

MEDICO-SURGICAL SUGGESTIONS

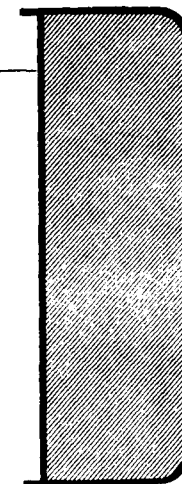
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No. 10.

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MEDICO-SURGICAL SUGGESTIONS

A MONTHLY JOURNAL OF PRACTICAL MEDICINE & SURGERY

VOL. IV

OCTOBER 1935

No. 10

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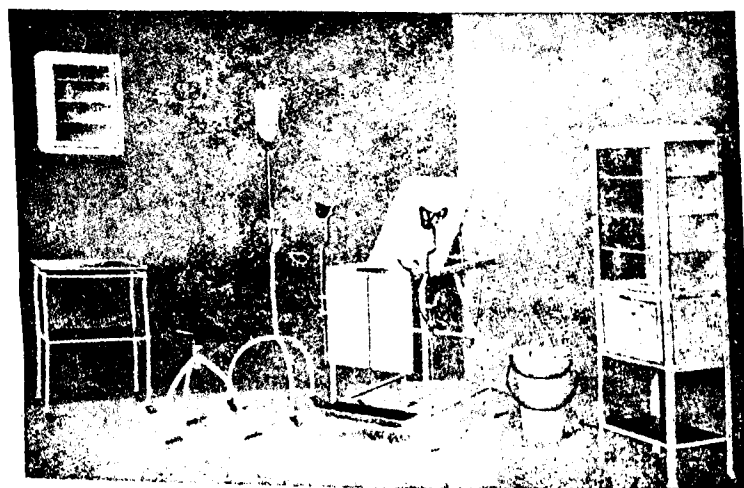
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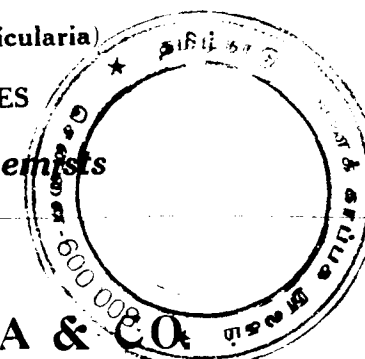
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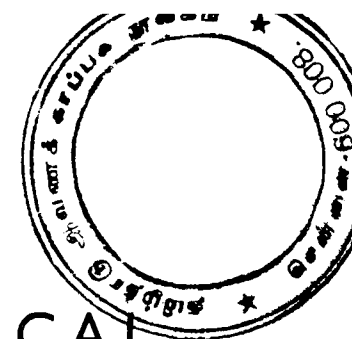
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MEDICO-SURGICAL SUGGESTIONS

VOL. IV

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Leading Articles

METALLIC POISONS

By P. GOPALACHARI, M.B., B.S.

Donovan Institute of Clinical Medicine, Madras.

The 26th annual report of the Indian Institute of Science, Bangalore, contains certain observations in respect to metallic contamination of foodstuffs. The Institute has ventured to discourage the use of tinned brass vessels for culinary purposes, and to suggest aluminium instead, based on certain experiments the protocol of which, however, has been made available to the discerning section of the public purporting to show that foods prepared in the latter are now conducive to growth and development in contradistinction to the use of the former.

Tinned vessels are generally, as the readers are aware, brass or copper vessels coated with what is popularly believed to be pure tin, but really an alloy of tin and lead and possibly zinc as impurities. The Institute does not seem to object to the tin getting into the foodstuff on valid grounds, but what is objected to is the minute fraction of lead present in the marketed tin that is used for tinning purposes. The Institute itself admits that it is the tin portion that is dissolved out first and it is only after it is exhausted that lead gets into the foodstuff.

The question arises, is there to any extent cases of plumbism directly traceable to utensils to merit a wholesale disapproval of a time honoured custom and to prefer aluminium which has for its merit cheapness as a capital investment for domestic purposes and none else.

In the first place, in ordinary Indian homes the question of re-tinning is not put off until the last flake of previous tinning is eroded, and there is thus little chance of the lead present as impurity getting into the system to set up either an acute or chronic form of lead poisoning.

E. P. Poulton teaches that the diagnosis of plumbism depends upon the discovery of lead in the motions and urine and a blue line on the gums which has, however, got to be differentiated from that occurring in pyorrhoea alveolaris, that the common type of lead paralysis is readily distinguished from radial nerve paralysis of other known causes by the escape of the supinator longus muscle in the former and the simultaneous affection of both arms. Though W. H. Willcox would admit of rare cases of unilateral paralysis.

Secondly, Legge and Goodby have shown that by far the most commonest way for lead salts getting into the system is by the respiratory tract and therefore chiefly affects lead workers as in printing, plumbing, type founding, glazing of china and pottery, house painting, coach painting, etc. Plumbism is therefore more of the nature of an industrial or occupational disease where a susceptibility factor seems also to play, which however is a very variable factor, women being more susceptible than men. The tendency to attack being increased by starvation, previous ill health, exposure to cold, indulgence in alcohol and by the pre-existence of gout, syphilis, disease of the kidney, disorders which individually have been known clinically to be etiological factors in the causation of peripheral neuritis.

Thirdly, in respect to poisonous metallic compounds S. Dixon has to say that a public analyst has to be mindful of the possibility of the poisonous metallic compounds deliberately introduced as red lead or vermilion, lead chromate or copper arsenite and prussian blue as colouring matter to confectionary and foodstuff and that recently illness had been traced to use of vessels like enamelled cups or glazed earthenware for preparing or storing food and to metal containers and pipes. Soda water drawn from syphons fitted with valves containing lead has been from time to time found to be contaminated with the metal. Fatal cases have been recorded of saturnine encephalopathy from drinking cider containing lead. Likewise beer, if acid, may become contaminated through standing in lead pipes. Thus, it will be realized, there is far more danger of chronic lead poisoning arising among industrial workers to the use of stagnant water and beverages from industrial houses, and more than all, depend upon the individual body build and constitution of those exposed to the entry of lead in some form or other. There would appear to be very little danger arising out of the use of tinned utensils as admittedly the lead fraction is the last to enter into the system whereas the use of glazed earthenware which is getting into popularity with all classes and communities and enamelware containing over 41 per cent by weight of lead is more potential in inducing chronic lead poisoning now apprehended. It behoves, therefore, clinicians who have laboratory facilities to investigate into etiological factor of peripheral neuritis either to confirm the Bangal

Institute's theory of tinned vessels in the role of sickness production or refute it from an analysis of toxicological data gathered by special analytical methods referred to by Willcox.

Lastly, is it advisable to use the substitute suggested? It is in the knowledge of every one that oils and fats, buttermilk and milk products deteriorate in quality if kept in aluminium. It does not seem improbable that the foodstuff has got contaminated with an aluminium compound and shrewd clinical observers would attest the anorexia and consequent sickness prevailing among the poorer classes to their substitution of aluminium to earthenware vessels. Unless therefore its innocuousness is well established beyond a shadow of doubt, the use of aluminium for culinary purposes on an extended scale, that is now sought to be made in preference to the customary tinned vessels, would, in the interests of public health, require to be deprecated. Besides it would seem to defy all ordinary cleanliness and allow numerous pathogenic bacteria to flourish, and needless to say, as an economic asset it is next to nothing.

It is within the purview of every clinician, therefore, to make his own personal observations, in the light of data aforesaid, rather to confirm or repudiate the views differently held by the writer and the Indian Institute of Science towards advancement of medical science, comprising as it does many branches of science, inclusive of the preparation and chemistry of foodstuffs.

REFERENCES FOR FURTHER STUDY.

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Selected Articles

THE ACCIDENT HOSPITAL OF DR. BOHLER IN VIENNA

The origin, structure, and organization of this hospital are all so unusual that it is necessary to devote a few introductory words to them before describing the incidents of a recent visit.

In modern days it is the fashion to make hospitals large, expensive, and showy; but Dr. Bohler has been quite independent of any great outlay of money. He saw and seized a unique opportunity of utilizing a building designed for another purpose, and during the last nine years he has formed a wonderful hospital organization, which instead of costing money, has paid for itself and its staff and saved money for the community.

Dr. Bohler's experience of traumatic surgery, especially in the treatment of fractures, during the War, made him realize the terrible waste of lives, of limbs, and of working capacity that results from the neglect of prompt, efficient, and thorough treatment of wounds and other injuries. Therefore in 1919, when the end of the War let him free to turn his attention to peace problems, he offered his services to his own country, Austria, in order to save the victims of industrial accidents from mutilation, invalidity, and incapacity. In 1912 there had been built on the south bank of the Danube, in Vienna, a large building, six stories high, for the offices of the National Insurance Company. This was designed on a large scale, so as to be able to deal with the working population of the Austro-Hungarian Empire, which included 56,000,000 people. After the re-distribution of Central Europe, this Company had only to insure the working people of Austria, with its population of 6,000,000. The building was therefore out of all proportion to the needs of the office. Dr. Bohler suggested that part of it should be converted into a hospital for the treatment of insured persons. His idea was accepted in principle, but just at that time the financial crisis caused by inflation was so severe that all new developments were suspended, and it was not until 1925 that the suggestion was carried out.

The upper two floors of the insurance building were then adapted as a hospital, accommodating 120 in-patients, the operating and treatment rooms, x-ray room, and offices, as well as affording residence for the nursing and surgical staff. The wards, thirty-two in number, are arranged on the outside of two sides of a square, whilst the kitchens and offices lie on the corresponding inner sides. The largest wards contain five beds, the smallest three, and, although lofty and well ventilated, are rather overcrowded as compared with our modern hospital standards, but not so much crowded as is usual in continental hospitals, such as the General Hospital in Vienna.

The visitor approaches the hospital, then, through the entrance of the insurance company's offices. As he takes the lift to the fourth floor, or climbs the one hundred stairs, he realizes that the hospital is only a department of the insurance business. On the landing of the fourth floor there are two doors, one leading into the hospital and the other into Dr. Bohler's private residence. The main examination and treatment rooms are six in number, arranged in a series opening into one another, or rather communicating with a common passage. An office where records are stored and x-rays are examined, and the x-ray room, with couches for two patients, are at one end of this series. The x-ray plant, which includes a very efficient portable machine, is remarkable for its simplicity. Every year between 12,000 and 13,000 pictures are taken, the majority by one of the nursing sisters, the others by one of the assistant surgeons. Both the x-ray apparatus and the films themselves are available for use or reference at any time by day or night. Next to the x-ray room is a receiving-room where minor surgery is done and where the examinations and preliminary treatment of all new out-patient cases are carried out. This can be divided by curtains into several parts, so that three or four cases are usually being dealt with at the same time. Then come two operating-rooms, separated from one another by a room for instruments, dressings, and sterilization.

The surgical staff consists of Dr. Bohler, two chief assistants, four secondary assistants, and two junior assistant surgeons. One of the chief assistants lives outside the hospital and is allowed to do private practice; the others are residents and give all their time to the hospital. The whole surgical staff are at work every week-day from 7-30 a.m. to 2 p.m., and for the rest of the twenty-four hours and on Sundays there are always four surgeons on duty, day and night. The first assistant has been with Dr. Bohler since the opening of the institute nine years ago, the others for two or three years, thus affording an eloquent testimony to the enthusiasm which he inspires.

The nursing staff is twenty-four in number, including a matron and six sisters. They have been trained in one of the training schools of Vienna.

On entering the treatment department one is at first confused by the many things which are going on at the same time - an almost bewildering activity—two sets of x-rays being taken, others being developed and inspected, a recent case having the wound excised, a fractured arm or leg being reduced under local anaesthesia and put up with pin or wire traction and the application of plaster; a major operation such as the pegging of the neck of a femur in one theatre and the setting of a fractured tibia by screw traction, transfixation, and plaster in the other. But it soon becomes apparent that this

pronation and supination. The whole limb was finally placed on an aeroplane splint.

3. *Removal of Chondroma from the Knee-joint.*—A man of middle age who had intermittent pain and disability in the left knee. A tentative diagnosis of loose body in the joint had been made, the x-rays being negative. Under spinal anaesthesia the knee was opened by a longitudinal incision, medial to the patella. A fibro-cartilaginous mass was found growing from or attached to the deep surface of the vastus medialis; it was removed. The knee was closed by two layers of interrupted silk suture.

4. *Dislocation of the Shoulder.*—A stout woman of 55, who had an accident three weeks previously; she had been treated elsewhere, but on account of the great swelling of the shoulder the nature of the injury had not been recognized. There was an anterior dislocation of the shoulder, the great tuberosity being fractured but not separated. Under general anaesthesia by ethyl chloride the shoulder was reduced by steady manual traction, counter-traction being made by the heel in the axilla. After reduction was effected, the arm could easily be put in and out of its socket. It was bandaged to the side. X-rays showed reduction to be satisfactory. In a week's time it would be put up on an aeroplane splint.

5. *Old Fracture of the Neck of the Femur.*—Johansen's modification of Smith-Peterson's method. A healthy man of 50 had a fracture of the neck of the femur in February, 1934, and had been treated elsewhere by pin traction and plaster casts. He presented a typical medial fracture of the femoral neck, with shortening and varus deformity. Three days previously a pin had been put through the tibial crest and weight traction applied. X-rays showed the reduction was incomplete. Operation took place under spinal anaesthesia on June 8, 1934. Powerful traction was made by a screw traction apparatus. X-rays taken by a portable apparatus showed reduction to be satisfactory. Three small pieces of metal were stuck on to the skin along the line of the neck of the femur for purposes of orientation. Two long boring wires were then thrust about 11 cm. from the base of the great trochanter upwards and inwards to the head of the femur. X-rays showed that neither wire was in a satisfactory position, one having slipped in front and the other behind the head of the bone. This procedure had to be twice repeated before the pin could be placed in position satisfactorily. The flanged Johansen pin was inserted through an incision about four inches long, the central hole in the pin being passed over the right wire guide and driven home. The last set of x-rays taken while the patient was on the table (actually the sixth in point of number) showed the final position to be satisfactory. The spinal anaesthetic did not last long enough, and a little general anaesthetic by open ether was

given from time to time at critical stages of the operation, the patient himself begging that he should not be rendered unconscious.

The circumstances of this operation were noteworthy. In spite of the utmost care in the matter of orientation the wires seemed obstinately to refuse to go where they were wanted, and yet everything was done with calm deliberation and utmost precision, without hurry or flurry. It was difficult and disappointing for an operator, who would naturally have liked everything to go quickly and smoothly. There was, however, no sign of irritation either by word or gesture, nor was there the slightest suggestion of abandoning the attempt until success had been achieved. We saw a number of other cases in which this operation had been done with complete success at varying periods after the accident. On return to his bed the patient's leg was elevated on a Braun's splint, with adhesive plaster traction and suspension of the toes. This was to be maintained for a week, when a plaster cast would be applied and fourteen days after the operation he would be allowed to walk.

THE TREATMENT OF CERTAIN TYPES OF CASE SEEN IN THE RECEIVING-ROOM AND ON THE WARD ROUND.

The Setting and Fixing of Recent Closed Fractures.—Each case is immediately x-rayed and anaesthetized by local infiltration, brachial plexus, or spinal anaesthesia. In fractures near the joints with no apparent displacement, an attempt is made to produce displacement, and x-ray examination is repeated. In this way a good idea is obtained of the liability to displacement. The fracture is then reduced, fixed by manipulation and skeletal traction, and again x-rayed. When satisfactory it is fixed in an unpadded plaster cast, the skeletal traction usually remaining. The limb is always put up in an elevated position—the leg on Braun's splint, the arm on an aeroplane splint. The next day and then daily afterwards, all joints of the limb not fixed by plaster are moved by active contraction of the muscles. In closed fractures of the leg below the knee a few days after the setting a walking-iron is incorporated in the cast, and the patient gets up daily. No crutches of the ordinary kind are allowed, but in the first days of walking four-legged hand crutches are used until the patient can support himself with sticks. Patients with fracture femurs begin to walk in casts with walking-irons from six to eight weeks after injury. In all cases of lower-limb fractures, when the plaster cast is removed an Unna's paste dressing is applied from the toes to the knee, and in this way oedema is prevented. We actually saw a great number (over 100) cases of closed fractures of the lower limb, without ever seeing any swelling or oedema round the ankle. No case of fracture had any stiff joints apart from those where the joint itself had been involved.

The formula for the treatment of recent closed fracture is, then:

- (1) Accurate setting and x-ray control; (2) Uninterrupted fixation

manifold activity is not confusion, but merely the organized activity of the beehive where every unit has his appointed task, which he does without interfering with the others.

Over two-thirds of the patients are working people, insured against accidents. The remainder consist of private patients, six to twelve in number, and those cases of accident too urgent for inquiry to be made before admission. The private patients pay 20 to 25 shillings a day, and the others 8 to 11 shillings. (The shilling referred to is the Austrians' shilling, of which 27 go to £1 sterling.) All insured persons have a right of admission to this hospital, but there is no compulsion. In 1932 there were 1916 in-patients, with average stay in hospital of seventeen days, and 6478 out-patients, with an average period of fifteen days. The total cost of treatment during this year (1932) was £15,300, and it is estimated, by a careful comparison with the same number of cases treated elsewhere in unorganized clinics, that a sum of money is saved which is just double the cost of treatment. This is no rough and ready estimate but is very amply borne out by a great wealth of statistical information. It is thus made perfectly clear that this hospital organization is a sound business proposition, not dependent on sentiment, charity, or mendicancy.

The major operations are done three days a week, from 7-30 to 10-30 after which Dr. Bohler does a round of the wards accompanied by all the assistants who are not engaged in the receiving-room, a sister and nurses responsible for each ward, and visitors. On each round about forty cases are seen and examined in detail, the rest cursorily. Every patient is examined and a note taken once a week. An x-ray viewing apparatus is available in every ward, and the x-rays are seen of all new patients and those patients examined in detail at the weekly visit.

But the examination and report of the x rays is much more formal than this. On the three mornings a week on which there or no major operations, at 9 o'clock Dr. Bohler and all his assistants sit down to a meticulous examination and report of all the x rays taken during the past few days. The frontal and lateral films are put up in the viewing box, the history of the case is given in brief and one of the assistants is invited to describe it. A discussion of the nature of the injury follows, and then Dr. Bohler dictates his own notes and decides on the treatment or modification of treatment which is to be adopted. He is now engaged in an intensive study of fracture-dislocations of the cervical spine, and when the films of a new case of this injury were presented, antero-posterior, lateral, and oblique, they were examined in very great detail; the case proved to be a rotatory dislocation on the left side, between the 3rd and 4th vertebrae, with the fracture of the tip of the 4th articular process. The articulated vertebrae from a skeleton were at hand

and the exact displacement was demonstrated with their aid. The trivial fractures and dislocations of the bones of the wrist, fingers, and toes were all noted and described with equal care.

It will make for simplicity if we first describe the operations we saw and then some of the patients in the ward, to illustrate the chief points in Bohler's principles and practice.

OPERATIONS WITNESSED

1. *Open Fracture of Finger*.—This was one of the little fingers in a man of 69. The finger had been torn on the dorsal surface, from above the knuckle to below the first interphalangeal joint. Local anaesthesia was used; the skin was not washed but painted with iodine; the torn skin edges were excised, leaving a considerable open wound. The proximal phalanx had a fracture into the joint. The defect of the skin was made good by a free skin graft from the thigh. The finger was fixed on a suitable bent wire padded splint and the whole arm was elevated on an aerial line splint, the patient being admitted to the ward. He had been advised to have the finger amputated, but he begged that it might be saved. We saw him several days later in the ward, too soon to say whether the skin graft would survive. (We have heard subsequently that the skin flap did survive.) The great care given over this comparatively trivial injury was very impressive, and we found it characteristic of the whole work.

2. *Open Operation on Ununited Fracture of Radius and Ulna*.—A man of 30 with fracture of the radius and ulna (November, 1933). The ulna had united but the radius presented a pseudarthrosis. It had been treated by double transfixion (olecranon and metacarpals), traction, and plaster-of-Paris. Later, both ends of the bone had been subjected to multiple subcutaneous drilling by a wire drill 0.5 mm. in diameter. It was intended to do this operation under brachial plexus anaesthesia, but for some reason it was impossible to locate the brachial plexus with the needle and anaesthesia was by open ether. Through an incision about six inches long the radius was exposed at the site of fracture. The pronator teres lay obliquely between the fragments and had obviously been responsible for non-union. The interposing muscle was cut away, and both bone-ends were cleared of scar tissue and refreshed by a nibbling forceps, until the marrow cavity was exposed in each. The oblique fracture could then be held in good position by Lambotte's forceps. The fragments were united by a single strand of stainless iron wire, which perforated and surrounded the bone. All the scraps of bone which had been removed were packed round the area of fracture. The wound was closed by three layers of interrupted sutures. The patient was removed to the adjoining room and the arm put up in an unpadded plaster cast extending from the shoulder to the knuckles, the elbow at a right angle and the forearm midway between

until bony union is firm; (3) Elevation of the injured limb; (4) Active exercise of the muscles and proximate joints; (5) Natural use of the limb as soon as union allows.

Wounds and Open Fractures.--Wounds of the skin and soft parts receive the same treatment whether there is an associated fracture or not. There is no washing of the limb or even of the skin round the wound. Exuberant hair is cut away by scissors of dry shaving, and the parts are freely painted with iodine. Local anaesthesia is employed, either infiltration round the wound, or of the regional nerves. Brachial plexus or spinal anaesthesia is used for the more severe type of case. The edges of the skin and damaged surface of the soft parts are excised.

The cleansing is mechanical, not by chemicals or washing. This mechanical cleaning by the careful excision of damaged tissues requires great time and patience. The patient had a machinery accident in which his arm was caught in a revolving belt. The wound toilet in this case occupied close upon three hours, and a general anaesthetic was necessary before its completion. The patient who had this injury was seen by us a year later, with a very useful arm.

If the bone is fractured, all fragments of any size are preserved and dirty surfaces are cleaned by nibbling forceps, not by mere scraping with a spoon. No fixation or suture of the bone is permitted; in fact no ligatures or sutures of any kind are buried in the wound unless this should be necessitated by the injury of a considerable length of a blood-vessel or the division of a nerve-trunk. The skin is sutured if this can be done with not more than moderate tension. The fractured limb having been put up in the usual way (traction, plaster-of-Paris), the sutured wound is left quite uncovered and exposed to the air. Contamination by dust or flies is avoided by the use of a single layer muslin arranged as a cage over, but not in contact with, the limb. If the wound heals by first intention, the silk stitches are left in place for one to six weeks. If the wound breaks down, or if there has been a skin defect from the first, this is allowed to heal under a scab. We saw upwards of fifty cases of wounds, most of them associated with open fractures, and in not one was there any evidence of spreading infection, either local or constitutional.

Dr. Bohler lays no claim to originality in the matter of not washing wounds, of using no dressings, or of applying plaster casts without padding. In regard to the last two points, at first he was forced by the necessities of the War to dispense with either dressings or padding, and having used these simple methods, he became convinced of their superiority.

Fractures of the Spine.--These form a very important and interesting group of cases. After exact frontal, lateral, and sometimes oblique x-rays have been taken, the patient is kept at rest for a few days before reduction unless there is paralysis, in which case

reduction is done at once. Local (paravertebral) anaesthesia is given by injecting 5 per cent novocain by the side of the affected vertebral bodies. The reduction is made by hyper-extension of the spine, the head and arms resting on a high table and the legs on one much lower. The rectification is checked by fresh x-rays, and if necessary the hyper-extension is increased. The posterior prominence (gibbus) disappears as rectification is effected. The bony points of the pelvis are protected by wool stuck on by mastisol, the trunk is enveloped in a piece of stockingette, and the plaster case applied. Within three days to a week the patient is allowed up, and it is almost incredible how quickly he is able to carry out the exercises prescribed for him. At first these are only active movements of the arms and legs, but at a later period weights are carried on the head, beginning with 5 kilos and increasing to 40 kilos, whilst trapeze gymnastics are finally performed.

There were actually five cases of compression fractures or fracture-dislocations of the spine as in-patients on the occasion of our visit. One case of fracture-dislocation of the cervical spine, was awaiting reduction, three cases were still in plaster, and one had his plaster removed. All were men, and they occupied one ward. This principle of putting similar cases together was always carried out as far as possible. Each group seemed to form a happy family, or school class, the 'old boy' encouraging the 'freshmen'. All are desperately keen to do their lessons well, and the repetition of the exercises, individually and as a class, before the visiting surgeons, at least once a week, is an event which they evidently enjoy. Dr. Bohler says that the treatment of injuries, and especially of fractures of the spine, is one part physical and three parts psychical.

The same spirit of happy enjoyment pervades the whole hospital, and among the 120 in-patients we saw only one or two depressed or unhappy, these being women recently admitted with head injuries. There were three cases of pulmonary infarct from embolism, all in stout middle-aged patients with fractures. This complication had occurred in all three patients within twenty-four hours, and we were told that this is their usual experience--namely, that a year or more will pass without a single case and then several cases will occur at the same time. It was suggested that meteorological conditions may account for this. Although accidents of all kinds are admitted, those involving thoracic and abdominal viscera constitute only about 2 per cent, and we saw only one case of appendicitis, one hernia, and one abdominal wound.

All patients who have been discharged from the hospital and have not yet returned to work are seen by Dr. Bohler himself once a week, this inspection taking place on the ground floor of the large building. Every case is followed up until the final result is achieved.

The physiotherapeutical department is conspicuous by its absence. Except for some gymnastic appliances and those necessary for Swedish drill there is nothing of this sort. Massage and passive movement are forbidden in all recent injuries, and if proper treatment has been carried out, they are unnecessary at a later stage.

The most prejudiced or sceptical observer cannot fail to be impressed by a visit to Dr. Bohler. In matters of technical detail there must always be room for differences of opinion. Particularly in regard to the treatment of recent fracture cases by operative methods, it would seem to us that Bohler has an aversion that almost amounts to superstition. Also in cases of pseudarthrosis the modern bone-grafting operation might find a much larger place. But the broad principles of the work, meticulous care in observation, treatment and records; unremitting, hard work in carrying out the treatment; enthusiasm for ideals originated by the Chief, loyally followed by the team, and happily accepted by the patients; and, most convincing of all, the acid test of results—these all defy criticism.

—British Journal of Surgery, October, 1934.

Extracts

ERGOMETRINE.

(DUDLEY & MOIR: *B.M.J.* March 1935. Via *Medical Bulletin*.
Sept. 14, 1935.)

The active principle of ergot which has been responsible for the traditional clinical effect of ergot has been isolated and named "Ergometrine." It is an alkaloid slightly soluble in chloroform, benzene, and dichlorethylene, from which it may be recrystallized. It is appreciably soluble in cold water, to which it imparts an alkaline reaction, and dissolves readily in dilute acids. It gives the colour reactions common to the known ergot alkaloids.

Orally administered in a dose of 0.5 to 1 mg. it provokes after an interval of 6½ to 8 minutes, contractions identical in mode of onset and general character with those produced by active liquid extracts of ergot. When injected intramuscularly in the dosage of 0.25 to 0.5 mg. there is a strong uterine contraction in 3½ to 4½ minutes. When given intravenously in doses of 0.05 and 0.1 mg. strong response followed in 110 and 65 seconds respectively. These responses distinguish ergometrine from ergotoxine and the other alkaloids which are relatively very slow to act.

Ergometrine has not only a more pronounced effect but is also speedier in action—a most valuable property in obstetrics. It is further remarkably free from all the side effects like feeling of depression, headache, nausea, and even vomiting. The patient has been able to eat a large lunch or fall asleep after the administration of the test dose. The isolation of this alkaloid raises the question of

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standardisation of ergot which has been so far standardised in terms of ergotoxine—an alkaloid that is relatively unimportant. Ergometrine should now be considered as the most important active principle in any ergot preparation.

CONDITIONS SIMULATING PULMONARY TUBERCULOSIS.

(GEOFFREY MARSHALL: *Practitioner*, 1935 cxxxiv. 62.)

The manifestations of pulmonary tuberculosis are very various as regards mode of onset, symptoms, physical signs, and radiographic appearances, and there are a number of other conditions which may simulate closely one or more of its varying features. A wrong decision whether a case is pulmonary tuberculosis may entail the most serious consequences for the patient's future. The radiographic examination and examination of the sputum are important. The blood sedimentation test of Westergren is abnormally high in tuberculosis associated with toxæmia, but it is also raised in a great variety of other conditions. If, on the other hand, a normal sedimentation rate be found in a patient with pyrexia, it is highly improbable that the condition is one of active tuberculosis.

In its early stages pulmonary tuberculosis may give rise to little cough without expectoration, so that the early symptoms are those of toxæmia; common manifestations are fatigue, loss of appetite and of weight, night-sweats, amenorrhœa, and a raised temperature and pulse rate. It is therefore natural that the disease should be suspected when some of these symptoms arise from causes unconnected with tuberculous infection, and indeed when there is not any disease of the lungs at all.

1. Non-pulmonary conditions, as in young women with premenstrual pyrexia and in hyperthyroidism.

2. Mitral stenosis, in which cough and hæmoptysis are present. The radiogram shows an enlarged and globular heart shadow and passive congestion of the lungs. Clinical, palpable thrill and presystolic bruit are present.

3. Disease of the upper respiratory tract as in chronic septic infection of the naso-pharynx, tonsils or accessory nasal sinuses. In these cases pyrexia occurs only occasionally and will not be of the swinging hectic type common in tuberculosis. Radiograms do not show the characteristic fluffy mottled infiltration of tuberculosis.

4. Pleural effusion is rightly taken as presumptive evidence of tuberculous disease, although tubercle bacilli cannot be detected in the fluid in most cases. Tubercle bacilli have, however, been found in the gastric juice in 20 per cent of the cases of sterile pleural effusion. Effusions may be also due to malignant disease of the chest, heart failure or renal disease.

5. Spontaneous pneumothorax is generally regarded as an indication of pulmonary tuberculosis, but only in about 20 per cent of cases.

6. Diseases of the bronchi, such as chronic bronchitis may simulate or precede pulmonary tuberculosis, and in such cases the sputum should be periodically examined for bacilli. Senile phthisis, on the other hand, is frequently mistaken for chronic bronchitis on clinical grounds but a radiogram would reveal widespread mottled infiltration of both lungs.

7. Bronchiectasis has haemoptysis as a common symptom with tuberculosis, but the haemorrhages in the former are apt to occur with a frequency and profuseness seldom seen in phthisis. In the condition called "dry haemorrhagic bronchiectasis" the cavities are apparent only on the introduction of lipiodol into the bronchial tubes.

8. Syphilis of the lung: rare, and should not be diagnosed without a positive Wassermann and signs of syphilis in other organs.

9. Fibroid lung follows on repeated attacks of pneumonia, and is characterized by gross shrinkage of one lower lobe or minor changes on both sides, but the condition seldom affects the upper lobes.

10. Silicosis is characterized by shortness of breath on exertion but there is no cough, expectoration or pyrexia. The radiographic appearance is almost indistinguishable from widespread bilateral phthisis.

11. Lung abscess is characterized by the offensive odour of the sputum. Inhalation of foreign material into a bronchus is a common cause. X-rays show a single dense shadow with translucent cavity in the centre, and the latter exhibiting a horizontal fluid level.

12. New growths of the lung. The only primary growth commonly found is carcinoma arising from the epithelial lining of a bronchus. Persistent unproductive cough in the early stages, and dyspnoea and stridor in the later stages are common. The growth forms in and obstructs a large bronchus near the hilum and collapse of a whole lobe usually results. X-rays and bronchoscopy confirm the diagnosis.

CLINICAL FEATURES AND TREATMENT OF IMPETIGO CONTAGIOSA. (TILBURY FOX).

(M. A. MANIAR: *Indian Journal of Pediatrics*. 1935. ii. 168).

Impetigo contagiosa, a very common skin disease, is due to a special streptococcus, hence the name impetigo streptogenes. It begins as a small vesicle, at first filled with clear serum but in a few hours the contents of the vesicle become purulent. As the lesion is very superficial, it soon bursts on the surface and crusts over. The crusts are often slightly turned up at the edge and that gives them the appearance of having been picked off and stuck on again. When the crust is removed a red oozing area is left and after the lesion is healed a red blotchy mark is often left for a week or two. The disease is contagious, and occurs in epidemics in schools and other institutions. It occurs most frequently on the face, usually on

the cheeks, nose and ears, and spreads rapidly. The fingers, scalps, the lips and even the conjunctiva may be affected. In all cases the nearest lymphatic glands get enlarged.

Other varieties of impetigo are: impetigo circinate and impetigo bullosa. Sometimes a nephritis occurs after impetigo, and it is therefore wise to examine the urine in all cases.

Treatment: In the first place, all the crusts must be completely removed; this is best done by applying boracic starch poultice. The poultice should be removed every 12 hours and all softened crusts and discharges washed off with soap and water before applying another poultice. After the removal of the crusts, one per cent hydrarg. Ammoniata paste is applied spread on strips of cloth and covered with a bandage. After impetigo contagiosa heals, a red mark is often left and no further treatment is required as long as the surface of the skin is intact.

Other remedies in vogue are the application of a weak hydrogen peroxide lotion, followed by latic calamine. Compresses soaked in Eau-d-Alibour (zinc sulphate gr. 2, copper sulphate gr. 4, aqua camphor to one ounce) also give excellent results. Young children should be prevented from scratching the parts. The blebs in bullous impetigo should be opened with a sterile needle and dressed with a mild boric acid ointment. Of late, the pigments, viz., brilliant green, crystal violet, methylene blue in aqueous solution have come into vogue and these are also satisfactory.

UNDERLYING PRINCIPLES IN REPAIR OF DOUBLE HARELIP.

(F. C. LEE: *Georgia Med. Assn. J.* 1934. xxiii. 383.)

Early operation in double harelip is advised, but it is not justifiable until the baby's weight curve is definitely rising and the weight is at least as much as at the time of birth. Ether administered by a motor driven insufflation apparatus is satisfactory, after the patient has been anaesthetised lightly with the ether cone.

The first step to ensure symmetry is obtained by placing a single stitch of silk as a marker in the midline of the premaxilla at its free edge after a small bit of vermilion border has been removed from that region. Two other stitches as markers are placed through the upper lip at each nostril but inferior to the point where the lip is to be cut across. Both sides of the upper lip should be undercut near the alveolar process, care being taken to remain close to the bone. An incision is then made in each lateral part of the upper lip, as much as possible of the lip that is already formed being used. The incision should afford relaxation in order to bring the respective segments to the midline of the face: therefore it may be necessary to extend the incision almost parallel with the vermilion border. It is desirable to have a slight redundancy, as the excess tissue contracts and gives a better result. The small amount of crimson

border that is superior is then removed with a scalpel, care being taken not to enter too far into the nostril. After the remaining thin vermilion border on the premaxilla has been removed, care should be taken to leave as much normal skin as possible, and the lateral parts of the new upper lip are brought together in the midline to see whether enough relaxation is present, since thorough and complete relaxation of these lateral pedicles is essential to the repair. The first row of sutures is of silk and is placed with a No. 3 French needle. These sutures are placed first at the nostril of one side and they approximate the posterior and deeper aspects of the opposing surfaces. The knots are placed on the mucous surface and the threads are cut short. The interrupted suturing is carried anteriorly to the free margin of the newly formed lip and the sutures are placed into the lip and into some of the fibrocartilage in the premaxilla if necessary.

The second row of sutures consists of three interrupted sutures of 000 plain catgut; the first suture is put well into the remaining upper lip and into the premaxilla, a similar stitch is placed on the opposite side, and a third stitch is placed at the apex of the premaxilla at its junction with the two flaps.

The third row of sutures can be either of horsehair or of silk, and consists of bringing together the skin anteriorly. In order to ensure neat approximation and a small scar, it is advantageous to use a suture like an end-on-mattress stitch.

A one inch piece of a No. 8 French soft rubber catheter is inserted into each nostril and held in place with a suture to ensure patency. Compound tincture of benzoin boiled down to a soft putty-like consistency is applied to the sutures in the skin. A Logan bow is attached by means of adhesive strips to the cheeks immediately after operation. This may be left on for 2 weeks and the muscles of the face should be kept at rest. To this end as much as 3 grains (0.2 grams) of sodium bromide every 2 hours may be necessary. Keeping the patient quiet after operation is more important than the use of the Logan bow. The baby should be fed at the regular intervals normal for its age by means of a medicine dropper to which the terminal portion of a soft rubber catheter has been attached. Sutures can be removed at any time after the sixth day. Minor corrective operations may have to be performed to adjust the vermilion border or to excise portions of a broad scar. These operative measures should be done within three months of the original operation. Massage of the scar and nursing should not be allowed until 5 weeks after operation.

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TUBERCULOSIS OF THE SHAFT OF THE LARGE LONG BONES OF THE EXTREMITIES.

(C. K. HSEH, L. J. MILNER AND C. P. CHANG: *Chinese Med. J.* 1934. xlviii, 199, and *J. Bone and Joint Surg.* 1934. xvi, 545).

The term "shaft tuberculosis", as used by Hildebrandt and others, includes lesions originating in the diaphysis and metaphysis, and excludes lesions of the shaft of the bone which represent an extension of the disease from the epiphysis or from the joint. During the past 12 years 38 patients with tuberculosis of the shaft of the long bones have been seen in the Peiping Union Medical College Hospital, representing a total of 48 per cent of a total of 786 cases of bone and joint tuberculosis treated during this time. The authors think that most of the people in China fail to come under the notice of the physician until the disease is disseminated widely, and after wide dissemination of the bacteria almost any of the unusual lesions may occur.

Pathogenesis: In most respects tuberculous lesions of the shaft may simulate the osteomyelitic lesions produced by pyogenic bacteria. The capillaries of the epiphyseal, metaphyseal, and diaphyseal blood vessels in young individuals do not anastomose, being end vessels, and the finer ramifications of the blood vessels of each of these regions are directed towards the epiphyses, and this explains partially the usual location of the primary foci in tuberculous infectious of the shaft. The position of the infecting embolus or thrombus with respect to the main nutrient vessel, the virulence of the bacilli, and the resistance of the local tissues are all factors determining the nature of the lesion, resulting in thromboarteritis or thrombophlebitis and consequent necrosis of the bone cells. Tuberculous lesions behave in a manner directed by the tissue reaction to infectious processes. When cancellous bone is involved, destruction predominates, and when the periosteum is involved, proliferation takes place.

Classification of lesions: Four types could be made out according to the nature, location, and extent of involvement.

1. *Tuberculous periostitis:* The rarest form. There is a very low grade chronic inflammation of the periosteum, characterized by rarefied, laminated, new bone in the periosteum over an apparently intact cortex. The newly formed bone appears to be rarefied irregularly and striated longitudinally, not unlike that in syphilitic periostitis. The local symptoms consist of mild chronic pain and tenderness over the lesion, and there are no constitutional symptoms.

2. *Solitary tuberculous abscess:* (Brodie's type), is usually located centrally in or near the metaphysis over a single area of destruction. Only in the later stages it is usually surrounded by fairly dense bone. The onset is insidious, without constitutional symptoms but occasional attacks of dull aching pain over the lesion. Later on, the

tuberculous abscess shows a tendency to extend slowly through the cortex of the bone, eventually forming sinus tracts leading to the surface. Sometimes sequestra are present.

3. *Localised tuberculous osteomyelitis*. In this form the lesion is disseminated throughout the cancellous and cortical bone in an area over a larger portion of the shaft. The disease is of the infiltrative variety with many scattered areas of destruction and proliferation of bone, abscess formation, and occasionally sequestrum formation. Involucrum is usually present when the superficial layers of the cortex or the periosteum is involved. In cases with mixed infection, the periosteal new bone often presents a very irregular outer surface, with fringy, serrated or radiating projections of involucrum. The infection is characterised by an insidious onset and a chronic course. Pain of a dull aching character and muscle spasm are present for several days or weeks, following which soft tissue swelling develops gradually. Most of the patients show a slight febrile reaction with general malaise and loss of weight. The abscesses are not of the "cold" type, and the skin over them is hot, red, and tender. The abscesses tend to rupture spontaneously after several weeks.

4. *Massive tuberculous osteomyelitis* of the entire shaft is characterised by sub-acute onset, and severe pain and swelling of the limb, which develop after 2 weeks into fluctuant soft tissue swellings. The temperature of the patient may vary from 37 to 38 degrees C. This form of tuberculous osteomyelitis might easily be mistaken for acute pyogenic infection of the bone. During the early stages there is marked decalcification of the shaft, with usually a fusiform swelling of the periosteum and surrounding soft tissues. Later on, after 2 or 3 months, the cortical and medullary bone shows extensive decalcification, and the entire shaft may be separated as a sequestrum if the progress is very rapid. Since the circulation of the periosteum is not seriously affected, laminated layers of involucrum are seen after several weeks or months.

Diagnosis: Though there are clinical and roentgenologic signs which suggest the diagnosis of tuberculosis, it is necessary to use either curettage of the existing sinus or an exploratory operation to obtain tissue for biopsy. Because of the unreliability of physical signs in early pulmonary tuberculosis, it is necessary to secure roentgenograms of the lungs in every case of bone tuberculosis. As a rule, bone and joint tuberculosis is a peripheral manifestation of a general systemic disease, and therefore careful physical and laboratory examinations should be made in order to locate the possible associated lesions.

Treatment: It is always necessary to adapt principles of treatment to the economic condition of the patient, and it is often necessary to eliminate the long period of conservative management with its long period of convalescence, and adopt radical surgical procedures

with the greatest chance of permanent cure in the shortest possible period of time.

Most of the patients with shaft tuberculosis and active pulmonary lesions did not respond favourably to operative procedures, so the treatment of the pulmonary condition was considered of primary importance and the bone lesions secondary. It is believed that amputation of an extremity may be strongly indicated in these cases, especially since complete eradication of an active peripheral focus may allow a greater chance for control of the visceral lesion.

About 75 per cent of the uncomplicated cases (those without associated tuberculous lesions) responded favourably following radical surgical treatment and the usual orthopaedic care.

In closed lesions (those without sinuses) the operative treatment consisted of unroofing of the diseased area of the bone, and whenever feasible, excision of as much as possible of the diseased bone and soft tissue. The defect in the bone was left unfilled, the wound was closed, and a plaster of Paris cast was applied.

In open cases (those with draining sinuses and accompanying secondary infection) were treated in much the same manner as the ordinary case of pyogenic osteomyelitis. In addition to the usual procedure, as much of the infected bone was excised as was possible without causing an interruption of its continuity, with wide excision of the tuberculous soft tissue. Following the unroofing and excision procedure, the wound was packed with vaselin gauze and a cast applied according to the technique of Orr, which method has proved very satisfactory.

In many of the cases, secondary infection seemed to have a favourable influence upon the healing of tuberculous lesions of the shaft, due to an increased fibroblastic reaction of the soft tissues, as a result of which the tubercles became walled off and quiescent.

THE VALUE OF AEROCYSTOGRAPHY.

(NORMAN ROSS: *Lancet*: 1934. ii. 124).

Radiography of the urinary bladder after it has been injected with air is a valuable aid in the diagnosis of bladder and prostatic diseases. In cases of intravesical enlargement of the prostate rectal examination is unreliable in diagnosis. In many cases where there is little or no palpable enlargement of the prostate as felt per rectum, cystotomy might reveal marked subtrigonal projection, while in other cases marked enlargement per rectum is not necessarily indicative of intravesical involvement. Further, the symptoms of prostatism may be due, not to enlargement of the prostate, but to a "median bar" formation ("contracture of the neck of the bladder" or prostatism sans prostate) which demands an entirely different form of treatment from prostatic enlargement. Cystoscopy as a confirmatory means of diagnosis has certain disadvantages such as

inability to pass the instrument owing to contraction of the neck of the bladder, haemorrhage or sepsis may cloud the field, or there may be severe pain.

Aerocystography is an alternative method of diagnosis where cystoscopy is contra-indicated. The technique of aerocystography consists of (a) complete emptying of the bladder, (b) injection of air into the bladder through a very small rubber catheter by numerous repeated fillings with a 20 or 50 cc. syringe, and (c) Potter-Bucky radiography. A low kilovoltage tube is used (15 to 50 K. V.) the obliquity of the tube being 15 to 25 degrees. Occasionally a posterior film is taken with the central ray directed obliquely upwards and forwards so as to project the sacrum and coccyx above the field. The objective is merely the production of a sharp contrast between air and solid tissue.

Besides prostatic enlargement, three other conditions in which aerocystography has been found of great aid in making a pre-operative diagnosis are: distinction between simple and malignant prostatic enlargement, vesical neoplasms, and "prostatic bar obstruction."

In the aerocystogram a normal bladder shows an outline which is perfectly clear and circular, with an uninterrupted margin and smooth walls; its capacity, as measured by the number of fillings required, should be about 300 cc. The lower margin of the bladder on the film should be seen about 1/4 inch above the margin of the pubic bones, quite distinct, running laterally within the iliopectineal lines to the iliac bones. The sigmoid should be free from gas. A large bladder is usually ovoid in shape, owing to lateral compression in the pelvis.

With benign intravesical enlargement of the prostate, middle and also perhaps lateral lobes; there is an obvious projection at the base of the bladder, the shadow being conical with the edges continuous with those of the inferior vesical margin. The shadow is almost as dense as the catheter inside the bladder. In the female a somewhat similar shadow may be shown by a cervical fibroid compressing the vesical neck. Calculi are frequently seen in the prostatic substance.

With a spheroidal-celled carcinoma of the prostate a nodular shadow is cast at the base of the bladder, more confined to one of the lateral lobes, and projects beyond its normal boundaries. Neither tuberculosis nor gumma of the prostate will produce a picture anything like the above.

Villous papilloma is rarely situated on the trigone, but usually on the outer side of one ureteric orifice, and hence not obscured by the prostatic shadow. Often the oblique line of the intramural part of the ureter is visible, as it is raised under the mucous membrane by the muscle of Astley Cooper, and the papilloma may be seen lying close to this.

In vesical carcinomas, the growth surrounds the trigone which is itself clear. The growths are sessile, and the bladder may be enlarged but not hypertrophied. One should bear in mind that malignant vesical tumours appear irregular on the radiogram and infiltrate along the bladder wall.

Median bar formation is the condition where there is a contraction at the neck of the bladder without any enlargement of the prostate; there is only a thickening of the median portion of the prostate posterior to the internal sphincter. This condition can be made out by aerocystography, and, of course, by cystoscopy.

LATERAL CONTRACTION OF THE PELVIS.

(E. A. GERRARD: *Clinical Journal*, 1935, lxiv, 120.)

The lateral measurements of the pelvis are found to be reduced in several types of case:

1. The simple generally contracted or justo-minor type, where all the diameters are proportionately diminished.
2. The generally contracted flat rachitic type, which is a small round pelvis with additional distortion as a result of rickets.
3. The Robert pelvis, where the wings of the sacrum are absent and both iliac bones are fused to the sacral body, there being no sacro-iliac joints.
4. The high assimilation pelvis, showing six sacral vertebrae instead of five.
5. The kyphotic pelvis, with the promontory of the sacrum forced backwards, and the tip forwards, and the ischial bones brought nearer.
6. The osteomalacic pelvis, where, as a result of osteoporosis, the whole pelvis collapses; the condition is really an adult form of rickets.

Two other types which have as yet received insufficient attention are:

7. The simple laterally contracted pelvis, where the antero-posterior measurements are normal. It is in this type that the head in an occipito-posterior position tends to malrotate into the hollow of the sacrum rather than to proceed by long internal rotation into the anterior position.

8. The male type of pelvis, where the pelvic inlet is normal in all its diameters but the transverse diameter of the outlet is reduced. This is by no means uncommon and is usually not noticed until the patient has been for some time in the second stage of labour. The foetal inter-ischial diameter is less than the normal 4 inches. The foetal head as it descends in the second stage is forced backwards towards the sacrum. For delivery by natural forces, the inter-ischial diameter and posterior sagittal diameter (or the distance from the mid-ischial point to the tip of the sacrum) should together measure $6\frac{1}{2}$ inches.

Treatment: In minor degrees of lateral contraction, delivery will be accomplished by natural forces as long as the powers are good, and perineal laceration is to be expected. Marked degrees are fortunately rare. Intermediate cases may be treated either by mid-forceps or induction. In the former method, it will be noted that the forceps have a tendency to twist into an oblique position owing to the resistance of the tuberosities. Labour can with advantage be induced during the later weeks of pregnancy.

OBSTRUCTIVE LESIONS OF THE UTERUS AND THEIR COMPLICATIONS.

(A. H. CURTIS: *Surgery, Gynecology and Obstetrics*, May 1935).

Cervical strictures are a common occurrence in the practice of gynecology. The various therapeutic procedures employed in the treatment of lesions of the cervix are more important than any other factor in the etiology of cervical obstructions. Endocervicitis is also an important factor, and in the majority of cases of serious stricture there is a history of an inflammatory process, as well as of instrumentation. However, the absence of infection or of instrumentation does not necessarily mean a patent cervical canal and adequate uterine drainage. Strictures of the worst kind are found in patients who are *virgo intacta* and in others in whom there is no discoverable predisposing factor. Fibrotic constriction of the cervical lumen is much more serious than obstruction by adhesions.

Metaplasia of the columnar epithelium into squamous epithelium has been found in the roughened pocketed endocervix above cervical strictures. A similar metaplasia has occurred in the pocketed endometrium above a cervical stricture. Irritation from retained secretions may be a factor in stimulating the metaplasia.

Tumorous nodulations of the endocervix and lower uterine segment are a less common cause of uterine obstruction. The effects of damming back the uterine secretions and menstrual blood may be far-reaching—perhaps important in the etiology of endometrial polypi, adenomyosis of the uterus, pelvic endometriosis, and back pressure inflammatory processes in the pelvis. The relation of obstructive retention to the development of intra uterine cancer is a problem which merits further study.

It will eventually be regarded as a surgical sin to use radium or make repeated endocervical topical applications, or apply the cautery within the cervical canal, or amputate the cervix of the uterus, or even administer expectant care to a patient with notable endocervical disease, without prolonged and attentive observation thereafter directed to the maintenance of patency of the cervical canal. The author thinks that gynecologists have been too little concerned with the lumen of the uterus and the importance of free uterine

PROGRESS IN OBSTETRICS AND GYNAECOLOGY DURING THE PAST 25 YEARS.

(J. S. FAIRBURN: *British Medical Journal*, May 4, 1935.)

The most marked progress would appear to be the application of modern constructive hygienic and preventive medicine to obstetrics, as illustrated by the spread of ante-natal clinics and the principles they embody. The fact that the facilities offered by these clinics are as yet inadequately seized is probably due to lack of public education, and there is no doubt that their efficiency is seriously impaired by the inability of many authorities to staff them with experienced obstetricians. Both these deficiencies will be corrected in time and it is a little unfortunate that some premature criticism has impaired public confidence in the ultimate value of these admirable institutions.

The toxæmias of pregnancy still remain one of the most difficult obstetric problems, particularly in view of recently acquired knowledge to the effect that the danger of permanent renal damage is much greater than was hitherto suspected. Active intervention, however, has now largely given way to Stroganoff's or similar treatment, although Caesarean section still has its indication in certain cases.

Knowledge of the aetiology and prevention of puerperal sepsis has been considerably illuminated by the discovery of spray infection, and though doubt has been thrown recently on this suspected source of sepsis, it is probable that it still remains the most adequate explanation for those cases which develop sepsis in the absence of any internal examination.

In gynaecology, the advances in radiotherapy are outstanding. It is being more widely and scientifically applied not only in cure, but also in the relief of malignant disease, and also for the treatment of non-cancerous conditions. The question of the best treatment for glandular metastases is still in the balance, but it is probable that there is very little to choose between the end-results of the operative implantation of radium or radon, and those of deep x-ray therapy.

Tubal insufflation for sterility, the mass of new knowledge which has resulted from the epoch-making work of Aschoim and Zondek, and the use of x rays in obstetrical diagnosis, are all advances of comparatively recent advent, and it is a satisfactory conclusion that the next 25 years will probably see advances of a similar and equally important quality.

Medical News and Notes

ETIOLOGY OF UTERINE FIBROIDS. The relationship of endometrial hyperplasia to follicle cysts of the ovary and a hyperoestrinism, or at least a continuous stimulation by the follicle hormone, in the absence of corpus luteum stimulation, is well established. Several writers have noted the coincidence of ovarian follicle cysts, hyperplasia of the endometrium, and fibromyomatous changes in the myometrium. J. Thornwell Witherspoon in *Surgery, Gynaecology and Obstetrics*, (1933, lvi, 1026) concludes that the unopposed action of oestrin on the uterus results in immediate endometrial hyperplastic changes and in the more latent fibromyomatous growths. He describes the results of a study of 150 cases of fibroids in white women, in whom follicle cysts were observed in every case, and suggests that the incidence of fibroids may perhaps be reduced by the prophylactic treatment of ovarian hyperoestrinism with the luteinizing factor of the anterior hypophysis. More recently the same author writes in the same journal (1934, lviii, 57) dealing with 125 women of the coloured race among whom the incidence of fibroids is far greater. Here too the hypothesis that cyst formation with hyperoestrin secretion was an etiological factor first in the production of endometrial hyperplasia and, if the stimulation be continued long enough, of fibromyomatous changes in the myometrium, holds good, but the greater frequency in coloured women is due to the higher incidence of chronic pelvic infection, which results in ovarian damage and dysfunction with subsequent permanent stimulation by the abnormal ovarian secretion. That infection is not the sole source of follicle cyst formation, however, is demonstrated by the occurrence of myomata in white women especially virgins, in whom infection is much less common, but a general glandular imbalance may be the cause of ovarian follicle cyst formation.

CENTENARY OF THE MADRAS MEDICAL COLLEGE. The programme for the Centenary week is as follows:—

Monday, 4th November, 4-30 p.m.—Inauguration of the Centenary Week Celebrations by His Excellency the Governor. Speakers: Sir Md. Usman, Lieut.-Col. Newcomb, and His Excellency the Governor. Tea at 5-15 p.m.

Tuesday, 5th November, 10 a.m.—Opening by the Surgeon General of the Scientific Exhibition, showing the progress of Medicine during the past century.

Wednesday, 6th November 5-15 p.m.—College prize distribution. His Excellency presides. 8 p.m.—Old Students' dinner.

Thursday, 7th November, 2-30 p.m.—College sports; 5-30 p.m.—distribution of prizes by the Hon. Dewan Bahadur S. Kumaraswami Reddiar. Sir Md. Usman presides.

Friday, 8th November—Ladies day. Exhibition open only to ladies.

Tickets (annas four each) for the exhibition will be available at the Medical College. Proprietors of cinemas have consented to give benefit performances.

MADRAS DISTRICT MEDICAL ASSOCIATION. A meeting of this association was held at the Masonic Lodge, Madras on the 3rd September with Major-General Sir Frank Connor, I.M.S., Surgeon-General, in the chair. Dr. S. Viswanatha Aiyer delivered a lecture on "artificial pneumothorax treatment of tuberculosis." A resolution was passed calling for liberal contributions for the celebration of the Centenary of the Madras Medical College. At night the Surgeon-General was entertained to dinner by Dr. S. Padmanabha Sarma, M.B., C.M., District Medical Officer.

THE EAST GODAVARI DISTRICT MEDICAL ASSOCIATION. The monthly meeting of the Association took place at Rajahmundry on the 21st September 1935. Captain J. S. McMillan, I.M.S., District Medical Officer, presided. The Rajahmundry group of members were "at home" to the Association. Dr. M. Ranganadham of Ryali exhibited three cases of "Endocrine Deficiency." Dr. Miss. T. E. Stephens of Rajahmundry exhibited a case of "Ovarian Cyst" operated recently in the Government Hospital. Rajahmundry. Three cases of poisoning due to the administration of the Indian drug called "Katukarahini," brought in a condition of collapse, were mentioned by the staff of the Government Hospital, Rajahmundry. Captain J. S. McMillan, I.M.S., delivered a lecture on "Parasitology" in relation to East Godavari District. After dinner and music, the guests dispersed.

SOUTH KANARA DISTRICT MEDICAL ASSOCIATION. The fifth annual meeting of the above association was held on the 21st September at the Wenlock Hospital, Mangalore, with Dr. M. Shiva Rao, President, in the chair. The annual report was adopted, which showed a membership of 50 (of which 25 were non-resident) and a record of good work turned out during the year. The toast of the association was proposed by Dr. H. C. D'Souza, M.B., B.S., who urged the members to evince greater interest in medical matters and to strengthen the medical association. Dr. C. P. Kamath responded. For the ensuing year Dr. L. P. Fernandez was elected president and Dr. K. R. Kini was re-elected secretary and treasurer. Several resolutions were passed and speeches made. The services rendered to the association by Dr. M. Shiva Rao, the retiring President, and Dr. K. G. T. Menon, the retiring District Medical Officer, were appreciated and placed on record. A dinner was arranged at night

Governor of Madras will open the Congress and Dr. Ada S. Scudder of Vellore will preside. The sessions will be devoted to the consideration of subjects under the following three sections: 1. Obstetric section, 2. Gynaecological section and 3. Maternity and Child Welfare section. There will be organised in this connection a *Scientific Exhibition*, which will include exhibition of scientific appliances, foodstuffs, drugs and scientific books. Members of the medical profession are invited to attend the Congress. Particulars with regard to the programme will be published later. Those who intend to contribute papers to any of the sections are requested to kindly communicate with the President of the Obstetric and Gynaecological Society of S. India, Government Hospital for Women and Children, Egmore, Madras.

THE INTERNATIONAL UNION AGAINST TUBERCULOSIS. The Organising Secretary of the King George Thanksgiving (Anti-Tuberculosis) Fund, Simla, sends us the following press notice: The Executive Committee and the Council of the International Union against Tuberculosis, whose Secretary General is Prof. Fernand Bezancon, met in Paris, at the Headquarters of the Union, 66, Boulevard St-Michel, on the 10th and 11th July 1935, under the chairmanship of Dr. Piestrzynski, Under Secretary of State for Poland. Delegates from 20 countries attended this meeting. The administrative meeting of the Council was devoted to the preparation of the programme of the Conference of Lisbon which is due to take place on the 8th, 9th and 10th September 1936. The agenda of this Conference is now definitely settled and will include the three following subjects. "Radiological aspects of the pulmonary hilum and their interpretation," opening report by Prof. Lopo de Carvalho (Portugal); "Primary tuberculous infection in the adolescent and the adult," opening report by Dr. Olat Scheel (Norway); "The open case of tuberculosis in relation to family and domestic associates," opening report by Sir Henry Guvain (Great Britain). At the scientific meeting of the Council Prof. Lyle Cummins (Cardiff) occupied the chair. Prof. Madsen of Copenhagen submitted a report on "Tuberculin Standardization and Tuberculin tests." Dr. Kendall Emerson, Managing Director of the National Tuberculosis Association, gave an account of the work of Dr. Long and his collaborators who claim to have isolated the active principle of tuberculin. In a discussion in which Prof. Madsen, Prof. Lyle Cummins, M. Boquet, Prof. F. Bezancon, Prof. Sargent, Prof. Debre, Dr. Lesne, Dr. Rist, Dr. Troisier, Dr. Saenz etc. took part, the respective merits of Pirquet's cuti-reaction and Mantoux's intradermal test were compared. The majority of the French speakers expressed a preference for the former method while their colleagues from other countries spoke on behalf of Mantoux's test. They all agreed on the advisability of adopting a standard tuberculin and a uniform tuberculin test.

THE INTERNATIONAL UNION AGAINST VENEREAL DISEASE. According to abstracts in *Venereal Disease Information*, representatives from all civilised countries met in Brussels in 1899 and 1902 to discuss measures for the control of venereal disease. Through the efforts of these congresses, national societies for the control of venereal disease were established in the different countries, which exchange opinion and information and co-operate with each other in dealing with international phases of the problem. This international co-operation was interrupted by the war, which brought about a great increase in venereal disease. After the war the International Union Against Venereal Disease (or Union Internationale contre le Peril Venerien) was established, with headquarters in Paris. Its objects were to study all questions related to the international control of venereal disease, to prevent venereal disease being carried from one country to another, and to support the national associations for the control of venereal disease in their work, to collect reports on the condition of venereal disease control in different countries and publish works on the scientific and social aspect of the problem, to try to interest the Governments of the different countries in venereal disease control and prevention, and also to enlist the co-operation of social organizations. A general congress is held each year; in 1934 it was held in Madrid and in 1935 it is to be held in Budapest.

Resolutions were adopted in regard to the treatment of syphilis, declaring that the infectious stage of the disease must be shortened as much as possible by immediate and energetic treatment which must be continued long enough so that no infectious lesions recur. Transmission of syphilis to children must be prevented by treating the parents before conception and the mother during pregnancy. The people must be instructed in regard to the dangers of syphilis so that patients will continue treatment until cured. Physicians must follow up cases and make every effort to discover and treat sources of infection, and general practitioners must be instructed in the prevention, recognition, and treatment of syphilis. Close co-operation must be established between general practitioners, specialists, and public health workers. Physicians must be more thoroughly instructed in regard to the best methods of diagnosis and treatment of gonorrhoea and of determining when a patient is really cured. Sources of infection must be looked for patiently and energetically in men and women, and care taken to see that the patients are really cured before they are dismissed. It was decided that prophylactics do not definitely prevent the contraction of venereal disease and are apt to give a feeling of false security, particularly to the young. It was found that tabes and other syphilitic diseases of the nervous system have decreased not only absolutely but relatively since the introduction of arsenic treatment, thus showing

that arsenic does not further the development of nerve syphilis; lumbar puncture was recommended in the course of the disease. Measures were adopted for the examination of emigrants to prevent carrying disease from one country to another. An international agreement was adopted providing for the free treatment of seamen from all signatory countries in the harbours of the countries that adopt the agreement. Every effort is made to acquaint all sailors with this fact. Resolutions were adopted against the segregation of prostitution and in favour of public health control of all venereal disease patients, both male and female.

GAGS AND TONGUE FORCEPS. W. S. Sykes in the *Lancet* of January 12, 1935 says that for anaesthetic purposes tongue forceps need never be used, and for anesthetic purposes gags need never be used, (with one solitary exception intubation for endotracheal methods). The words "for anaesthetic purposes" are specially important. It is, of course, often necessary to open the mouth for the surgeon or the dentist in oral operations, and one may very occasionally have to pull out the tongue for the same reason, but apart from this, the prohibition should be absolute. To fulfil this non-traumatic ideal, three conditions are essential: premedication to stop the secretion of mucus, oxygen must be at hand, and small sized airways must be available. In an ether anaesthesia, once the patient is properly under, and the jaw relaxed, an oral airway can be put in easily with the fingers and then there is no more trouble. It keeps the tongue out of the way far more efficiently than any forceps. Before this stage is reached, however, is the time when the novice is apt to use force. If the mouth cannot be opened with the fingers, it is not yet time to insert an oral airway and a gag ought not to be used. When it can, there is no need for a gag and the necessity for the gag disappears altogether.

ANIMAL vs. VEGETABLE PROTEIN. According to the *Journal of the A.M.A.*, August 10, 1935. The value of any protein or food or ration in meeting the protein requirement of animals depends on the nature and amount of amino acids yielded on hydrolysis. Proteins that are unsatisfactory for nutritive purposes are not toxic or poorly utilized but are lacking in one or more of the so-called essential amino acids, which cannot be synthesised by the animal organism and must therefore be adequately supplied in the diet. The emphasis has thus been transferred from one of the quantity of protein in the diet to that of quality of ingested protein. The importance of the individual amino acid components of a protein in determining its value in nutrition is emphasized and investigators have clearly established that, in general, the proteins of animal origin are superior to the vegetable, proteins for purposes of nutrition. The results of the studies of H. Wu in China from 1928 to 1935, on white rats show that animals ingesting a vegetarian ration grow at a slower rate than

controls ingesting a mixed diet, and that the diminished growth rate is accentuated in successive generations. The vegetarian rats attain a smaller final body weight than do the control animals. Fertility remains normal, but the ability of the experimental animals to nurse the young is quite inferior to that of the rats in the stock colony. The basal metabolism of the vegetarian rats is somewhat lower. There was little effect of the vegetarian diet, continued for many generations, on the gross physical characteristics or on the general health of the animal. The vegetarian rats may grow to maturity and reproduce, even when continued for several generations on the same diet, without any sign of abnormality except the lowered growth rate. A diet that is slightly deficient and yet suffices to propagate the race after a fashion may never arouse suspicion and continues to exert its insidious effects; it must be changed to a better one or the race will perish. This is true not only of a strictly vegetarian ration but of any slightly deficient diet.

INTRAVENOUS CHARCOAL in acute and chronic suppurative conditions is the subject of a recent paper in *Beauches-médical* by E. St. Jacques, who has used it in furunculosis, puerperal infections, acute arthritis, cholecystitis, and erysipelas. A 2 per cent suspension in distilled water of chemically pure animal charcoal, as finely powdered as possible, is injected intravenously, usually every other day although in certain instances of severe infection it has been repeated daily, night and morning, in doses of 2 to 5 cc. It is important to see that the plunger of the syringe and the needle are lubricated with sterile liquid paraffin as the charcoal suspension easily causes blockage; another way to avoid this difficulty is to draw 2 to 3 cc. of blood into the syringe after puncture of the vein, and then inject the mixture of blood and charcoal suspension. This method is completely devoid of danger or of any unpleasant after results such as headache, rigors, or shock. There is rapid relief of pain in certain conditions such as prostatitis and epididymitis, and there ensues of fall of temperature within 48 hours in patients with localising collections of pus.

PROTEST AGAINST THE INDIAN MEDICAL COUNCIL ACT. The 20th of September 1935 was observed all over the country as the All-India Anti-Indian Medical Council Day and protest meetings were organised on the initiative of the All-India Medical Licentiate's Association. Resolutions were passed placing on record the emphatic protest of the profession against the Indian Medical Council Act of 1933 and urging on the Government of India the necessity for amending the Act forthwith so as to include the Indian Medical licentiates within its purview and thus allay the discontent and dissatisfaction in its rank and file and the bulk of the independent medical profession. The Editor of the *Indian Medical Journal* says: "It is not a strange irony of fate that the very licentiates who were responsible for the original idea of an All-India Medical Council

should now suffer the ban? There can be no All-India Medical Council in the real sense of the term without the licentiates. The present one is a mockery and a snare. Its abnormal birth and atrophied body are evidences of disease rather than of health. This Act has not given us an Indian Medical Council but has installed the General Medical Council of Great Britain in an Indian garb and in Indian soil. The medical associations of this country entirely rejected this Bill. They expressed vehemently against the unjust exclusion of the licentiates, the appointment of an official president, the one-sided reciprocity, the meagre representation of the independent medical profession, the invidious exclusion of some of the universities, and above all, the undeserving and undignified subservience of the Central Government to the G. M. C. The All-India Medical Council Act is a misnomer, and it is the result of adroit and audacious trespass of the G. M. C. into our precinct.

CORRECTION. In the September issue of this journal, on page 396, line 12 from the bottom, instead of "Interruption" please read "Interruption."

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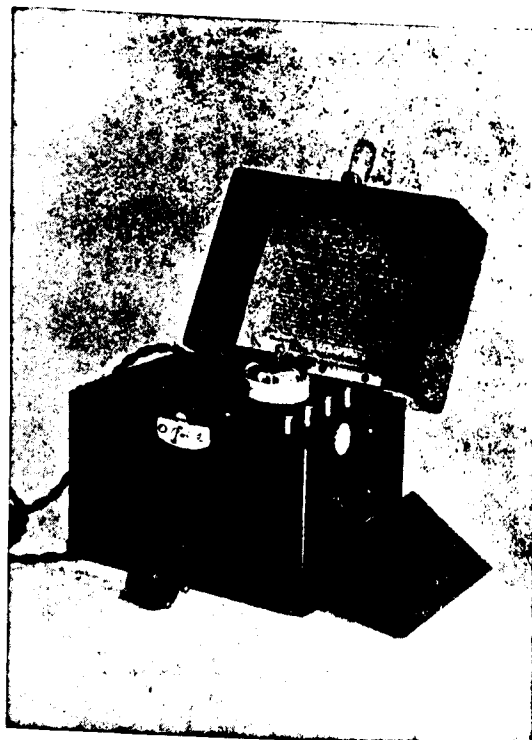
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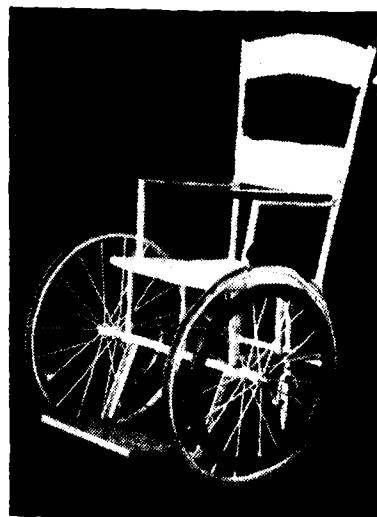
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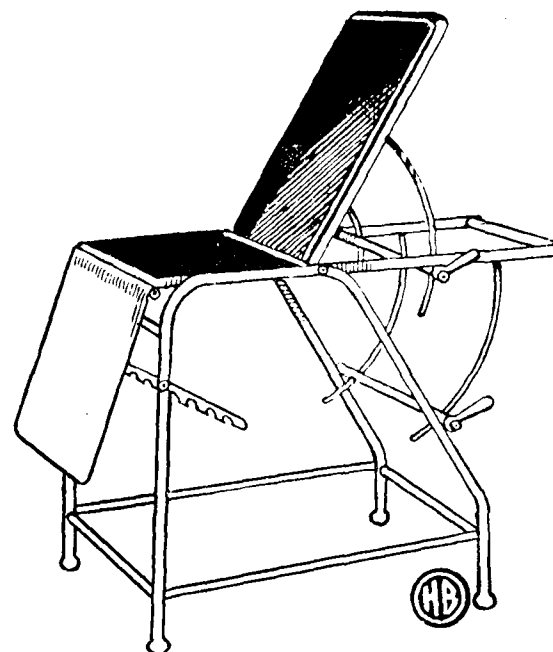
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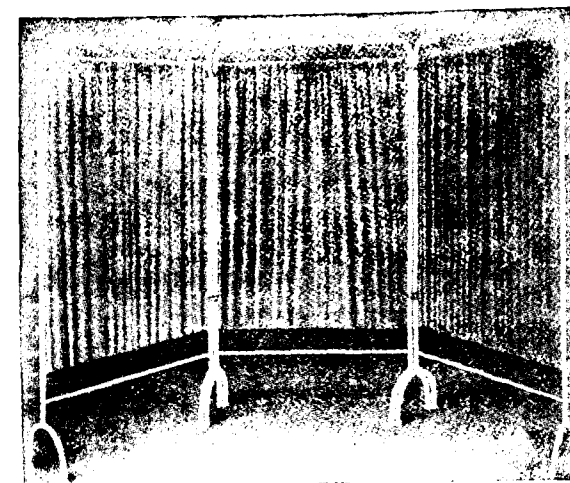
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