milligrams of this poison, daily administered, results in quick improvement of the symptoms of the disease, most marked among which is the tendency of the eyes to protrude and that after a few week's constant treatment, the disease itself almost always disappears.

TAKING NOURISHMENT THROUGH THE SKIN.

The head of the internal clinique of the Hospital of the Brothers of Mercy in Vienna, Professor Stejskal, claims to have found a new method of administering nourishment to such patients as are unable to absorb through the mouth sufficient sustaining food. This is, of course, comparatively frequently the case. A tuberculosis patient, for

instance, in an advanced state of the disease, is scarcely able to bring up enough energy to masticate; those who suffer from cancer of the stomach can retain no food; in the case of those affected with certain ailments of the throat, swallowing is practically impossible and it is not always possible or advisable to introduce a swallowing tube.

The Professor has evolved a sort of paste which is rubbed on to the skin. The foodstuffs it contains are absorbed by the pores and conveyed through the body. There is not, among the scores of cases in which this experiment was made by skilled physicians, one instance of failure of this paste to act. In many cases, of course, the disease from which the patient was suffering, was too far advanced to permit of his being saved, but his strength was maintained upto the last. In many cases, however, it was found that the sustenance thus afforded the body enabled the patient to survive the critical days and thus led to convalescence and cure.

These experiments, by the way, were conducted over a series of days upto ten, and it was found that the human body is prefectly capable, when at rest, of living for the period from food conveyed through the skin. The process of feeding could even be followed by a combination of X-rays and the cinema, and the Professor is about to publish a treatise embodying the results of the experiences incurred for the benefit of the medical profession. It may be added that, while the tests were all made with the particular paste he himself concocted, he does not attach undue importance to that side of the question. It is probably that there are innumerable ways of preparing such a skin food that would be equally or even more efficient. The important point is that apparently the principle of feeding through the skin has been established.—*Transocean Service.*

Gleanings from Medical Press.

MEDICINE AND THERAPEUTICS

Treatment of Whooping Cough: Arthur J. Turner, M.B.B.S., *The Practitioner* Jan. 1932, pp. 66.

In describing the method of treatment of this disease the author gives his method of treatment with Ultra violet radiation and discusses its value and usefulness over the ordinary treatment that is in vogue. He advises isolation in all suspected cases of whooping cough from non-infected children. Since the mortality from this disease and its complications is high, under 5 years of age, greater care must be exercised is preventing the spread of the disease. Where there has been a contact with the infected patients and where isolation is not possible treatment with Ultra violet rays for 10 days to increase the

resistance of the patient or the following mixture in its absence may be prescribad:

℞

Creosoti	m. x.
Pot. Iodide.	gr. xx.
Spts. Rect.	m. xl.
Ext. Glycyrrhiza. Liq.	dr. 1
Aqua ad.	oz. iv.

Dose for a child of 5 years, two teaspoonfuls every four hours.

Though it is very difficult to diagnose the disease in the pre-paroxysmal stage with any precision yet it is possible to determine its existence by pronounced increase in the leucocytes in the blood. The writer gives an increase of 20,000 to 30,000 or more of which the lymphocytes number as many as 60%. Treatment therefore has to be adopted on suspicion of whooping cough in the first or catarrhal stage or in the second on the existence of vomiting and the paroxysmal cough.

Treatment with Bordet-Gengou vaccine is not very encouraging to warrant its general use since 30% of the cases reported (Oustrics report 1929.) showed little or no improvement. Intra-muscular injection of ether is not very satisfactory and is often attended with abscess formation and even paralysis. However with the writer it has not given any untoward symptoms but has helped in checking the severity of the paroxysms. Since 1925 the writer has been treating these cases with Ultra violet rays and says "that his success has been almost identical with that of E. H. & W. K. Russell and should not now think of treating any case of whooping cough free of any complications by any other means".

The advantages claimed by the writer are, that there is no uncertainity as to the medicine being retained; next, there is no unpleasantness of the taste to add to the child's distress; neither is there the fright of needle injections. There is a speedy control of the symptoms under this treatment. The youngest patient in the writer's series was a baby of eight months, and a very severe case. The average age of his patients was 5 years.

The whole body is exposed to the rays both back and front at a distance of 36 inches. This is carried on until the principal symptoms disappear. The exposure is made once a day and then twice a week for one or two weeks. The initial dose varied according to the age of the patient from half a minute to two minutes both to back and front. Each day the dose is increased by half a minute in the young and one minute in the older patients. Pigmentation due to excessive dose must be avoided. The improvement is noticed even after the first exposure to the light. This is evidenced by the

happier countanance that the patient puts on by an increase in the amount of sleep, and later by the tonicity of the muscles:—*V. C. S.*

Intestinal Action of Camphor:—H. Busquet and A. Jaurou (Bull. Soc. de Ther. Oct. 1931. p. 259.) state that the action of camphor on intestinal pain was first noted by Nicolas Alexandre in 1750 in his botanical dictionary, and its constipating effects were described by Viet in 1803 in his Materia Medica. Graffienhauer, in a monograph on camphor published in the same year, emphasised its sedative action in colic. Millot advocated its use in acute colitis in 1837. Since then, however, little attention was paid to the sedative action of camphor on the intestine until Busquet read a paper on the subject before the Societe de Biologie in June, 1930. In his recent Paris thesis Jurou recorded 14 cases of diarrhoea due to different causes, and usually attended by colic and fever, which he had treated by camphor. The use of this drug produced within the first few hours a diminution in the number of the stools, a considerable relief of the colic, and a fall of the temperature to normal. The daily doses of camphor should not exceed 0·25 gram. It is best prescribed in a watery solution, with an appropriate syrup to correct the disagreeable taste.—*B.M.J.*

The Vitamin Alphabet.

Vitamine A lives in carrots and cheese ;
A promoter of growth and a foe to disease.

B : beri-beri, that pest of the East.
Needs an antineuritic like lentils or yeast ;
But the function of B, it has now been decided,
Between F and G must be fairly divided.

C : prevents scurvy if taken in time
In the form of tomatoes or orange or lime.

D : is for rickets an excellant foil ;
It occurs in abundance in cod liver oil.
E : in wheat germ, has reputed ability
To aid reproduction and counter sterility.

F : is in liver, or lettuce, or both ;
Its function's concerned with promotion of growth.

G : bear in mind if pellagra you see
That meat, mllk, and yeast contain vitamin G,
A factor called H aids the growth of young trout,
But at present its nature is somewhat in doubt.

(*The Prescriber*).

Toxicity of Atophan compounds.—Twenty-five fatal cases of atophan poisoning have been recorded, but it is not generally known that this drug is present in other proprietary analegesics. F. Hogler reports four cases of poisoning by an atophan compound; one terminated fatally. Atophan increases the uric acid excretion, but it also promotes calculus formation; sodium bi carbonate should therefore be administered concurrently in doses of 60 to 75 grains daily. Dyspepsia, erythema, pernicious anaemia, and jaundice have followed its administration. Some writers advise that atophan should be given for three or four days, and then be discontinued for a week or ten days. Hogler states the symptoms of atophan poisoning as headache, anorexia, and diarrhoea, loss of weight, jaundice, and increase of the splenic dulness, with sugar, acetone, bile pigment, cholic acids, albumin, casts, and leucocytes in the urine. The patient who died was found to have subacute yellow atrophy. Hogler found that goitrrous and diabetic patients did badly under atophan treatment, which is very dangerous as a prophylactic.—*B. M. J.*

Hexamine in acute diseases:—Minet and Duthoit in an article on this subject point out that, though hexamine is extremely successful in urinary infections when the acidity of the urine is sufficient to liberate formaldehyde, it also can exert a bactericidal and inhibitory effect on the bacteria in neutral or even alkaline solutions, in which formaldehyde cannot be liberated. The intravenous injection of hexamine, advocated in 1916 by Ayerza, of Buenos Aires, exerts a beneficial influence in the early and septicaemic stages of enteric fever before the bacilli have settled down in the viscera; and even later, when localisation of the bacilli has taken place, the incidence of relapses and of complications, such as intestinal haemorrhage and biliary inflammations, is diminished, though the duration of the febrile stage is not shortened. In cholecystitis and catarrhal jaundice intravenous injection of 30 grains of hexamine daily for five days and then intervals of a similar period gives remarkably good results. The same treatment is recommended in puerperal and other septicaemias, in post-influenzal phlebitis, influenzal lung complications, menengitis and polomyelitis.—*Practitioner.*

Mercuric chloride poisoning with recovery by use of Sodium Thiosulphate.—A woman aged 21, took ten 7½ grain tablets (75 grains = 5 gm) of mercuric chloride with suicidal intent. About 20 minutes after swallowing them, she vomited. She was treated 10 minutes later by 10 cc. intravenous injections of sodium thiosulphate every 8 hours until 5 doses had been administered. Her diet was chiefly egg albumin in orange juice, milk and butter-milk. It it

remarkable that the poison was retained 20 minutes before she vomited at all, and 30 minutes before an emetic was administered. Six months after taking the poison the patient had normal kidney function and had no symptoms traceable to the mercury.—H. E. March Banks, H. Smith and H. L. Church, J. Am. M. Ass. 1931; P. 611,—thro. *J. C. M. A.*

Glucose Solution:—David Stein, M. D. (American Medicine Nov. 1931) discusses the use of concentrated solution of glucose intravenously with better results over weak solutions. The author is of opinion that concentrated solutions give better result in much less time and to a greater extent than can be got with a weaker solution. The usual strain that is supposed to produce on the right heart by administering larger quantity of fluid cannot happen as the quantity of solution recommended is only 180. c. c. as against 500 to 1000 c.cs. in weaker solutions. It has also been his experience says the author that in cases of severely injured right heart glucose administered after his method preceding venesection improves the tone of the heart. The following are given as examples of indication for its administration with good results: post-operative acidosis, acidosis of toxaemias, cyclical vomiting of children, acidosis of nepheritis. It has been found invaluable in the treatment of Pneumonias, Broncho-pneumonias in children, in diphtheria, epidemic-encephalitis, eclampsia, cholera and toxaemias of burns. In exhaustion and prevention of circulatory failure, glucose has greatly helped. In delayed choloroform poisoning, and phosphorous poisoning it has been tried with benefit. It has also been used with excellent results in bi-chloride of mercury poisoning.

Method of preparation of the solution:—The solution should be freshly prepared before administration as follows:—Add 108 grms. of glucose (3½ ounces of C. P. dextrose) to 180 c.c. (6 ounces of physiologic solution of salt) into a conical flask and keep in a hot water bath at the boiling point for twenty minutes. Then allow the solution to cool to body-temperature.

Method of administration:—The usual method of sterilizing the site of injection is followed. Then insert the needle of the syringe in the usual way and allow the solution to flow by gravity keeping the can at about 18 inches height from the patient. The slower the rate the better and it must in all be not less than thirty to forty minutes for the solution to run in. In this connection it is worthwhile to remember "Speed shock". The easiest and most practical method to keep the solution at the required temperature is to cower the can in a hot water-bottle. If these precautions are taken the question of reaction need not be frightening:—*V. C. S.*

Diet in Peptic Ulcer:—While there are many diet lists advocated for ulcer, and the growing impression is that one is no better than the other, it is pleasing to know of a departure in which palatability is considered without a decrease in efficacy. Orange juice, with its vitamin and food content, has been debated but its acidity seemed to be a contra-indication. It is being used with happy results both to palate and ulcer. Drs. R. C. Blankenship and W. H. Oatway, Jr., of Madison, Wisconsin, in a paper in *Annals of Internal Medicine*, April, 1931—a new modification in the Dietary Treatment of Peptic Ulcer, advocates its use.

"The ideal ulcer diet is one which furnishes the fundamental requisites (balanced, with adequate mineral and vitamin content) in a finely divided state and which brings about a minimum digestive effort. When properly modified, and slightly supplemented to overcome the distorted relationship between protein, fat and carbohydrate content, milk and cream can be made to form an excellent basis for such a diet. The pediatricians years ago recognized the importance in infant feeding of a fine soft curd, as well as a balanced diet and slightly acidified milk. Hess and Matzner, in 1924, first recommended the addition of a small quantity of lemon or orange juice to milk fed to infants, but such modification has never been suggested in the dietary treatment of disease in adults. On the contrary, until recently, authors have generally recommended excluding all forms of citrous fruits from the ulcer diet.

"Naturally with our increasing knowledge of vitamins physicians everywhere are now using fruit juices quite freely, and of course, in some instances where it was formerly thought to be contra-indicated. A short time ago Harris included both orange and tomato juice in his ulcer diet, saying that they have been shown to bring about no increase in gastric acidity. Similarly Cowadias has used orange juice while discussing vitamin B deficiency as a possible causative factor in ulcer. We believe we are the first to use milk modified by the addition of large quantities of orange juice in the dietary treatment of peptic ulcer, and to define all the principles involved, at the same time reporting the practical application in the actual treatment of patients.

"It is noteworthy that the carbohydrate in orange juice (1 Gram to 10 cc.) has been shown to inhibit hunger contractions of the stomach. It is also known to leave the stomach very rapidly, and it is a readily available source of metabolic energy bringing about a minimum amount of gastric secretion and it does not cause pain. The addition of orange juice to milk permits the feeding of more juice than might otherwise conveniently be given. This is not undesirable because additional carbohydrate is needed to aid in balancing the diet. The large quantity of juice used obviously

increases the vitamin content and adds a mild laxative effect. The incidental factor of dilution is certainly beneficial rather than harmful.

Our work includes a study of milk and cream mixture with orange juice, sodium citrate, citric acid and tomato juice, in the proportions indicated. These mixtures were examined in vitro and then fed to subjects known to have uncomplicated duodenal ulcer. All patients used were in the second week of therapy, with rest and citrated milk the two main factors in previous treatment. The formulas used in each case, with intervals between feedings and aspirations, are given below. In each case the large Ewald stomach tube was easily passed and the stomach emptied.

"From gross examination and photograph of the curves we are able to make the following deductions:

1. The orange juice mixture produced the softest and finest curds. Dilution, of course, might have some influence in this observation.
2. Sodium citrate curds are relatively fine though tougher and somewhat enmeshed in mucus.
3. The citric acid curds were relatively larger, but soft and more evenly distributed.
4. Tomato juice may be excluded entirely from consideration, because of its disagreeable taste and the large tough curd formation.

"Since our initial aim in this work was to acidify milk with orange juice to a point equal to that of ordinary citric acid milk (four Grams to the liter) as usually fed to infants, we have plotted curves showing the pH values of milk when an increasing amount of orange juice is added to a constant volume of milk (75 cc.). This mixture as used is approximately 25 per cent. orange juice and just falls short of curdling before ingestion. It is highly palatable and by most patients is preferred to the other commonly used modifications."—*J. M. B.*

The diagnosis and treatment of Colitis:—Sir William Willcox (Clinical Journal) writes..... "There are many varieties of colitis. Acute catarrhal colitis begins acutely. There is pyrexia, a feeling of general malaise, abdominal discomfort, and pain and gastric symptoms. Mucous and blood are passed in the stools. Complete rest and careful dieting are important. Milk is not the best diet as it produces curds. Milk can be given diluted with barley or citrated or peptonised. Glucose, arrowroot, corn flour, etc., in solution are good. As regards drugs 30 grs. each of soda bicarb and soda sulph. with 5 min. of nepenthe per dose are the best.

Ulcerative colitis is the most dangerous type. There is a lot of toxic absorption and the patient is very ill. Temperature, pain, vomiting, and blood and mucous are the prominent symptoms. Death takes place from toxic condition or due to complication like perforation, haemorrhage.

Colitis is due to some bacterial infection probably to a variety of streptococcus treatment—Complete rest, warmth such as poultices antiphlogistine, is necessary. Diet must consist of foods which give rise to no residues. Drugs—all sorts of drugs are tried. Soda bicarb, soda sulph, belladonna, with nepenthe are the best. Salol, beta-napthol, salicylates are also good. Starch and opium enema (40 min. of Tropii in 3 or 4 oz of starch water) will give the bowel rest. Specific treatment—If there is a bacilary infection 100 c. c. of Anti-dysentery serum is of great value. A total of 100 c. c. in two days will do good for a severe case. Regarding vaccine treatment a warning is given. As the patients are very severely ill, and as they are very sensitive to the toxins producing the illness a very weak vaccine dose will have to be used. The same caution has to be observed with regard to blood transfusions and Colon washes. With regard to the latter normal saline or soda bicarb given every second day after the acute stage has passed away is recommended. Muco membranous-colitis is a third form of colitis without ulceration. This improves by Plombeirs treatment. Dysentary is a fourth variety. It is a form of infective colitis. The usual treatment of dysentery is to be followed:—*U. K. R.*

SURGERY

Epistaxis.—Georgec Liebault, M.D., of the Faculty of Medicine Paris.—Franco-British Medical Review. No. 1931. Discusses the treatment of this condition under two broad headings: that due to external causes eg. trauma, Sun-Stroke, Whooping-Cough in children as a prodroma at the onset of some specific fevers, or acute infections., Dyscrasis, arterosclerosis, high blood pressure are some common causes in adult life. It is frequent in pregnancy and at the menopause. Among the local conditions Epitheliomas, Sarcomas, Nasopharyngial fibroma in young adults; varicose-veins of the septum polypi may determine bleeding.

In most cases the bleeding is copious and the patient is much upset and the face pallid. A small thready pulse, muffled heart sounds, tendency to faintings warrants prompt and immediate treatment.

Start treatment with Camphor in Oil if found necessary. The cloth must be removed from the nostril and the patient is asked to breathe through the affected nostril which very much diminishes bleeding.

In all cases of copious bleeding an attempt must be made to spot out the source of bleeding. Arterial supply of the septum must be known with its surface markings, thus the Spleno-Palatine branches supply the antero-inferior part of the septum, Internal-Ethmoidal branch its superior part and the Facial branch the sub-septum.

Vicarious menstruation is good and need not be stopped.

Treatment:—Digital pressure on the nostril pinching the nose at its vascular spot or by Blandius manuvoure. Per-Chloride of Iron. Antipyrin, Hydrogen peroxide are of less value as hæmostatics while local application of horse serum *e.g.* diphthereticserum may be of much value when properly applied.

Plugging the nostril with gauze strips soaked in cocaineadrenalin solution which causes vaso constriction is very effective.

Application of Galvano-cautery on the bleeding spot with a flat electrode and a current of 25 to 35 ampires stops all bleeding. The current must be 'on' when the cautery is removed to avoid separation of the scab.

Bleeding not controlled by these measures must be encountered by plugging the nostril either from front or behind.

Precautions to be taken in plugging the nostril are —

Use strips of antiseptic gauze *eg.* Iodoform, as it can be left in for several days if necessary.

Inner-end should not hang loose in the naso-pharynx. This can be avoided by tying a silk thread to the end of the strip. This thread is held tight by the assistant while plugging is being done.

Posterior plugging is rarely called for and is both difficult and distressing to manage for the patient.

To plug posteriorly pass a soft rubber catheter through the nostril, running along the floor of the cavity into the naso-pharynx. When the extremity makes its appearance behind the soft palate seize it with a forceps and pull it forwards. Attach to it the threads connected to the gauze strip and pull it back the way it went. This will bring the plug into the cavum and to the posterior aperture of the nasal fossa. It is better to pass the finger into the fossa and jam the gauze into the infundibulum than to pull the string to increase pressure.

Unplugging—An anterior plug can remain for several days if one has nade use of an antiseptic plug. Posterior plug must be taken away much earliar and never must remain longer than 48 hrs.—*V.C.S.*

Correspondence.

I

Dr. D. V. Venkappa, Provincial Secretary The All India Medical Licentiates Association Madras Branch writes :—

The Annual Conference and the Silver Jubilee session of the above Association was held in the spacious premises of Victoria Memorial Hall, Darbhanga under the presidency Col. I. Cook I.M. S., Inspector-General of Civil Hospitals, Bihar and Orissa. In the unavoidable absence of Diwan Bahadur T. Rangachariar M.L.A., C.I.E., his address which touched upon the several aspects of the Licentiates' capacity for being entitled to the recognition in the proposed All-India Medical Council Bill, apart from other deserved and well merited qualification of the class as a whole in the discharge of their onerous duties to the Government as well as the suffering humanity, was read by Dr. D. V. Venkappa of Madras—when such of those striking portions of the address were received with acclamation by the house. The session began precisely at 1 P. M. on Sunday the 3rd instant when apart from the elite of the town about 80 delegates from all parts of India attended the function. At 4 P. M. the Sanitary and Scientific Exhibition was opened by his Highness Maharajadhiraj Sri Kameswar Singh Bahadur of Darbhanga in which the distinguished guests present and the delegates took a keen interest in going round the stalls of the Exhibition. After 6 P. M. there was a Magic Lantern Exhibition by the Bengal Chemical Works detailing the process of their manufacture to the audience. The 2nd day of the Conference was entirely devoted to the reading of the scientific papers got from all parts of India when there was a discussion on their professional aspects by the delegates. The scientific section was presided over by both the Inspector-General of Civil Hospitals, Bihar and Orissa, and the Superintendent, Medical School, Darbhanga. Lt. Col. Cook commenced with a dissertation of his interesting experiences of the causation of diseases other than the usual and elaborately described his conviction that Leprosy was due to a deficiency in the intake of food and instanced examples from his own experience. The Subjects Committee which met on the 2nd night pulled on to the 5th morning at intervals including two sleepless nights for the delegates discussing and passing of resolutions concerning their status and their recognition in the Bill whilst very important items regarding the internal administration of the association and its office-bearers took a long time for disposal. The feature of the Conference was the mustering strong of delegates and L.M.Ps all over India, the heated discussions and resolutions

protesting against the All-India Medical Council Bill amongst others and the representation of Madras by about half a dozen delegates. The next venue of the Conference was put before the house when Assam and Madras invited the Association to hold its session. It was unanimously agreed to accept the invitation of Madras.

II

To

THE EDITOR, The *Antiseptic*, MADRAS.

SIR,

Dr. D. V. Venkappa and Dr. G. Subbarayadu of The All-India Medical Licentiates' Association, (Madras Branch), addressed the Medical men of Vizianagram on the 8th instant under the auspicies of The Vizianagram Medical Association on their way to Madras from Darbangha Conference. Dr. D. V. Venkappa spoke on The Indian Medical Bill and the utility of forming an association, a branch of The All-India Medical Licentiates' Association). Dr. G. Subbarayadu spoke on the conference work at Darbhanga. At the end of the speech, the following resolution was passed unanimously deploring the defects of The Indian Medical Bill.

Text of the resolution :—"Medical men of Vijianagaam met under the auspices of The Medical Association, Vizianagram strongly protest against the non-inclusion of the Licentiates and other Diploma holders in The All-India Medical Bill and point out that such a bill will be detrimental to the interest of the medical profession in India and produce discontent amongst the large proportion of the Indian Medical Corps and defeat the very objects aimed at by the bill."

With the usual vote of thanks to the two distinguished guests and the president of the meeting, the meeting came to a close.

I remain,
Sir,
Yours faithfully,
K. M. Raju
Secretary, Medical Association,

9-1-32
Vizianagram.

P.S. :—Dr. B. V. Sanjiva Rao occupied the chair.

III

To

THE EDITOR, The "*Antiseptic*," MADRAS.

DEAR SIR,

I herewith enclose a summary of the proceedings that took place between the Government and the deputation that waited on it. You will find from the trend of the happenings how they are prejudicial to the class of L.M.Ps. and how a strenuous fight should be

put up to achieve our objects. I request you therefore that you will kindly exert yourself in the matter and see that the justice of our claims are broadcast to whomsoever it concerns so that our avowed object of the inclusion of the L.M.Ps. in the purview of the proposed Medical Bill is not frustrated. You may use all the weight of your influence at your command and see that no stone is left unturned in this important task. I need hardly say any more than what you already know and I leave it to you to do the best in the matter. If you have any proposals to make or have already decided on any plans to suggest kindly let me know at the earliest possible opportunity.

Thanking you,

Yours sincerely,
D. V. Venkappa.

SUMMARY OF THE PROCEEDINGS OF THE DEPUTATION.

The deputation appointed by the above Association to place the considered views of the members about the proposed All-India Medical Council Bill before the Government met the Minister in charge of the medical portfolio, the Home Member and the Deputy Secretary to the Government at the Government Secretariat Office precisely at 3 P. M. on the 25th inst. as per appointment when the Surgeon-General with the Government of Madras was also present. The members of the deputation, were Dr. U. Rama Rau, President of the Madras Branch, Dr. D. V. Venkappa, Provincial Secretary, Drs. U. D. Gopala Rao and G. Subbarayadu, Branch Secretaries and Drs. V. Rama Kamath and K. B. Bhujanga Rao, other members of the deputation were each of them introduced to the respective Officers of the Government. Dr. U. Rama Rau who headed the deputation gave a brief survey of the Bill and pointed out the deficiencies in the very preamble of the Bill and certain other significant factors which meant the exclusion of the L.M.Ps. from the purview of the Bill. He brought to the Members of the Government and those present the necessity of including the L.M.Ps. who form the vast bulk of the profession and without whom the Bill cannot represent the name it signifies. Dr. D. V. Venkappa gave a short sketch of the doings of the Association in which he pointed out the weighty pronouncements made by the highest administrative heads of the department both Civil and Medical such as Viceroys, Governors, Lt. Governors, Director-Generals of the Indian Medical Service, Surgeon-Generals, Inspector-Generals of Civil Hospitals and other members of the Indian Medical

Service which he treasured as the highest and most worthy testimonials for the recognition of this class of medical men. He referred also to protests all over India against this Bill. Dr. V. Rama Kamath argued on the several aspects of the Bill and remarked that apart from the defective preamble not the slightest consideration was given about the inclusion of the L.M.Ps. in the Bill particularly pointing out that it was intended mainly to serve and safeguard the interests of the graduates and placate the General Medical Council of Great Britain so much so it may well nigh be termed the All-India Medical Graduates' Council Bill. The other doctors also took part in the lengthy discussion that followed when the Surgeon General gave his opinion that until and unless the course of the L.M.Ps. was raised there can be no talk of their recognition. He said the increase in the course of study for the L.M.Ps. from 4 to 5 years will probably come to pass from the next year onwards when the question of recognition may be taken up. When questioned as to the present status of the L.M.Ps he said that their case would be decided later and the fact that there was recognition in the provincial medical councils was enough qualification for them. When questioned still further as to the efficiency of the class and desirability for inclusion he went on to say that Section 18, Clause 2 of the Bill gave them the opportunity in that the Governor-General in Council was vested with powers to afford opportunities to recognise the qualifications to be included in the Schedule, whilst personally he held on to his own opinion in the matter referring to those present that he was only an acting Surgeon-General and that they may get enlightenment from the permanent Surgeon-General. The Minister followed in the wake of the Surgeon-General and would not recognise the claims of the L.M.Ps in the matter of their qualifications and went a step further contending that the graduates were superior to L.M.Ps. The Home Member was sympathetic enough to consider the claims of the class and said that all the L.M.Ps could be recognised and when the five years' course came into existence the future L.M.Ps will automatically get registered after a specified period of service. The Deputy Secretary to the Government opined that the L.M.Ps could be included under a separate clause of the Schedule. The whole interview was one of disappointment and surprises and the deputation felt rather depressed at the angle of vision of some of the powers that be who they expected would be a source of encouragement and relief. After a very lengthy discussion and persuasion, the members of the deputation appealed to the Officers concerned to sympathetically view the claims of this class of medical men who form the backbone of the medical department in India and further pointed out that almost all the medical associations and provincial medical councils in India have recommended the inclusion of the L.M.Ps in the All-India Medical Register. The authorities promised to consider the matter and the deputation thanked them for their kindness and the interview granted.

D. V. VENKAPPA.
Provincial Secretary.

Proceedings of Societies, Associations, etc.

THE ALL INDIA MEDICAL LICENTIATES' ASSOCIATION

At a meeting of the Madras *Branch* of the above Association held on 21—1—32 at Ganamandir, Thambu Chetty St., at 5-30 P.M., a large gathering of L. M. Ps. was present. Dr. U. Rama Rao was at home to the members. Major V. Mahadevan, I.M.S., who occupied the chair expressed gratification at the opportunity to meet the gathering and hoped that all the licentiates would muster strong under the banner of a common association, like the All India Licentiates' Association. After the reading of the minutes of the previous Meeting and getting it confirmed, Dr. U. Rama Rao the President of the Association moved the following resolutions in connection with the All India Medical Council Bill, all of which were passed unanimously. (*a*) The All India Medical Licentiates Association, Madras Branch having further considered the Draft Bill of the Government of India to establish a Medical Council for India resolves that a new section No. 20 be inserted in the Bill defining specifically the privileges and rights which a registerd medical practitioner would enjoy. (*b*) The medical qualifications granted by medical institutions outside British India which are included in the second schedule shall be recognized medical qualifications for persons enrolled or entitled to be enrolled in the provincial medical registers up to the date of the enactment of this Act. (*c*) In section 23 of the Govt. Of India Bill, in line 4, after the words "Governor General in Council" add the following "Provided that no permanent appointment or commitment shall be made by the Governor-General in Council."

Dr. G, Subbarayudu, the Madras Delegate, to the Darbhanga Conference then gave a detailed description of the Silver Jubilee Celebration and Exhibition touching the important resolutions passed and the scientific papers read before the open conference. He also announced the celebration of the next All India Medical Licentiates' Conference at Madras and impressed on the necessity of making it successful and worthy of the Madras Province. The next item on the agenda was the lecture by Dr. P. Rama Rao on "Roentgenology in Vienna". Dealing with the important pathological conditions of the digestive tract, such as gastric and duodenal ulcers the lecturer explained through the help of lantern slides shown on screen the structure of the mucous folds in the diseased and normal conditions. He gave his impressions on the recent and

up to date advance made in Vienna on this branch of medical science. Major Mahadevan, in his concluding remarks expressed his satisfaction of being present at the function and felt that he was one of their own in the matter of their professional advancement, aspirations and recognition. He expected that the increased course of study of the L. M. Ps. will come into effect from next July and thus the differences in the profession will be removed by raising the status of the L.M.Ps. to that of the graduates, so as to have a uniform standard of medical education and qualification over India. He also expressed gratification at the interesting lecture given by Dr. Rama Rao.

Dr. D. V. Venkappa, the provincial Secretary of the Association in proposing a vote of thanks to the Chair, the host and the lecturer of the evening, summarised the activities of the Branch Associations and expressed the need for many more.

Book Reviews.

Sanatorium —By Donald Stewart Esq, published by Messers Chatkoo & Windus. 97 & 99 St. Martin's Lane, London ; price 7 sh 6 net.

This volume written in a novel form gives to the readers an idea of life in a Tubercular Sanatorium. Though the learned author has tried to describe the working of a Sanatorium in some detail, we can not say that he has done so as regards the advantages institutions of the kind afford to the suffering millions. On going through the book one will be tempted to think that the author has, as his definite object, the idea to bring to light the dark side of the working. The facts described about the patients 'frequent discourses about T. B. among themselves in the wards in the third chapter, the little love episode between the hero and Nurse Wynee mentioned in chapter V, the story of the suicide of one of the patients—one Vere—mentioned in chapter VI, will certainly create not a good impression in the minds of lay people.

Though the author has clearly described the routine work in the institution in an idealistic manner as regards the attention paid to the ordinary as well as urgent patients, the working of the nursing staff, the discipline maintained by the controlling medical officer, etc. etc. few will try to realise the meritorious part of the working, when some insigificant flaw is described side by side ; only the faulty side of the show will attract prominent attention of the readers.

The Sanatorium treatment has been in practice for some years. It cannot be said that this mode of tackling the wide-spread dire

disease has been brought to perfection. The reasons for this are too many to mention here. Added to this if books of this sort fall into the hands of a prospective patient, one is certain, that he will to a certain extent be disappointed and even discouraged.

The book is well get up, the formal is fine. The language is excellent. The book will afford good reading to those who like reading novels. The price is rather high for a novel.—*M. A. K.*

Modern Pharmacology and Therapeutic Guide.—By Akhil Ranjan Majumdar, M.B., with a foreword by Lt. Col. R. N. Chopra, M.D.I.M.S., 1930. 2nd edition 596 pages. [The Book Company Ltd., 4-4 A. College Square, Calcutta.] Price Rs. 5/-

This book contains the lectures delivered by the author to the students of the Campbell Medical School, Calcutta studying for the Licentiate standard of the State Medical Faculty of Bengal. It is a stepping stone to a more detailed study of Pharmacology. The second edition contains a more detailed study of the pharmacological action of drugs and their therapeutic use. It also contains a description of important extra-Pharmacœpial drugs as well as drugs used in the indigenous medicine in India whose value in therapeutics has been definitely proved. All these greatly enhance the utility of the book to students. The author deserves to be congratulated on the success of his work.—*U. K. R.*

The Thyroid and Manganese Treatment.—By Herbert W. Nott, M.R.C.S., L.R.C.P., 1931. [William Heinemann Ltd., 99 Great Russel St., London.] Price 7sh. 6d.

This book deals with the subject of Detoxication by the Thyroid and Manganese treatment and contains a history of the subject and its application in various diseases. The book is divided into three sections. The first section deals with the history of the treatment from 1919 and gives the author's personal experience and the results of the interviews with Sir Hamphry Rolleston and the Late Sir Dawson Williams and the early set backs and the favourable and unfavourable reports of those who tried this method of treatment. Section two deals with the Technique of the treatment. Section three deals with the progress and the possibilities of this method of treatment. The book on the whole opens up new visitors of treatment especially for such diseases as Pneumonia, Rheumatism, Angina, Pectoris, Hyperpiesia, Rheumatoid arthritis &c.—*U. K. R.*

Modern Medical Treatment.—By E. Bellingham Smith M.D., F. R. C. P. & Anthony Felling. M. D., F. R. C. P. and with an introduction by Sir Hunphrey Rolleston, Bart G. C. V. O., K. C. B.—2 Vols. 1931. [Cassell & Co. Ltd. London.] 30sh. Net.

The subject of therapeutics is presented here from the aspect of disease and not from that of the remedies employed. In the case of each disease brief summaries of aetiology and symptoms precede the details of treatment. Progress too, is considered in so far as it effects treatment, and complication for which special therapeutic means may be required are also described. Regarding treatment, while the book gives due recognition to the older methods of treatment it does full justice to the more recent methods, such as the use of sera and vaccines and the many forms of physical treatment. The authors have been very careful to recomend the newer methods, of treatment only in those conditions in which they have themselves tested their efficacy. We whole-heartedly agree with Sir Humphrey Rolleston who characterises the book as a "most attractive" review of the subject and as being "most conveniently planned for the reader's benefit." The book in our opinion "lives up to its title" and should be read by everyone.—*U.K.R.*

The Cause of Cancer.—By W.B. Gye M.D. & W.G. Purdy M.B. 1931. [Cassell & Co. Ltd., London.] 30 sh.

This book contains an account, with deductions therefrom, of the experimental work carried on by Doctors Gye and Purdy at the laboratories of the National Institute for Research. As a result of their research work they conclude that cancer is a parasitic disease and they maintain that the present views regarding the nature of cancer are altogether wrong and based on theoritical arguments and negative evidence. They are of opinion that the organismal cause of cancer is possible, although epidemologists deny its existence. They are of opinion that too much reliance should not be placed on mammalian experiments. They conclude by saying "Cancer is a cell-re-action to a living intracellalar Virus, the reaction manifesting itself in all growth and multiplication. Whether the work of these two indefatigable research workers has taken us nearer the solution of the cancer problem time alone will answer. However the present work will remain a record of their strenuous endeavours and no one interested in the study of Cancer can offord to ignore it.—*U.K.R.*

The Students Hand-book of Surgical operations. By Sir Frederick Treves. Bart, G.C.V.O.C.B., F.R.C.S., and Cecil P. G. Walkely F.R.C.S., F.R.S.E., 1930. Pp, xii., + 535 illustrated. Fifth edition. London: Cassell & Co., Ltd., Price 10 sh. 6 d.

This popular book is in its fifth edition, and has undergone careful revision, and brought uptodate. New illustrations have been added and certain of the unimportant illustrations have been removed. We would certainly have liked to see some of the modern advancement on Surgery specially operative, as, surgical diathermy, Fascial sutures &c. included in a popular book like this. The use of Radium in the treatment of Cancer, the injection method of treatment of Varicose Veins are some of the more important additions to this edition.

This is a practical little book well illustrated by diagrams and photographs and we are sure the present edition will continue to be as popular as the its previous editions.—*V. C. S.*

The Twenty-fifth Anniversary number of the 'Prescriber'.—We have great pleasure in offering our hearty congratulations to Dr. Thomas Stephenson, D.Sc., F.R.S. on the attainment of the twenty-fifth Birth-day of the 'Prescriber'. The Anniversary number contains a sketch of the history of the 'Prescriber' for a quarter of a century, by the Editor which is really edifying and entertaining reading. There is also a full review of literature dealing with all aspects of Dermatology during the past 12 months, covering about 31 pages and such periodic reviews of the advancement of medical science in all its branches and the publication of special numbers annually on such new and hitherto untrodden subjects as the Spa treatment, Endocrinology &c., have been the characteristic features of this journal, We wish the journal many more years of useful and prosperous career and its able and distinguished Editor, continued success.—*U.K.R.*

Elements of Embryology—By H. Hyderalikhan F. R. C. S. E. [The Indian Press Ltd., Allahabad.] Price Rs. 5.

The book is designed, as its author says, to meet the requirements of the ordinary student. The book is very brief and terse. It reads like a summary of a bigger book or an abstract of a course of expanded lectures. The student who has no previous knowledge of Embryology and takes the book to get an elementary grasp of it, will find it very tough. For he requires less details and more explanation of fundamentals. But a student who has already learnt the subject will find the book useful for a revision. For such use it is a good book, except for a mistake in p. 34 where the Vomeronasal organ of Jacobson is mentioned as an "entodermal" diverticulum and a few instances of loose wording in some other places.—*A. A. I.*

Hay—Fever, Hay—asthma:—*Its cause diagnosis and Treatment.*—By William Lloyd F.R.C.S. F.R.S. 3rd edition. 1931. 124 pages illustrated. [Straker Brothers Ltd., London E. C. 2.]

The book gives us a clear and concise account of the disease, a review of the opinions held on the exciting causes, a description of the symptoms and its treatment. The chapter on treatment is especially interesting as it gives us a clear account of the technique of cauterization of the nasal mucous membranes with the electro-cautery. The other method of treating the disease with cocaine, Adrenalin chloride, oil of chanomile, caustics, ultra-violet rays and inoculations are also discussed. It forms interesting reading.
U. K. R.

Acknowledgment.

HORLICK'S CALENDAR.

We acknowledge receipt with thanks of the above calendar and are pleasantly surprised to find in the midst of trade slump and depression the Horlick's Malted Milk Company issuing their calender for 1932 in a style reminiscent of the good old days. It is a fine colour production and most artistically designed. It depicts the interior of a beautiful Oriental palace with gardens and fountains and in this delightful setting an Indian Prince is shown reciting an ode from the famous Persian Poet Hafiz. A most unusual feature of this calendar is the ode (really a Parody praising Horlick's Malted Milk) imprinted both in English and Vernacular, and the words have been set to music.

Notice.

Messrs. Brand & Co, Ltd., London, whose advertisement for Brand's Essence of Chicken appears in the first page of this journal have been Invalid Food Specialists for nearly ninety years and during the whole of that time have held the appointment to supply their products to the Royal Household.

Brand's Essence of Chicken is a marvellous Stomachic without an equal in cases of Gastric Trouble, Fevers, Impaired Digestion, Nervous Prostration and similar diseases and is prescribed by the leading medical men throughout the world.

Their Indian representative Mr. J. P. Cronin, P. O. Box, No. 2229, Calcutta, will at all times be pleased to supply literature and price lists.

ERRATUM

Antiseptic January matter, Page 23. Line 13 in para 2. chemical type *etc.* After produces add, "Complete dilatation. A second doze of Pilocarpine produces."