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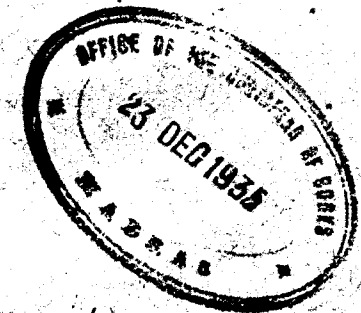
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SEPTEMBER 15, 1935

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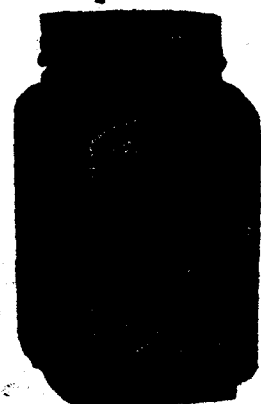
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MENTAL REACTIONS IN PHYSICAL DISEASES

P. S. VARADARAJAN, M.D. (Madras), M.R.C.P. (Lond.)

Physician, General Hospital, Madras.

According to the psychological make-up of the individual, mental disturbances in the form of excitement, depression, apathy, delusion, etc., singly or in combination, may result. That the patient's mental make-up decides the type of mental disturbance is fairly obvious from our observations on the effects of alcohol on different individuals. Likewise, the emotional disturbances in Graves' Disease (without going into the vexed question of calling it thyrotoxicosis or hyperthyroidism) are far greater in an individual of the "live-wire" type who lives every moment of his life than in a torpid human being. However, psychotic reactions in organic diseases have certain clear-cut types and their recognition is of value both diagnostically and therapeutically.

CARDIO-VASCULAR DISEASES

In AORTIC DISEASE, the mental condition is one of excitement and nocturnal restlessness. In MITRAL DISEASE, there is a tendency to depression. CONGESTIVE FAILURE is accompanied by agitation, restlessness and apprehension. The dominant mental reaction in ANGINAL ATTACKS is anxiety. As regards the *angor animi*, or sense of impending dissolution, so often talked about, the view of LEWIS merits attention: "Expectation of death in the severer attacks is not often referred to unless the question is raised. Such a fear is a common association of many new, painful or disturbing experiences and is usually irrational;.....much depends upon the mentality of the patient and something upon what he has read or heard previously about his ailment." On the other hand, *anxiety neurosis* is not

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infrequently accompanied by pseudo-anginal attacks. The basis of this (as in other anginal types) is essentially one of fear, secondary adrenaline discharge and sympathetic overaction.

ARTERIO-SCLEROSIS merits some reference as arteriopathic (non-syphilitic) dementia is a lengthy chapter in the domain of psychology. It must, however, be admitted that not all cases of cerebral arterio-sclerosis manifest psychotic symptoms. A deficient blood supply to the higher regions of the brain is said to be the cause. The strange fact that cases with marked physical signs present but few mental changes is explained by the fact that the "terminal" arteries of the brain are said to form two definite systems—(1) the cortical, and (2) the subcortical, and that the mental symptoms predominate when the cortical arteries are mostly affected. Excitement, depression and confusion may all be present. Delusions (persecutory or exalted) are not uncommon. The condition is progressive. It is indeed hard at times to demarcate them from Dementia Paralytica, unless serological investigations are undertaken.

GASTRO-INTESTINAL DISEASES

ACUTE ABDOMINAL STATES lead to agitation and anxiety. In CHRONIC ABDOMINAL DISEASES, the prevailing state of mind is one of depression. By far the commonest cause of hypochondriasis is chronic abdominal trouble, which should include the various forms of visceroptosis. The incessant introspection of these people is a constant source of worry and annoyance to their medical attendant. The pathetic repetition of their daily regimen is no less vexing.

DISEASES OF THE CENTRAL NERVOUS SYSTEM

It is natural that organic diseases of the central nervous system should manifest psychic reactions considering the proximity and close inter-relationship of the central nervous system and the psychic areas, and the limited mental and bodily activity that such diseases invariably impose on the individual. Most of the chronic diseases end in dementia. Conversely, most chronic mental cases are said to present detectable organic changes in the brain. The mental reaction in the early stages of these diseases only come within the purview of this paper.

MENINGITIS.—In the acute stage, delirium, hallucinations and even acute confusion may be present.

CHOREA.—The child is dull and apathetic or listless and fidgety.

HUNTINGTON'S CHOREA.—Explosive temper and emotional upsets gradually pave the way to mental dissolution.

DISSEMINATED SCLEROSIS.—Euphoria is the feature. Depression marks the progress of disability.

Abiotrophies and *Agenasias* need no mention here.

LETHARGIC ENCEPHALITIS.—A welter of psychic symptoms are present. Delirium, if marked in the acute stages, is said to be of the "occupational type". Excitement, depression, hallucinations and delusions may all be present. Of the chronic cases, a few are hopelessly demented. A few of the younger patients may become "moral imbeciles". A change in the personality is not at all uncommon. Bright, well-behaved children become dull and irritable. They may become so wild as to be denoted the "apache" type.

CEREBRAL TUMOURS.—In general, the early features are dullness, apathy and somnolence.

Prefrontal tumours in the early stages may show merely mental changes. It may need a very careful neurological examination to exclude the diagnosis of pure psychosis. (Possibly, the loss of contralateral abdominal reflex may be the only sign to indicate the organic nature of the malady). The mental symptoms are emotional instability, amnesia, dullness and loss of sphincter control. A few of the cases closely simulate General Paralysis of the Insane.

Uncinate lobe tumours manifest "uncinate fits", the mental symptoms of which are: (1) an abnormal state of consciousness—a feeling of being "far-away" or a feeling of strange familiarity—the Déjà Vu phenomenon, or the patient may in a very short time re-live in detail a large part of his past life; (2) hallucinations of taste and smell.

Temporo-Sphenoidal lobe tumours.—Visual hallucinations of a complex type ("cats walking on the ceiling"; "jewess sucking her lips") confined to the upper half of the visual fields and auditory hallucinations of bizarre nature may be present.

Corpus callosum tumours.—More and more light is being shed upon this obscure part of the brain by recent studies of the tumours in this region.

It is said that mental changes are constant; they are more common than in tumours of the prefrontal area. Apathy, drowsiness and defects of memory are very common. Of the latter it is said that a patient who suffered from the most intense headache forgot all about it in a few minutes.

Pineal body tumours.—About 14 per cent of these, in young boys, produce the syndrome of *macro-genito-somia praecox* wherein mental precocity is one of the features.

Pituitary tumours.—These will be dealt with under DISEASES OF THE ENDOCRINE ORGANS.

SUBACUTE COMBINED DEGENERATION.—Mental changes (first studied by MCALPINE), if present, are mild dementia or a confusional psychosis with disorientation and paranoid tendencies. Rarely, the affective elements such as irritability or depression with a suicidal tendency may be emphasized.

Of the **MUSCULAR DYSTROPHIES** only *Myotonia atrophica* needs mention. It is said that the mental and physical deterioration in those afflicted with this heredo-familial malady tells on the progeny to the extent that there is a remarkable downfall in their fortunes, e. g., the progenitors of a maid belonged to a Royal family—the maid inherited but the disease.

TRAUMA OF THE HEAD may lead to retrograde amnesia, automatic actions, a subtle change in character, epileptic fits and the Friedmann's complex (the mental reaction of the latter being irritability and undue proneness to mental fatigue).

EPILEPSY. The psychotic reactions need but brief mention as they are so well-known. Excitement or depression or automatism may occur after *petit mal*—progressive mental deterioration also may result. Various epileptic equivalents may occur, such as brief impulsive acts, automatism, "double-consciousness", confusion, delirium, depression, furor, narcolepsy, cataplexy, stupor, epileptic katatonia.

RESPIRATORY DISEASES

In general, there is no characteristic mental reaction.

In **PNEUMONIA**, particularly of the asthenic type, the patient is apt to be delirious. The alcoholics among them are prone to develop delirium tremens.

ASTHMA.—Apart from the fact that the patient has inherited a neuropathic diathesis, a preliminary asthmatic aura may occur in which restlessness, irritability and mental exaltation, less frequently depression, may be marked. In early attacks, great restlessness, anxiety and alarm occur.

DISEASES OF THE BLOOD

Mental symptoms appear in a small percentage of cases of **PERNIOUS ANAEMIA**. According to WITTS, they are usually delusions of persecution, and the patient swears that he is being poisoned by his relatives or his physician.

VASOMOTOR NEUROSES

Depression marks a moderate or severe case of **RAYNAUD'S DISEASE**. The association of neurasthenia or hysteria with **ANGIONEUROTIC OEDEMA** is well-known.

DISEASES OF THE ENDOCRINE GLANDS

GRAVE'S DISEASE. "Alteration in the mental condition of the patient varies through a wide range. Unrest and excitement are the characteristic changes. The patient becomes irritable, difficult and bad tempered. Exhilaration and depression may alternate, but the latter is much the commoner" (LEYTON).

Mental changes are extremely common in **MYXOEDEMA**. They are loss of memory, lack of decision, and a general lowering of the mental level.

DISEASES OF THE PITUITARY GLAND. Owing to the complex functions of the gland, the mental changes are not constant. The "giant" as well as the "fat boy" is apt to be dull and somnolent. Emotional upsets and depression are constantly present in *Dercum's disease* (*Adiposis Dolorosa*), *Basophilism* with complete change in personality, and *Simmonds's disease* with premature senility, can hardly fail to affect the mental outlook of the patients.

DEFICIENCY DISEASES

PELLAGRA alone needs to be noted. The early mental depression may suggest a functional disturbance. But the untreated case courses on to the asylum with dementia.

METABOLIC DISEASES

DIABETES MELLITUS may be accompanied by irritability, agitation, and depression, especially when there is a marked degree of acidosis. Some cases become grossly confused. (DAWSON).

GOUT.—“During the attacks the patient suffers from great depression and matutinal irritability. The attacks of gout may alternate with mental disturbance” (DAWSON).

RENAL DISEASE

“Depression is the feature of chronic Bright’s disease. Uraemia may be accompanied by confusion, acute excitement, hallucinations and occupation delirium. Some cases display apathy and apparent stupidity” (DAWSON).

GENERAL INFECTIOUS DISEASES

TUBERCULOSIS.—Pulmonary infection, especially in the early stages, tends to make the patient unduly optimistic (*Spes phthisica*). The mental state in tuberculous peritonitis is one of depression.

LEPROSY.—Anxiety and depression are conspicuous in the early stages. Later, an inferiority complex may impel them to attempt to mingle in society (of course, with dire results).

SYPHILIS may be associated with mental disturbances in various ways:

- (1) Morbid fear of infection.
- (2) Morbid fears as to the result of infection.
- (3) Morbid self-consciousness with regard to scars of infection.
- (4) Delirium and mania in acute systemic infection (secondary stage).
- (5) In congenital infection: mental defect, epilepsy, and juvenile general paralysis may occur.

(6) General paralysis of the insane.

ACUTE INFECTIONS.—Toxic psychosis with marked confusion, especially in those with a basic predisposition, may result in most acute infectious fevers (e. g., erysipelas, influenza, pneumonia, rheumatic fever, scarlet fever, septicaemia, typhoid fever, typhus, etc.). It may take any of the following forms:—

1. Simple delirium.
2. Excitement (especially marked in hydrophobia, plague and typhus exanthemicus).
3. Depression (sequel to influenza, at times leading to suicide; trench fever; chronic malaria; chronic dysentery).
4. Stupor.
5. Katatonia.

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RENAL LITHIASIS

N. MANGESH RAO, M.B., C.M., F.R.C.S. (Edin.), D.L.O. (Lond.)

Surgeon, General Hospital, Madras.

PART II

RENAL CALCULI

These may be classified as 1. *Aseptic stones*, which may be either *primary* or *secondary*, and 2. *Septic stones*.

PRIMARY ASEPTIC STONES.—These are formed entirely of normal urinary crystalloids with a minimum amount of "irreversible urinary colloids." They are made of uric acid and urates, calcium oxalate, cystine, and xanthine. The first two are the commonest. They are usually small, not more than 4 to 5 mm. in diameter. When small, they may be passed down; but if retained in the pelvis, secondary aseptic stones form round them by deposition of layers of foreign albuminous colloids and crystalloids as a result of inflammation.

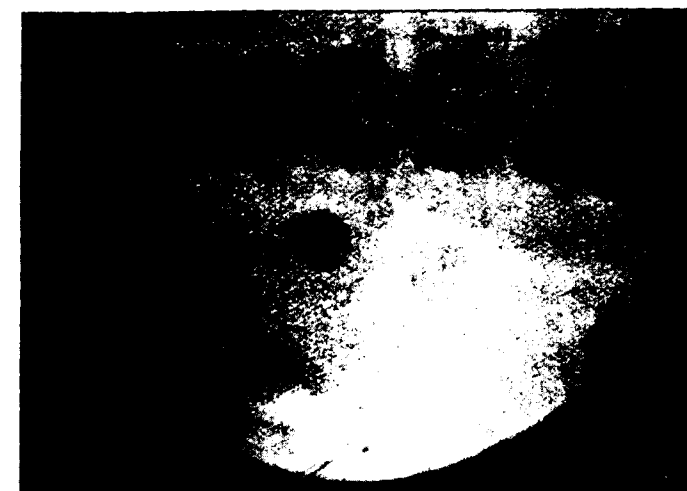
SECONDARY (OR INFLAMMATORY) ASEPTIC STONES.—These have a nucleus of the primary type, surrounded by layers of spongy and compact deposits. (See Fig. 1, 1 a). They contain a large amount of albuminous colloids and are called "colloid-crystalloid stones", while the primary type containing minimum amount of urinary colloid and maximum of crystals are called "crystalloid" stones. These secondary or inflammatory stones may further acquire a coating of phosphates due to alkaline treatment or in the presence of sepsis in the renal pelvis. This is seen in giant stones of the kidney. (See Fig. 2, 3).

These primary stones are liable to form in people of the *third* type. The appearance of an irreversible urinary colloid sets up an atypical crystallization of the salts and formation of microliths which may be held up or passed down. Retention is due to obstruction at the pelvi-ureteric junction or at the pelvi-calycal junction. Congenital or acquired stricture of ureters is said to be present in 80 per cent of cases in which retention occurs. Partial mechanical obstruction helps in retention and the further growth of stones. Microliths with a rough surface grow in size

FIG. 1a



FIG. 1



Shows development of a stone in layers in the course of a few years.

FIG. 2



A giant stone in the right kidney. (Case 1).

FIG. 3



A giant stone in the right kidney. (Case 2)

more rapidly owing to inflammatory deposition on them of exudates as described before. Infection of the pelvis is likely to occur in such cases, and this gives the stone a further coating of triple phosphates.

Ammonium and Sodium Urate Stones.—Microliths of this type are smooth, easily pass down, and produce no local inflammation. They occur in children under ten years. They cannot be made out by X-rays as they are translucent, being devoid of calcium. Hence, it is rare to find renal calculi in children. They may, however, be held up in the bladder and there grow in size. They are smooth and of a pale fawn colour.

Uric Acid Calculi may be single or multiple. They have a mamillated surface and a reddish-brown colour, being stained with urochrome. They are hard and found mostly in adults. Diets rich in purines favour their formation. The small ones are smooth enough to be passed down with occasional attacks of ureteral colic. When pure, they are not visible in roentgenograms. But uric acid is often mixed with calcium oxalate. Such mixed stones are likely to cause more pain.

Calcium Oxalate Calculi usually occur singly in the renal pelvis. They are oval or bean-shaped, spiculated and hard. They are the most painful stones to have. They are brown or black, due to admixture with urochrome and blood. They are the commonest in young men and in middle age. When mixed with uric acid, they may be multiple. The proportion of uric acid and calcium oxalate in these is dependent on diet, localities, and water supply. Renal stones that give a dense shadow in roentgenograms have a large proportion of calcium oxalate or calcium phosphate and carbonates. (See Fig. 4, 5, 6).

Cystine Stones are uncommon in this country. A hereditary tendency is to be noted in their formation. They are fairly pure ones, smooth, with a waxy surface, and greenish-yellow colour turning to green-blue on exposure to light. They are non-opaque to X-rays. They are very liable to be bilateral, and recur after removal.

Calcium Phosphate Stones.—Primary stones of this kind are very rare. They may form in alkaline urine. The crystalline types are hard, rough, and give a dense shadow in roentgenograms. In infection and ammoniacal decomposition of urine triple phosphates and calcium carbonate give a thick coating to the stones already present.

Indigo Stones are very rare. They are greyish black, smooth, and formed from indoxyl absorbed from the intestines in intestinal fermentation. Indoxyl is excreted as indican in the urine.

Xanthine Stones are extremely rare.

SEPTIC STONES. They are most often formed round foreign bodies (see Fig. 8), and sepsis is usually present. They are most often seen in the bladder. In the kidney they form round inspissated pus and bacteria following pyelitis. They also result from infection due to the presence of a primary stone. They are soft, and consist of triple phosphates and calcium carbonate, with a large amount of albuminous colloids.

MIXED STONES.—Most stones are mixed in type. The different salts may be intimately mixed up, being deposited together. Calcium oxalate is usually mixed with uric acid. Phosphatic stones are always of this type. In another type, the successive layers may be made of different salts, especially if formed during alkaline treatment or infection.

INCIDENCE. Renal calculi are most often diagnosed in the middle period of life (20 to 50 years). In children, renal stones, being made of urates, are easily passed down and are not evident in roentgenograms. They seem to be more frequent in men than in women. They are more often unilateral (88 to 90 per cent) than bilateral (10 to 12 per cent), and a little more frequent on the right side than on the left side. Renal stones form about 30 per cent of stones of the urinary tract. Pure stones made of only one salt are rare. Stones made of 90 per cent of one particular salt may be considered as pure. Uric acid, urates, cystine and xanthine may give rise to such. Calcium oxalate stones are usually mixed with small amounts of uric acid or calcium phosphate. Pure stones of calcium phosphate are very rare.

PATHOLOGY

The majority of renal stones arise in an otherwise healthy kidney. Others result from a preceding pyelitis. Calcium oxalate stones are the commonest. Though uric acid gravel is common, pure calculi are rare, as they are easily passed down. Calcium oxalate microliths, being spiny, are more often held up. Minor obstructions in the ureter help in this. Microliths formed in the lower calyces are sooner or later pushed into the renal pelvis by the pressure of urine behind them. If held up in the pelvis, they begin to grow in size. Other similar ones may arrive and be held up,

ending in multiple stones. These multiple stones become faceted. If a stone is held up in the calyx, it begins to grow into the pelvis and then extend into other calyces. This is one type of *branched stone*. The other type of branched stone begins from a nuclear stone held up in the pelvis, and it grows into all the calyces. Multiple calculi in the renal pelvis are more often made of calcium oxalate. Dendritic or coralliform giant stones are made of uric acid, with admixture of calcium oxalate, and especially coatings of phosphates. A single stone in the pelvis as it grows first takes the shape of the renal pelvis, i.e., a pyramidal shape, and then further growth results in the branchings into the calyces. Secondary infection by *Bacillus coli*, *Staphylococcus albus*, etc., is usually present when the stone has persisted for some time, and the resulting decomposition of urine gives the heavy coating of phosphates and albuminous colloids seen in stones from cases of calculus pyonephrosis.

Effects on the kidney.—Small calculi may become impacted at the upper or lower end of the ureter. When obstruction is partial, a hydro-nephrosis results, this may end in pyonephrosis if infection supervenes. When the block is complete, suppression of urine with destruction of that kidney might result. This occurs rarely. The substance of the kidney may undergo damage by back pressure. An interstitial nephritis also may occur.

Infection of the renal pelvis is often followed by the development of secondary stones. Both the pyogenic and the coli group of organisms may be found in these cases. But in cultures, the colon bacillus outgrows the cocci. *B. coli* is often found with large calcium oxalate stones. But large stones with cavities in the renal substance, covered with pyogenic membranes, show a mixed infection, pyococci predominating.

SYMPTOMS

Pain.—Pain in some form is evident in 80 per cent of cases. A smooth stone of urates or cystine may remain in a calyx without causing any pain. The pain is of three types:

1. A deep-seated, uncomfortable, *aching pain*, referred to the costo-vertebral angle just below the last rib. This pain increases gradually, lasts for a few hours, then wears off slowly, leaving behind a feeling of stiffness and soreness. Attacks of such pain may occur at intervals of days, weeks, or months, and are often induced by jolting as on a journey, riding, etc.

2. *Referred pains* of a more severe character also occur. They start in the renal area and radiate to a corresponding point in front, to the suprapubic region, iliac fossa, or to the shoulder. About 50 per cent of cases give such symptoms; and they may be mistaken for cholecystitis, duodenal ulcer, appendicitis, etc.

3. *Renal colic*.—This type is of sudden onset, and is intensely agonizing, and radiates downwards along the course of the ilio-inguinal and genito-crural nerves to the genitals and inner side of thigh. It is severe enough to be accompanied by nausea, vomiting, and a rapid small pulse. During the attack the patient becomes covered with a cold sweat. It may last for from a few minutes to a couple of hours, and may recur at irregular intervals. These attacks may alternate with the milder attacks mentioned above. Indigestion, abdominal distension, and constipation may follow the attack.

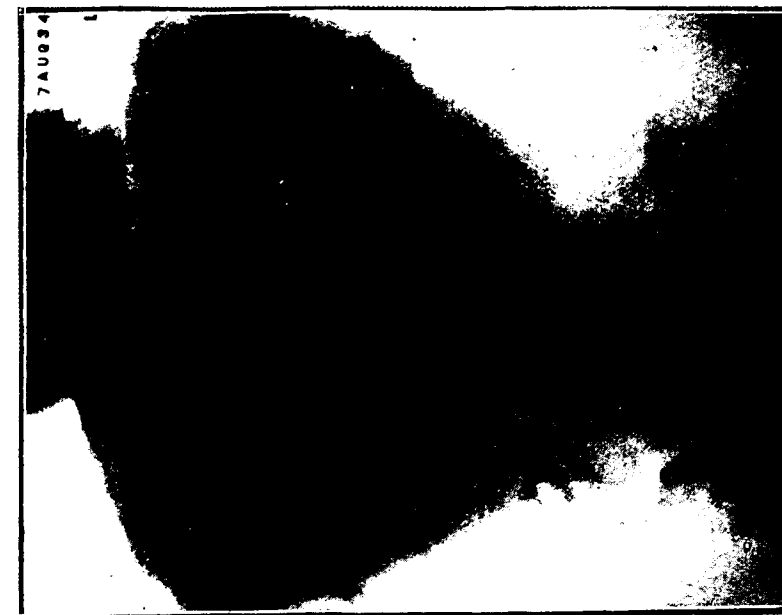
Hæmaturia.—This is never severe, and subsides with rest for a few days. Red blood corpuscles and leucocytes are found in the urine at some time or other. Visible blood, as smoky urine, is more often seen with oxalate stones, or after vigorous exertion such as jolting, or an attack of renal colic. The urine may be clear in the mornings, but becomes smoky in the evenings, due to movement during the day causing a slightly visible hæmaturia. The pain and hæmaturia become worse after jolting or rough riding. The greatest pain is produced by rough crystalline stones, especially calcium oxalate.

During the colic there is an intense desire to micturate, but a small amount of blood-stained urine only is passed. There is often a history of passage of gravel and small stones accompanied by colic.

Tumour mass.—A visible swelling is not common. A hydronephrotic or pyonephrotic kidney gives rise to a palpable swelling in about 15 per cent of stone cases. In a few, pyonephrosis may dominate the picture. In such cases, intermittent and profuse pyuria occurs.

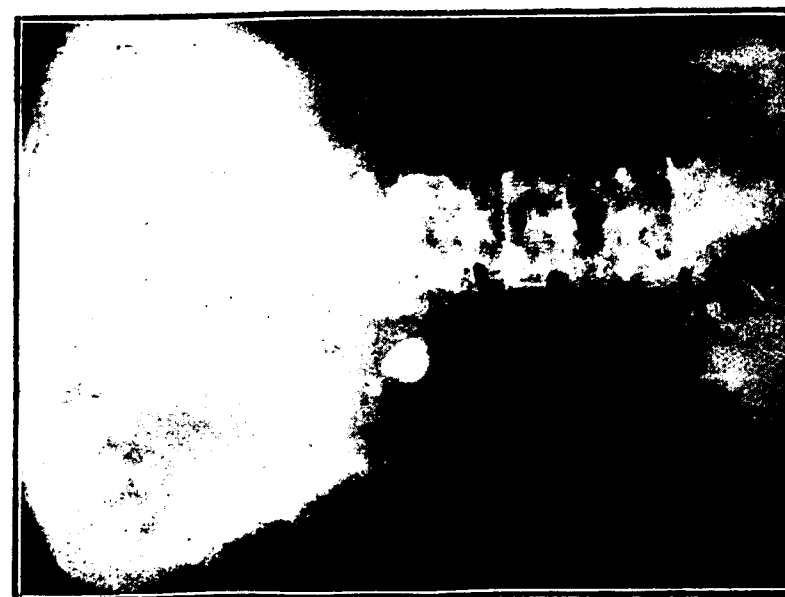
Urinary changes.—In long standing cases, blood, pus-cells, and albumin and infection are present. Blood is present in about 82 per cent of cases; of these, a third may show visible blood; pus cells are present in about 72 per cent of cases; and about 14 per cent of cases may show no changes in the urine. The urine is usually acid, and may show crystals of calcium oxalate, uric acid, hyaline casts, pus cells or leucocytes, and red blood corpus-

FIG. 4a



Function of the right kidney by intravenous pyelogram (after operation) (Case 3).

FIG. 4



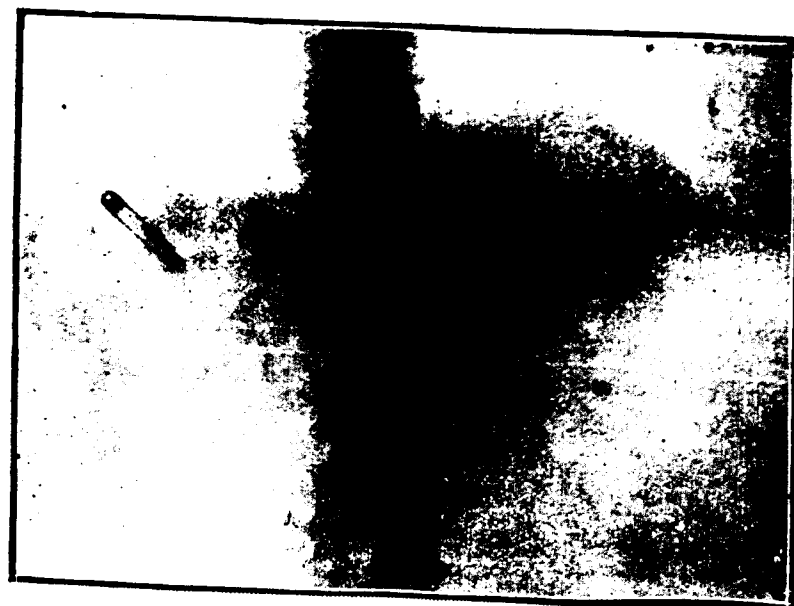
Three stones in the right kidney (before operation.) (Case 3).

FIG. 5



A large stone and a tiny one in right kidney (Case 4).

FIG. 5a



The functional activity after operation in same case (Case 4).

cles. An evening rise of temperature is suggestive of infection. Polyuria may occur in later stages from chronic interstitial fibrosis.

DIAGNOSIS

Renal colic with dull ache in the costo-spinal angle, and increased frequency of micturition during working hours, relieved by rest, should suggest a renal stone. A microscopic hæmaturia, the red cells preponderating over white cells, and passage of smoky urine after an attack of pain confirm the suggestion. The pain starts in the renal angle first, then is felt below the ninth rib in front, then passes along the 12th dorsal nerve into the groin and down the thigh. The patient rolls about during the attack of pain. Some cases of renal stone may closely resemble those of acute abdomen. Chills, fever and frequency of micturition (in the later stage) indicate infection: and the urine will show a heavier deposit. In every case chemical, microscopic, biochemical and bacteriological examinations of the urine should be done. In women a catheter specimen should be obtained and examined. The centrifuged deposit should be stained and examined. Blood urea and non-protein nitrogen should be estimated before and during treatment.

ROENTGENOGRAMS.—A positive shadow is seen in only 80 per cent. of cases. Small uric acid, urate and cystine stones cast no shadow. Only those stones that have a fair amount of calcium salts give good shadow. A plain X-ray picture is taken first. Then three or more pictures are taken after an intravenous injection of uro-selectan B or perabrodil. The latter pictures would show the presence of the opposite kidney and give a fair idea of the function of each kidney.

CYSTOSCOPY.—This is necessary to find out the side from which the hæmaturia occurs. The efflux from each ureter is observed for frequency, presence of blood, pus, etc. Then chromocystoscopy is done to find out roughly the excretory function of each kidney. Ureteral catheters are passed up and collection of urine is done for cultural and biochemical examination. If necessary, retrograde pyelograms should be done and pictures taken. A picture should also be taken after emptying the pelvis of the iodide solution. Injection of 2 c. c. of air greatly helps in bringing these into relief. The patients must be properly prepared and their colon rendered free of gas.

Persistent pyuria in children is indicative of stone.

TREATMENT

MEDICAL. This has been mentioned under lithiasis. There is no known drug that can dissolve a stone. Avoidance of sepsis and over-coming any that may be present is carried out by giving hexylresorcinol, hexamine, and other urinary antiseptics.

OPERATIVE TREATMENT. This is always indicated if the stone is 1 cm. or more in diameter. The type of operation depends on the number, size, and site of stones, and whether the disease is unilateral or bilateral.

Unilateral stones. 1. *Large single stones in the pelvis* form the majority. These are removed by pyelotomy, or pyelo-nephrotomy, where the stone extends into the lower calyx.

2. *Single stone in a calyx* can sometimes be removed by pyelotomy. Some may have to be removed by a small nephrotomy.

3. *Multiple stones in the pelvis* can be removed by pyelotomy.

4. *Multiple stones in the pelvis with a stone in the ureter.* The stone in the ureter should be pushed up into the pelvis by the cystoscopic method. If it be impacted it should be removed at the same time, or by a separate incision at an earlier stage.

5. *Calculus Pyonephrosis.* A giant stone with destruction of the kidney to a great extent should be treated by nephrectomy if the opposite kidney is in a healthy condition. In bad cases, a preliminary nephrostomy may improve the condition of the patient to undergo a more serious operation subsequently.

A silent small aseptic stone in a calyx is best left alone to be passed down in course of time. But septic ones showing cocci infection should be removed, and the kidney drained; otherwise, the organ is certain to get damaged. A stone in the kidney is a *menace*; *active*, if infected; *potential*, if non-infected.

Bilateral stones.—1. *Large bilateral stones:* In old people these are best left alone. If non-protein nitrogen is high and rising, a nephrostomy may be done under local anaesthesia so as to leave a fistula on both sides. In sturdier individuals an attempt may be made to remove the stone on the worse side and drain the kidney. After improvement the other side is operated on.

2. *Moderate sized stones in both kidneys.*—As renal damage is not extensive, the stones should be removed by pyelotomy or nephrotomy at one sitting or two separate sittings, according to the general condition of patient.

3. *Large stone in one kidney and small stones in the other.*—It is best to remove the small stones from the less damaged kidney first. At a later stage, when the general condition has improved, the opposite side is dealt with. The latter may sometimes require nephrectomy.

4. *Multiple stones in one and a single stone of moderate size in the other.*—The single stone should be dealt with first, and the opposite side only later.

5. *Multiple stones on both sides.*—Operate on the side where there are small stones which may pass down and block the ureter suddenly.

Where both sides could be dealt with at one sitting without adding much to the risk, this should be done as it saves the patient from another operation and its complications. The aseptic side should be dealt with first, then the septic side.

It is essential to see that all stones are removed from the side operated on. Hence, the importance of good roentgenograms and a fluoroscopic examination on the table before closing the wound. It is also important to see that the ureter is patent right down to the bladder by passing a fair-sized ureteral bougie down to the bladder.

CASE REPORTS

1. M. Mohammadan, male, aged 40, was admitted on 15-2-'33 with a typical history of duodenal ulcer and a dilated stomach. Urine was reported as normal, which was apparently a mistake as was subsequently proved. He was operated on 17-2-'33 and a large duodenal ulcer was found. During exploration the right kidney was found to be cystic and to contain a giant stone. Posterior gastro-enterostomy and appendectomy were done and the wound healed normally. Blood urea on 8-3-'33 was 32 mgm. per cent. Urine culture gave a growth of *staphylococcus*. On 6-3-'33 *cystoscopy* was done and pus was seen to flow down the right ureter. *Röntgenogram* (Fig. 2) showed a giant stone in the right kidney and no shadows in the ureter or elsewhere. On 14-3-'33 the right kidney was exposed under spinal anaesthesia, 14 ounces of pus were aspirated first, and this was followed by nephrectomy. There

were marked adhesions, especially at the upper pole. The preliminary aspiration of pus helped the separation of the kidney without fear of rupture. He was discharged on 6-4-'33, wound completely healed. He also had a course of auto-vaccine.

2. R.—Hindu, male, aged 30 years, was admitted on 4-5-'34, complaining of indigestion and pain in the costo-vertebral angle. Urine contained pus cells and red blood corpuscles. Roentgenogram showed a giant stone in the right kidney and a bilobed stone near the lower end of the right ureter (Fig. 3). Cystoscopic attempt to push the ureteral stone did not succeed. The right kidney was exposed and eight ounces of blood and pus were aspirated. Nephrectomy was done and the ureter was fixed at the lower end of the wound, with the idea of removing the stones in it by a separate incision. The wound healed normally. The patient declined to have another operation for the ureteral stones. He was discharged on 25-5-'34.

3. M. A.—Mohammadan, male, aged 55, was admitted on 16-6-'34 for pain in the right iliac fossa and back-ache of 12 years' duration. Urine showed pus cells and red blood cells. Blood urea was 50 mgm. per cent. Roentgenogram showed three stones, one large in the pelvis and two smaller ones in the calyces (Fig. 4). On 5th July, the right kidney was exposed and pyelo-lithotomy was done, the stones removed, and the pelvis washed out. Subsequent intravenous pyelograms (Fig. 4 a) showed a good functioning kidney. He was discharged on 12-3-'34. On 12-7-'34 the blood urea was 49.5 mgm.

4. A. R. S.—Mohammadan, male aged 40, admitted on 22-9-'34 with history of back ache of 8 years' duration. He gave a history of injury to the right lumbar region prior to the onset of this pain. Urine contained pus cells and red blood corpuscles. Blood urea on the 25th September was 41.4 mgm. per cent. On the 27th the kidney was exposed and pyelotomy was done. One large stone was removed and the small one was washed out by syringing. On the 29th the blood urea was 50 mgm. but on 12-10-'34 it came down to 30 mgm. per cent. Subsequent intravenous pyelogram showed a well functioning kidney. This patient was seen 10 months later and is quite fit. Discharged cured on 30-10-'34. (Fig. 5, 5 a).

5. A. R. Mohammadan, male, aged 35, was admitted on 5-10-'34 complaining of pain in the right costo-vertebral angle of one year's duration. Urine contained red blood cells and pus cells, but was sterile on culture. Roentgenogram showed a reniform stone in the right kidney and no other

FIG. 6



A reniform stone of right kidney (Case 5).
(Outline of stone very faint)

FIG. 6a



Function after operation in same case (Case 5)

FIG. 7



Large branched stone in the left kidney and functioning right kidney. No excretion of uroselectan seen on the left. (Case 6)

FIG. 8



Uroselectan B — Hydronephrosis right side — a laminated stone in the left renal pelvis. (Case 7).

shadows. Blood urea was 32 mgm. per cent. Operation on 27-11-'34: pyelotomy was done, stone removed, pelvis washed out. Wound healed normally. Subsequent intravenous pyelogram showed a well functioning kidney. Patient was discharged cured on 28-12-'34. (Fig. 6, 6 a)-

6. N. R.—Hindu, male, 51 years old, was admitted on 2-5-'35 complaining of pain in the left loin, shooting towards umbilicus and epigastric region, of three months' duration. The pain used to come on between 4 and 5 in the evening after the day's work. Urine was alkaline and contained pus cells and red blood cells. Roentgenogram showed a large stone with branchings (Fig. 7). Operation on 16th May: the kidney was exposed, but the renal tissue was thin and too damaged for being left; the ureter was thickened by peri-ureteritis; a nephrectomy was, therefore, done. Dense adhesions were present at the upper pole. The removed kidney showed fair amount of pus and a large branched stone. Discharged cured on 19-6-'35.

7. A. H.—Mohammad, male, aged 21, was transferred from the medical side on 3-9-'35. He was admitted on the medical side in a state of toxæmia. Urine was cloudy with pus and gave *B. coli* on culture. Roentgenogram showed a large secondary stone with a dense nucleus in the left kidney. Lamination could be made out (Fig. 8). His blood urea was 94 mgm. per cent on 10-8-'35, but came down to 50 mgm. on 19th August and to 30 mgm. on 3rd September. An intravenous pyelogram showed a slight dilatation of right pelvis, and very little secretion by the left kidney whose pelvis contained the laminated stone. On the 14th September, the left kidney was exposed and a pyelotomy was done. The stone was very crumbly except for the nucleus. The pelvis was cleared by gauze pieces and finally washed out. A ureteral catheter was passed down to the bladder. The wound healed in normal time. Though the blood urea rose up to 80 to 90 mgm. per cent after the operation it came down to 24 mgm. per cent since. A subsequent intravenous pyelogram showed hydronephrosis of the right kidney as before and the left kidney showed function by secretion of the drug though not to the normal extent. This patient is now being treated by mandelic acid and ammonium chloride to overcome the *B. coli* infection. Retrograde catheterisation and lavage of the pelvis has been done. He is still under treatment.

I am obliged to THE BARNARD INSTITUTE OF RADIOLOGY for the roentgenograms of these cases.

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NOTE.

Fig. 1, 1a, and 2 are reproduced here by kind courtesy of *The Antiseptic, Madras*, in which Journal they originally appeared.

ECLAMPSIA *

M. BALAMMAL, M.B.B.S.,

Trichinopoly.

ECLAMPSIA is an acute toxæmia occurring in pregnant, parturient, or puerperal women, usually accompanied by clonic and tonic convulsions, during which there is loss of consciousness, followed by more or less prolonged coma, and frequently ending in death. Convulsions and eclampsia are generally considered as synonymous terms; but such a view is not correct inasmuch as a number of well-authenticated cases of eclampsia without convulsions are recorded, and, more-over, other toxæmic conditions occasionally occur in obstetric practice which are accompanied by convulsions and coma. Accordingly, the only absolute characteristic feature of the disease is the presence, at autopsy, of the hepatic lesions which will be referred to later. Statistics show that eclampsia occurs much more frequently in primiparae than in multiparae. It is seen also in association with multiple pregnancy and hydramnios.

PATHOLOGY.—The presence of albumin in the urine of women suffering from eclampsia led to the view that the fundamental pathological lesion underlying the disease was a nephritis, and for a long time the condition was considered to be identical with uraemia. This view was gradually abandoned when it was found that only a small proportion of women suffering from chronic nephritis developed eclampsia; and still further modifications became necessary after it had been shown that albuminuria is sometimes absent at the time of the eclamptic attack. The absence of albumin in the urine does not, however, necessarily disprove the renal origin of the disease; VAN DER VELDE has referred to instances of eclampsia in which the kidneys were markedly diseased notwithstanding the fact that albumin was not demonstrable in the urine. For the most part, autopsy will reveal the presence of renal lesions which may be marked in some cases and only slight in others. The lesion usually consists of degenerative changes in the vessels and epithelium of the glomeruli, associated with similar changes in the convoluted tubules. There are no in-

* Read before the 5th Annual Gathering and Conference of the Trichinopoly District Medical Association on December 21, 1934. Rewritten and rearranged for publication.

flammatory or atrophic changes unless the process has been grafted on to a previously diseased kidney. In other words, the evidence available indicates that the renal lesions are the result and not the cause of eclampsia.

Certain well-defined hepatic changes are almost constantly met with in this disease. According to MAC CALLUM, "At autopsy the liver is found sprinkled with haemorrhages, which may become confluent into great patches. These haemorrhages correspond with areas of necrosis of the liver-cells beginning essentially in the periportal region of each lobule, but often becoming confluent." These changes, which constitute a haemorrhagic hepatitis, are highly characteristic of the disease, and do not occur in any other condition.

Lesions are noted also in other situations, especially in the heart and the brain.

PATHOGENESIS. So many hypotheses have been advanced to explain the origin of eclampsia that ZWEIFEL has aptly called it "a disease of theories." Unfortunately exact knowledge is still lacking. WHITRIDGE WILLIAMS has summarized the various theories as follows:—

- (1) Uraemia;
- (2) Bacterial origin;
- (3) Auto-intoxication;
- (4) Biological reactions;
- (5) Entrance of foetal elements into the maternal circulation;
- (6) Foetal metabolic products;
- (7) Placental decomposition products;
- (8) Alterations in maternal metabolism;
- (9) Endocrine disturbances;
- (10) Mammary toxæmia;
- (11) Effect of dietary alterations;
- (12) Physico-chemical changes.

The theory that finds most acceptance at the present time is that *eclampsia is an expression of a disturbance in metabolism*, the precise nature of the metabolic disturbance being unknown.

DIAGNOSIS.—Except for the possibility of confusion with purely uraemic conditions, the recognition of eclampsia usually offers no difficulty.

It might be confused with acute poisoning from strychnine and phosphorus. But careful enquiry into the history of the patient should prevent error. Sometimes hysteria may simulate it.

PROGNOSIS.—The outlook is always serious, eclampsia being one of the more dangerous conditions with which the obstetrician has to deal. The maternal mortality varies from 20 to 25 per cent, while that of the child approaches 50 per cent. Prognosis will depend upon the time the patient is seen, being much more favourable in cases which are seen immediately after the first convulsion than in neglected cases which are sent to the hospital only as a last resort. It will naturally vary according as the disease is mild or severe in type. In severe cases two or more of the following symptoms are present:—

- (1) Prolonged coma.
- (2) Pulse rate above 120 per minute.
- (3) Temperature 103° F. or higher.
- (4) Blood pressure above 200 mm. Hg.
- (5) 10 grammes or more of albumin in urine.
- (6) More than 10 fits.
- (7) Absence of oedema.

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There are exceptions, however, to what has been said. Some patients die in the first seizure and others recover after a great number of fits. Variations are noted also in the relative prognosis as between cases occurring in primiparae and in multiparae. If the eclampsia occurs during pregnancy the prognosis is favourably affected by the death of the foetus, the convulsions usually ceasing soon after. The presence of marked oedema generally justifies a more favourable prognosis than when the swelling is not marked. The suggestion has been made that the retention of the fluid in the tissues is to be regarded as a protective mechanism, possibly serving to withdraw temporarily from the circulating blood certain substances which may otherwise do harm.

SYMPTOMS.—In a large majority, about 80 per cent. of cases, premonitory symptoms are present. These are in the main the symptoms of the condition spoken of as *albuminuria of pregnancy*. In addition, certain other symptoms often occur. These are: (1) severe headache; (2) disturbances of vision; (3) albuminuric retinitis and partial or total loss of vision; (4)

puffiness of the eye-lids and cheeks; (5) nausea and vomiting; (6) severe epigastric pain. A sudden diminution in the urinary output may occur with marked albuminuria. The blood pressure is usually considerably raised. These premonitory symptoms are of great significance, and should receive careful attention.

An eclamptic convulsion may occur without any warning "like a bolt from the blue", in women who are apparently in perfect health. Usually, however, it is preceded by prodromata. The attacks may come on at any time, even when the patient is sleeping. It has four stages: prodromal, tonic, clonic, and comatose. The fits may last from a few seconds to a couple of minutes, and sometimes even longer; the patient is deeply unconscious, and may remain in this state for a variable period.

The number of fits may vary from 1 to 2 in very mild cases to 20 or more in the severe ones. In very severe cases as many as 100 fits have been recorded. In rare instance, the fits follow one another so rapidly that the patient appears to be in a state of prolonged and almost continuous convulsion. During the fits the blood pressure rises, and may reach 200 mm. Hg. or even more. The temperature usually remains normal, but occasionally rises considerably.

Antepartum eclampsia may terminate in several ways. As a rule, labour sets in and spontaneous delivery takes place. Sometimes the patient dies undelivered. In my experience cases have occurred where labour did not supervene, but the patient recovered from the attack under treatment and either delivered a dead or macerated foetus soon afterwards, or went on to full-term and gave birth to a living child.

In *post-partum eclampsia*, the attack usually comes on soon after delivery and recovery often occurs after a single convulsion. In some cases, however, the seizure follows one another in rapid succession and frequently ends in death. The general belief that post-partum eclampsia is comparatively benign is correct in so far as cases of it are usually mild, but when they are severe the mortality is indeed high. A few instances have been reported in which convulsions did not appear until several weeks after the birth of the child. It can be assumed that these were not cases of eclampsia, but were probably due to hysteria, uræmia, or other causes.

In one of my cases there was total blindness for some weeks, but this got better spontaneously leaving one eye with defective vision. This might

have been due to oedema of the retina, which not infrequently occurs in eclampsia.

TREATMENT.—Prophylaxis.—This is of the utmost importance. As the mortality from the fully developed disease is very high, every effort should be made to prevent its occurrence. It may be possible to prevent the disease from developing by careful attention to the *hygiene of pregnancy*, especially during the last three months, and by the early recognition and treatment of the premonitory symptoms. The urine should be examined and the blood-pressure determined at regular and frequent intervals, and where any symptoms suggestive of pre-eclampsia are noted they should be promptly treated by the institution of appropriate dietetic and medical measures. The aim in every instance should be to prevent the possible outbreak of eclampsia.

Curative Treatment.—When preventive measures have failed, and eclampsia has declared itself, curative treatment should be promptly instituted. If the patient is seen during a fit, loosen all *tight-fitting clothes and jewels*, and *insert a mouth-gag*. Do not hold her *tight*, as doing so will promote the occurrence of more fits. I have found a few whiffs of chloroform helpful in controlling the fits temporarily. If possible, the patient should be taken to a hospital or nursing home as constant attention of a nurse is necessary until all acute danger is past.

The patient should be put in a darkened room and every effort made to secure the greatest possible quiet. If comatose, she should be placed turned to one side so that mucus collecting in the pharynx can escape. If necessary the mucus should be removed by means of swabs.

(1) The first thing to do is to inject one-fourth grain of morphia. The patient is then catheterized, and examined medically and obstetrically. Morphia can be safely repeated at reasonable intervals, if necessary.

(2) A bowel-wash is given with sodium bicarbonate solution to eliminate the toxins.

(3) If the patient is conscious, an ounce and a half of magnesium sulphate or sodium sulphate should be given by mouth; also a mixture containing potassium bromide and chloral hydrate.

(4) Washing out the stomach and leaving in a mixture of potassium bromide and magnesium sulphate is the routine practice in some hospitals

But this method has a serious drawback: it may set up an aspiration pneumonia and thus indirectly cause death. Because of the danger of an aspiration pneumonia developing, nothing should be given by the mouth or forced into it, in the form of diet or medicine, during unconsciousness.

(5) The blood-pressure is taken, and if it is above 160 mm. Hg., 1 c.c. of veratrone is given intramuscularly; if it is below 160 mm. but above 140 mm., 0.5 c.c. is to be administered. Repeated doses of 0.25 to 0.5 c.c. are not harmful if the fits persist. 1 c.c. of veratrone causes a sharp fall in blood-pressure and considerable slowing of the pulse. Sometimes collapse also follows. In such cases, injection of camphor-in-oil, subcutaneous saline, or glucose-saline per rectum should be resorted to.

(6) If the patient is conscious, she should drink water freely. If coma lasts for more than 12 hours, the propriety of intravenous glucose (5 per cent in normal saline) should be considered.

Obstetrical Treatment.—On the question of obstetrical treatment, very divergent views are held. There are some who advocate *radical treatment*, namely, the emptying of the uterus as quickly as possible. They hold that the foetus is the exciting factor, and that emptying of the uterus will result in recovery of the patient; and they advise the expulsion of the foetus by the operative method, viz., abdominal or vaginal Cæsarian section. But many obstetricians consider that *conservative treatment* only is needed, and that operative interference is not only unnecessary but even harmful. The general trend of thought at the present day is in favour of conservative treatment.

If the attack is mild or only moderately severe, and labour has not set in, with conservative treatment the convulsions cease in a short time, the patient remaining in a semi-torpid condition; as the condition improves she becomes brighter and more alert, there is no return of convulsions, the blood pressure falls and the albuminuria diminishes; some days or weeks later, labour sets in, and a living or dead child is delivered. But, in many cases, the improvement is only temporary, and after a few days the blood pressure begins to rise, the albuminuria to increase, and the general condition to become less satisfactory. In such circumstances, labour is to be induced by means of a large sized bougie inserted into the uterus. If the patient is seen in labour, as soon as the cervix is fully or nearly fully dilated, the second stage should be terminated (by forceps, if the head is fixed, or by

version, if otherwise). Unfortunately, in the more severe cases, irrespective of whether the patient is in labour or not, the course of events is not always satisfactory, and in spite of treatment the convulsions become more frequent, the coma deepens, and the general condition becomes very bad. In such cases, when the cervix shows no dilatation, Cæsarian section under local or spinal anaesthesia may be the procedure of choice. Of course, such interference should be employed only in exceptional circumstances.

For a long time *venesection* has had considerable vogue in the treatment of eclampsia. I have not had recourse to it in my practice, and I feel that our women of South India may not stand it. However, I let them bleed after delivery, as it is helpful in reducing blood pressure.

THE ENDOCRINE GLANDS AND THE TEETH

DR. C. SITARAM

Assistant, Dental Department, General Hospital, Madras.

Various manifestations may be found in the teeth which are unquestionably related to disturbed endocrine function.

The Thyroid.—Deficiency of the thyroid secretion may be present at birth. Clinically, these children are recognised as cretins. Among other characteristics, there is delayed eruption of the teeth, a tendency toward microdentia and the persistence of the deciduous teeth upto or beyond the age of puberty. Enamel defects, dental caries and structural defects are common, as are also anomalies of the jaws, malformations, and mal-alignment. In the adult, thyroid deficiency results in a condition known as myxoedema, which is characterized by the rapid development of dental caries. The teeth become loosened and fall out. The mucous membrane of the mouth is thickened and the tongue becomes enlarged, grooves appearing on its borders, due to the pressure of the teeth.

The Pituitary Gland. In children, hypopituitarism causes retardation of dentition, microdentia, persistence of deciduous teeth and narrowing of the mandible with a crowded arrangement or superposition of the teeth.

Hyperpituitarism. This is characterised by large, strong and widely spaced teeth. Before complete ossification of the bones occurs this affection leads to gigantism. After complete ossification of the bones it leads to acromegaly. In acromegaly, there is a marked increase in the size of the superior and inferior maxillary bones, especially the latter, widening of the alveolar bones and widely spaced teeth. The tongue may become enlarged.

The Thymus.—Persistence of the thymus is associated with the condition known as status lymphaticus. According to Timme, the skin in these cases is of soft texture, and the growth of the hair on the face is scanty. The teeth are bluish-white in colour. They lack uniformity in size and development. The central incisors are larger than normal, the laterals small and under-developed, and the canines show a lack of their normal fang-like character.

GLEANINGS FROM MEDICAL LITERATURE

9 SPINAL ANAESTHESIA IN THE TREATMENT OF MEGACOLON AND OBSTINATE CONSTIPATION

S. J. STABINS, J. J. MORTON, and W. J. M. SCOTT

The American Journal of Surgery, Vol. XXVII, January, 1935, p. 107.

Prior to 1927, the conservative treatment of idiopathic megacolon consisted of diet, catharsis, and repeated enemas, while surgical procedures varied from colostomy to partial or complete colectomy. The results in all cases were poor.

A true definition of idiopathic megacolon infers dilatation and hypertrophy of the colon without any obvious mechanical obstruction inside and outside the bowels, so that the numerous theories which were from time to time held inferring some mechanical obstruction are outside the scope of a discussion of idiopathic megacolon.

Although, as long ago as 1895, it was shown that stimulation of the lumbar sympathetic ganglia caused an inhibition of peristalsis with dilatation of the colon and contraction of the sphincter ani internus, it was not until 1926 that idiopathic megacolon was treated by lumbar sympathectomy. The next step in the treatment of the disease was the introduction of spinal analgesia as a preoperative test to determine whether sympathectomy would be of benefit. There is good clinical evidence to conclude that when spinal analgesia shows a positive motor response, the results of sympathectomy are very satisfactory. Besides, at least in certain cases, the temporary interruption of the sympathetic reflex arc is followed by sufficient improvement in the motor activity of the bowels to overcome the achalasia so that spinal anaesthesia may alone be sufficient to affect beneficially the course of the disease. This benefit has continued to the point of practically complete relief of symptoms in some cases.

Spinal anaesthesia thus not only demonstrates sympathetic overactivity, being a useful index of the type of case in which benefit may be confidently predicted by lumbar sympathectomy, but is also a useful conservative therapeutic measure by itself. The repetition of the spinal anaesthetic for its therapeutic effect would appear to be desirable in certain instances, though it was not found necessary in reported cases.

M. K.

10 RECURRENCES FOLLOWING INGUINAL HERNIOPLASTIES

ALFRED H. JASON

The American Journal of Surgery, Vol. XXVII, February 1925, p. 268.

An anatomical defect can be said to have *recurred* only when the condition repaired returns in its pre-operative state. Most of the so-called recurrences of inguinal herniae after hernioplasty are really post-operative incisional herniae of one form or another and as such not true recurrences at all, the term "recurrence" being a misnomer.

There is, and can be, only one cause for the return of a sac through the *deep ring* after a hernioplasty. This is failure to remove the entire sac, due to too low a ligation of the

peritoneal pouch, and in the absence of a contributory anatomical defect such as weak musculature, high ligation of the sac would alone be quite sufficient to prevent recurrence. Regarding infection in a hernioplasty wound, a study of 50 cases of indirect inguinal hernia do not show a single case of return of the peritoneal sac, which alone constitutes a true recurrence.

The first and most important cause of post-operative incisional hernia is poor musculature. The weak tissues cannot stand the operative insult and as a result the new fibrous tissue stretches and yields readily. At re-operation a large defect occupying the entire inguinal region is found and any suggestion of a sac is merely part of an inguinal prolapse. Another type of weakness is due to a constriction or division of the ilio-hypogastric and ilio-inguinal nerves. According to McGregor, the deep ring with its sphincter is permanently weakened by section of these motor nerves. A deep suture placed laterally to the deep abdominal ring is practically certain to transect these nerves, thereby weakening the internal oblique and transversalis muscles. At re-operation, the peritoneal protrusion is lateral to the deep epigastric vessels.

It is well known that when inguinal herniae return, they do so as a rule within a month after operation; in fact, the condition is somewhat in evidence even at discharge from hospital. This would appear to be further proof that the condition we are dealing with is an *incisional hernia*, as it is inconceivable that a sac could return in so short a space of time to produce a true recurrence.

The fact is stressed that it is necessary to differentiate between true and false recurrence; of 50 cases of so-called recurrences reviewed, only 6 were true recurrences, and in these after second operation no return of the previous condition was noticed. In contrast with true recurrences, the incisional herniae occur in an older age-group and in those who are obese and with poor musculature, and in these re-operation usually yields another so-called recurrence.

Recurrences can be recognised as a rule within 40 days after operation.

M. K.

11 CHRONIC INTERMITTENT DUODENAL STASIS

J. FRIEDENWALD AND M. FELDMAN.

American Journal of Roentgenology and Radium Therapy, August 1938.

This condition may be due to (1) arterio-mesenteric compression of the duodenum with visceroptosis; (2) movable tumours or masses producing pressure also spinal deformity, movable growths or pressure from ptosed kidney or calcified glands; (3) adhesions and congenital bands or reflex disturbances of the duodenum from lesions elsewhere in the gastrointestinal tract; (4) stretching and sagging of the duodenum due to overloading; (5) dysfunction of the neuro-muscular mechanism of the duodenum.

The greatest incidence of this condition is in middle life and in females. The symptoms are not always characteristic, especially in the mild form. Frequently, however, periodic bilious attacks occur, with nausea and vomiting, intermittently over many years, often from childhood. Nervous strain tends to induce attacks. The onset is often produced by constipation and headaches. Diarrhoea may alternate with constipation. Change in posture may relieve the pain. Loss of weight and strength, associated with extreme exhaustion as well as mental depression

and neurasthenic symptoms may occur. During an attack, epigastric distress, fullness, eructations of gas, and epigastric pain usually occur. Occasionally, pain may extend to the gall-bladder region, and the liver may enlarge.

Roentgenologically, duodenal stasis is most satisfactorily demonstrated in the upright posture. In the mild cases, demonstration of the disease may be very difficult. Between attacks, no stasis is seen. A rapidly emptying stomach, by distending the duodenum, may simulate the condition. To eliminate this condition, the duodenum must be examined at intervals over a period of at least 30 minutes. In well-marked cases, a six-hour gastric and duodenal retention may be present. Regurgitation into the duodenal bulb may occur. The bulb may be elongated, dilated, and present a delay in the expulsion of the contrast substance. In most of the cases observed, the stasis occurred in the second portion.

Treatment is medical in most cases. The visceroptosis is treated in the usual fashion and the diet is bland, but so planned as to produce gain in weight. Bed treatment is necessary in severe cases. Surgery is employed as a last resort—either a duodeno-jejunosomy or a division of constricting bands.

K. R. C. H.

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BRONCHOGRAPHY

A. BENTEL

Röntgenpraxis, March 1934.

The author says that 40 per cent iodipin (Merck) or lipiodol (Lafay) is used for bronchography. If an idiosyncrasy against iodine exists, a bromide-oil mixture may be used. Transglottic injection is the best and simplest method. In more than 500 bronchographies done by the author there has been no complication except occasionally a slight rise in temperature. The trachea may also be investigated by this method.

Bronchiectases are the most frequent indications for bronchography. Its importance from a diagnostic standpoint in these conditions is that bronchiectases which are not visible in flat films may be shown by this method. Exact localization and determination of the extent of the bronchiectases may be made only by this method, when clinical examination, because of haemoptysis, is negative. In other cases the clinical diagnosis may be bronchiectasis, but a bronchography shows no evidence of that disease and the diagnosis must then be putrid bronchitis. Cylindrical bronchiectasis shows the picture of a tree without leaves, because there is no alveolar filling. Club-like bronchiectases are much like the saccular type. These are either completely filled or may show a fluid level. Large bronchiectatic cavities may be single or multiple, and are often hidden behind the liver or heart in flat films. In bronchiectases, as in large cavities, a lipiodol filling may occasionally not take place when the bronchus is occluded by secretion, blood, etc.

Bronchography is of comparatively small value for the diagnosis of abscess cavities; here plain roentgenograms are usually sufficient.

For the exact localisation of fistulae, the injection of contrast material is of great value, but one must remember that non-filling does not mean non-existence of a fistulous track. Oesophageal bronchial fistulae are usually discovered by giving a barium meal; next in frequency are bronchopleural fistulae.

Extrabronchial expansive processes may compress or displace parts of bronchus and bronchograms are occasionally of diagnostic help.

Intrabronchial tumours may show no changes in flat chest films. A bronchogram often allows an easy diagnosis.

PRIMARY CARCINOMA OF THE LIVER WITH HYPOGLYCAEMIA

K. R. C. H.

DANIEL N. BEERS and JOHN J. MORTON

The American Journal of Cancer, XLIV, May 1935, p. 51.

The association of hypoglycaemia with primary carcinoma of the liver is exceedingly rare. Of over six hundred cases of primary carcinoma of liver reported in the literature only two were associated with hypoglycaemia. In one of these, reported by NADLER and WOLFE, attacks similar to insulin shock were frequent, and hourly feedings of 18 gm. glucose in addition to a basic diet furnishing 440 gm. of carbohydrate were necessary to keep the patient alive. The blood sugar averaged less than 50mgm. per cent. Post-mortem, a tumour replacing more than 70 per cent of liver substance was found. The pancreas showed no changes. In the second case reported by CRAWFORD, episodes similar to insulin shock were frequent and were relieved only by administration of 1700 to 2200gm. of glucose daily. The blood sugar was uniformly below 50mgm. per cent. Post-mortem, a medullary carcinoma of liver, replacing about 70 per cent of the organ was found. The pancreas appeared normal.

A third case, observed by the authors, is now reported. The patient was a sixty five years old male, who complained of weakness, dizziness and faintness associated with a peculiar numbness in the hands and feet on walking. These symptoms were invariably relieved by food, but recurred in a few hours. He was seen in hospital in a comatose state, breathing irregularly, pulse regular, rapid; blood pressure, 160 mm. systolic, 80 mm. diastolic, and he was sweating profusely. Blood sugar was 31 mgm. per cent. Following intravenous administration of 50 gm. of glucose the patient became alert and rational. Subsequent observations showed that the blood sugar values ranged from 10 to 50 mgm. per cent, the haemoglobin was 16.4 gm. the urine was sugar free. In the hospital there was a progressive tendency for the hypoglycaemic syncope to occur, and it was necessary to give drinks containing 40 gm. of glucose every hour in addition to a diet furnishing 250 gm. of available carbohydrate. Occasionally, intravenous administration of glucose had to be restored to. The liver was large and nodular, and a biopsy revealed a primary liver-cell carcinoma. Death took place seven weeks after admission from terminal broncho-pneumonia. Post-mortem, 75 per cent of the liver substance was found to be replaced by carcinomatous tissue. The pancreas showed no pathologic change.

These cases show that a low blood sugar may be determined not only by hyperinsulinism (over-production of insulin) as occurring in carcinoma of the islets of Langerhans, but also by extensive damage of liver tissue which produces derangement of the glycogen storage mechanism. Mention is found in the literature of toxic states, acute yellow atrophy, and fatty metamorphoses of the liver causing symptoms similar to insulin shock.

K. C. P.

OBSERVATIONS ON SURGICAL URAEMIA

H. L. ATTWATER

The British Medical Journal, March 33, 1935, p. 642.

Surgical uraemia may be defined as the condition which supervenes when there is disease or functional derangement of the urinary tract and a failure to excrete the toxins present in the blood and tissues of the patient. It arises from two causes: (1) mechanical obstruction, most frequently seen in the peripheral passages, as in prostatic cases, and (2) septic changes involving the kidney and injuring its functions. The observations noted here refer only to the condition arising from obstruction.

The toxins that accumulate in the blood and tissues in cases of urinary obstruction have not been definitely identified. In general terms it may be stated that they are metabolic waste products. The uraemic condition develops when these waste products reach a certain level in the various tissues of the body. The following facts are noteworthy: (1) Cases with high blood nitrogen and no symptoms of uraemia are common; (2) A persistent high blood nitrogen ultimately leads to uraemic manifestations; (3) After the removal of the obstruction the blood nitrogen does not always show an immediate fall, but only a gradual one. It is to be surmised that there is a latent period between the rise of nitrogenous waste products in the blood and the onset of uraemia, and also a period of high blood nitrogen after the removal of the causative obstruction, which is presumably needed for the removal of the accumulated waste products in the tissues.

Structural damage to the kidneys is absent in these cases, except when sepsis is present. The glomeruli and tubules retain their normal appearances. Even in the septic cases the changes are only those due to the presence of the septic process. There is no alteration in the kidneys to account for the state of uraemia.

Clinical Picture.—In complete calculous anuria, which is relatively symptomless, the patient remains in a comparatively quiet state, is mentally alert, is nauseated, vomits from time to time, tends to be rather drowsy, and has a dull-headache; there is little else for a week or ten days, and then coma sets in rapidly and death ensues.

The usual type of surgical uraemia occurs mostly in male patients of prostatic age who have some urinary obstruction. Such a patient ordinarily comes under observation only when increased frequency of micturition, dysuria, or an attack of retention drives him to seek medical relief. His mental condition by then will have become unstable; any upset, even the use of the catheter, may throw him into a state of mild mental confusion. It will be found that for some time he has been losing weight and strength, and growing restless in his habits. Irritability, lack of appetite, and mental apathy may also have been present. On examination, he is seen to have a yellowish, unhealthy appearance; the pulse is elevated, 80 to 60 per min., the tongue is dry and dirty; and the daily output of urine is 20 to 30 ounces. The urea concentration is below 1 per cent, and the blood urea 90 to 100 mgm. per cent or more. Delirium, convulsions, and deep coma are absent. Unusual symptoms arise only in the presence of sepsis or other simultaneous lesions.

The clinical picture of surgical uraemia is less complex than that of the uraemia arising in cases of intrinsic disease of the kidneys. There are fewer symptoms, and those that are present are usually milder. It is as if the "excretory tap" is simply turned off, absolutely or partially, permanently or temporarily. When it is absolutely and permanently turned off the outcome is bound to be disastrous; when it is only partially or temporarily turned off, a favourable prognosis can be expected, but the outcome depends on the amount of destruction of renal tissue that has occurred.

The object of treatment is to reverse the "excretory tap" which has been turned off. This is achieved by:

(1) Adequate drainage: In many cases an indwelling catheter for some days will suffice; if not, a suprapubic fistula must be provided.

(2) Forced intake of fluid: Two or three quarts of water, preferably of the diuretic type, should be given during the twenty-four hours. The patient should be kept on a light diet and given alkalis to help in reestablishing diuresis. If, for any reason, suprapubic drainage is insufficient a nephrostomy may have to be done.

Surgical uraemia of the type described here appears to result from a retardation of function of the kidneys. This retardation of renal function has been thought to be due to (1) "back pressure", (2) the direct action on the kidneys of toxic products absorbed from the bladder in which urine is stagnant and decomposing, and (3) reflex inhibition by way of the sympathetic nervous system. It seems likely that the last one is the factor primarily and chiefly concerned in bringing about the abeyance of renal function. For, in these cases resumption of functional activity by the kidneys on adequate treatment is often strikingly complete, and this could happen only in the absence of structural damage to the renal cells. Inhibition of function with absence of structural changes is inconsistent with the operation of either of the first two factors, but is quite consistent with the operation of the last.

K. C. P.

JOURNAL OF SOUTH INDIAN MEDICINE

SEPTEMBER, 1935

STUNT AND STAMPEDE

We have more than once criticized the curious ways of the Local Government in regard to retrenchment in the medical department. During the financial stringency of a few years ago some serious efforts were made to economize. And a helpful head of the administration found that his hands were tied by certain unreasonable methods adopted in the previous years in the matter of creating superior and higher paid appointments and in the method of filling them with some very junior officers. As a result, some very reasonable proposals of retrenchment had to be given up and the hasty step of turning out a number of junior assistants in the department was adopted. The authorities soon realized the unfairness of this procedure, and after repeated representation have agreed to take these assistants back into the service. But all of them could not be absorbed immediately. In searching for means to reappoint them, the brilliant idea has dawned on the authorities that the best way out would be to create new appointments; not because these appointments are essential, but because this is the easiest way and one that is very much loved by the bureaucracy.

And now the Vizagapatam Medical College has come in handy. It is rumoured that the Inspectors appointed by the Indian Medical Council have reported adversely on the efficiency of that institution. Among other things the smallness of the staff (numerically) has come in for criticism. The opportunity is evidently too good to be missed, and the air is thick with rumours that proposals have gone up to the Government that it is urgently essential to increase the staff of the College by appointing some more civil surgeons and a number of assistants.

We would like to know whether the authorities have explored other means of rectifying these defects. On rearranging the staff of some of the hospitals, will it not be found, especially where there are honorary medical officers, that a few of the paid officers are really unnecessary in these institutions? Can not the service of the honorary staff be indented on to a greater

extent in these hospitals so as to reduce the number of paid appointments. There are in some of the hospitals in the city and outside a number of young men and women who are enthusiastic in helping in the work of these institutions. Is it impossible to release a few of the paid men from these hospitals to take over the duties in places which are said to be under-staffed?

It was the opinion of the last Committee that was constituted to consider the possibilities of expansion of the honorary system that certain appointments in the Madras Medical College and Royapuram (Stanley) Medical School could be filled by honorary officers attached to the Government General Hospital and the Government Royapuram Hospital instead of by paid officers as obtaining at present. No effect has till now been made to give effect to this proposal, though it was made nearly two years ago. Substitution of paid medical staff by honorary medical officers where suitable men are available has repeatedly been urged by us, and is certainly the best means of ensuring economy in the administration of medical relief. And we fail to understand the unwillingness of the authorities to accept the proposal. If it were given effect to, the needs of the Vizagapatam Medical College and other institutions for additional medical staff will be amply met without adding to the burden of the taxpayer. To recruit more officers to the paid service when other means are available to fill new appointments that have to be made is not sound policy.

MEDICAL PERIODICALS

THE INDIAN MEDICAL GAZETTE

VOL. LXX, NO. 8, AUGUST, 1935.

A Record of five years' Antenatal and Infant Welfare work on estates in Malaya, J. G. Reed, p. 421.

Endemic malaria, even of moderate intensity, plays a very large part in foetal mortality and maternal morbidity and, less directly, in neo-natal mortality.

Maternal mortality is high, being largely due to intercurrent disease, but considerable success has been met with in the prevention of the anaemia so often met with in pregnant women of the class under consideration (Tamil coolies).

The abortion rate compares well with that of western countries, and a still-birth rate of 5.1 per 100 live births is a satisfactory figure for an eastern country. Malaria and anaemia are the most common causes of abortion, and syphilis is of importance in the causation of abortions as well as of still-births, and neo-natal deaths that can be attributed to complications of labour, toxæmias of pregnancy and antepartum haemorrhage is low while neo-natal states bulk large in this respect.

Infant mortality is responsible for the large proportion of 41 per cent of the general mortality while neo-natal mortality accounts for no less than 56.8 per cent of infant mortality. The average weight of new-born infants is low, being 5.3 pounds, and although it is difficult to prove statistically, there is much evidence to suggest that malnutrition of the mother is responsible for a large proportion of foetal and neo-natal mortality.

Ante-natal influences are seen to have a large effect on infant mortality and many findings point to the great importance of care of the mother during pregnancy and labour.

Nutrition.—One cannot escape the impression that malnutrition of the mother is the underlying factor in many cases of premature birth and foetal and neo-natal death. The Tamil dietary is deficient in vitamin A, in fat and in animal protein. Xerosis, nyctalopia and pyorrhoea are all found not uncommonly, though it cannot be said that they are specially common among pregnant women.

The strain of the later months of pregnancy seems to render the mother highly susceptible and more vulnerable to common tropical diseases such as malaria and amoebic dysentery, which often become manifest shortly before or after delivery. Malnutrition also appears to play a large part in the causation of anaemia and oedema. True beri-beri is almost unknown among these women, but oedema is very common with any debilitating disease such as malaria or amoebic dysentery. It may occur in the absence of such diseases and may or may not be associated with anaemia. Oedema of the vulva and deeper tissues favours difficult labour, perineal tears and local sepsis. The treatment of oedema may prove very difficult. The dividing line between oedema of nutritional origin and that of nephritic or toxæmic origin does not appear be clearly defined. Cases have been observed of oedema without albuminuria in the later months of pregnancy, in which albuminuria appeared for the first time during or shortly after labour. Treatment of the underlying disease, if any, combined with the administration of alkalis and attention to diet and nutrition helps these cases but is not always entirely satisfactory.

Investigations on Cerebro-Spinal Fever in Nasirabad (Rajputana) during the period 1931 to 1934, E. A. R. Ardesbir, p. 435.

1. "The disease was checked in a most striking manner immediately on isolation of carriers. 2. It was not introduced repeatedly, as had previously been thought probable, by fresh batches of 'new entries', whose carrier rate was found to be only 1.8 per cent. 3. Though very large numbers of carriers were found among the permanent staff, they suffered least from the disease. 4. The recruits, while showing few carriers, were most affected. Contrary to expectation, new entrants were singularly free from disease. Only one case occurred among approximately 2,000 new recruits that joined the battalion since 1927. 5. When the carrier rate in the general population rose to 14 per cent cases began to occur. 6. Very close relationship is established between occurrence of cases and overcrowding, prevalence of respiratory diseases, winter season, period of training, and the age of the recruit. 7. Humidity of air had no bearing on the production of the disease."

Infective Warts and their Treatment, L. M. Ghosh and P. A. Maplestone, p. 441

"The treatment of 17 cases of infective warts by injection of an emulsion made from wart tissue is recorded.

The method of manufacturing the emulsion is as described below :

Preparation of the autolysate.—The warts are sterilized by the application of alcohol and ether in equal parts. They are then carefully removed so that no normal skin is

included in the portion cut off. A known weight (in this instance 20 mgm.) of wart tissue is ground up in a sterile agate mortar with sterile pumice stone powder until it forms an uniform emulsion when mixed with sterile normal saline solution. The amount of saline used for the above quantity of wart tissue is 20 c. cm.

The mixture is placed in an incubator at 37° C. for 24 hours and is then filtered, first through a Kieselguhr filter and afterwards through a Chamberland candle no. L. 3. under negative pressure.

A quantity of saline containing 0.25 per cent commercial formaldehyde and equal in amount to the filtrate is added to it. The filtrate is now tested for sterility, and if found to be free from bacterial contamination it is ready for use.

Dosage.—The initial injection for adults was 0.2 c. cm. of the filtrate prepared as described above. Subsequent doses were increased each time by 0.2 c. cm. until 1 c. cm. was reached after which no further increase was made. The injections were given subcutaneously twice weekly. As few as six injections effected a cure and twelve was the greatest number given in any case.

Twelve cases of plain warts were treated with remarkably good results, and in five cases of papillomatous warts the same treatment proved quite ineffective."

Venoms in Pharmacology and Therapeutics, R. N. Chopra and J. S. Chowhan, p. 445.

The toxic principles of snake venom reside in albumins which are thermostabile, and a coagulable proteid which is thermolabile. The former, called 'neurotoxin' is found in excess in cobra venom and the latter called 'haemorrhagin', is in excess in viper venom. The viperine venom contains another substance called 'thrombase', which causes intravascular clotting. The following substances are known to enter into the composition of snake venom : fibrin ferments, proteolytic ferments, cytolsin, and neurotoxin.

Neurotoxin has a selective action on nerve tissue, especially in the respiratory and vasomotor centres. It has been noted that the neurotoxin in cobra venom has a special affinity for the respiratory centre and for the neighbouring ganglia of the 9th, 10th, 11th, and 12th cranial nerves, and a curara-like effect on the motor end-plates of the muscles. The krait neurotoxin has a selective action on the anterior horn cells of the cord.

Snake venoms have been from time to time used in therapeutics. The following table gives the indications based on the actions of the known principles in the venoms :—

Active principle	Venom	Action and uses
Neurotoxin	Cobra	Depressant to psychical and medullary centres. Heart stimulant. Paralysis of nerve and plates. Sedative in delirium, hysteria, epilepsy, painful cancer, metastasis, meningitis, asthma, and low blood pressure.
Haemorrhagin	(i) Viper (ii) Crotalus	Fall of blood pressure, intravascular clotting and haemorrhages.
Agglutinin	Cobra	Hyperpiesis, menorrhagia, haemophilia, purpura and epistaxis.
Thrombase	Do	Bleeding piles
Protein desensitizer	Crotalus	Epilepsy, asthma, erysipelas and carbuncles (allergies).
Immunizer	Bee Venom Crotalus	Rheumatism and rabies. Epilepsy.

The following table gives the diseases treated with venoms:—

Name	Venom	Dosage
Cancer : (1) Diagnostic (2) Curative	Cobra	Complement fixation test (Farmachidi's test) : 0.001 mg. intramuscularly every 8 to 10 days (Analgesic).
Epilepsy	Crotalus (Venene)	1.400 to 1.600 gr. up to 1.25 gr. hypodermically weekly. Minim 5 of 1 in 1,000 solution, intragluteally.
Asthma	Crotalus	1.400 gr. up to 1.50 gr. intramuscularly weekly.
Haemophilia	Daboia	1:1,000 solution in minim doses hypodermically.
Bleeding		1:10,000 solution. Local application.
Rheumatism	Bee Venom	Hypodermic injection or as ointment.
Uterine haemorrhages	<i>Ancistrodon piscivorus.</i>	0.2 c.c. (1 to 3,000) intradermically. Twice weekly up to 3 months.

The Question of Marriage in Pulmonary Tuberculosis, Y. G. Shrikhande, p. 456.

"The problem of marriage in tuberculous patients and tuberculosis in married patients is bound up more with social and economic considerations than the mere question of infection from one party to the other. Provided that the usual commonsense

precautions are observed, there appears to be no more risk to the consorts of tuberculous patients than to anybody else in frequent contact with the patient. Nor is there so much danger, as is popularly believed, to the patient from married life provided it is not lived recklessly. Tuberculous patients who contemplate marriage should wait for some time after all symptoms of active mischief in the lungs have ceased. In females, conception should, as far as possible, be avoided at least as long as active lesions are present in the lungs. The danger of infection to the children can be avoided by separating them from their parents immediately after birth (Grancher system), or minimized by the use of B. C. G. (Calmette method).

JOURNAL OF THE INDIAN MEDICAL ASSOCIATION

VOL. IV, NO. 12, AUGUST, 1935.

Investigations on the Prevention of Malaria in Rural Areas, Profulla Kamal Roy, p. 531.

The Centralisation of Welfare work in India, Cedric Dover, p. 541.

Recent Practical Developments in Endocrine Therapy, Henry R. Harrower, p. 546.

The Need for a National Anti-Cancer Campaign in India and the Role of the Radiologist therein, P. Rama Rao, p. 550.

The Anxiety State, Banarsi Das, p. 556.

THE INDIAN MEDICAL JOURNAL

VOL. XXIX, NO. VIII, AUGUST, 1935.

Laboratory Methods of Diagnosis Their Value, Limitations and Clinical Application in General Medical Practice, P. Murugesan, p. 391.

A Review of Blood Slides with Special Reference to Malaria, Md. K. Rahaman, p. 406.

THE CALCUTTA MEDICAL JOURNAL

VOL. XXX, NO. 2, AUGUST, 1935.

Haematological Studies in Indian Women, (Part Three), A Preliminary Report on Determination of the Differential Leucocyte Count in Eighty-six Normal Bengali Women, Jyoti Dhar, p. 65.

"1. The normal differential leucocyte count in eighty-six healthy, young Indian (Bengali) women, between the ages of sixteen and thirty-five years, is presented to furnish accurate data (numerical and in per cent) for the calculation of normal base line

of the blood-picture in them. The primary data of this investigation of the normal haematology in Indian women, which is the first of its kind in this country, is included in the body of the paper. The more recent and important literature on the subject has been very briefly reviewed. 2. The method of reporting differential leucocyte count in absolute numbers, in addition to the percentages, is a unique feature of this paper; in as much as, this method is for the first time presented in India. 3. In terms of absolute numbers, the average neutrophil count is 3,679 per c. mm.; the range being 1,625 (lowest) to 9,994 (highest) per c. mm. of blood. The average lymphocyte count is 1,674 per c. m. of blood; the range being 652 (lowest) to 4,050 (highest) per c. mm. of blood; The average monocyte count is 79.84 per c. mm. of blood; the range being 31 (lowest) to 300 (highest) per c. mm. of blood. The average eosinophile count is 170 per c. mm. of blood; the range being 31 (lowest) to 656 (highest) per c. mm. of blood. The average basophil count is 5.94 per c. mm. of blood; the range being 31 (lowest) to 137 (highest) per c. mm. of blood. 4. In terms of per cent of leucocytes, the average neutrophil count is 64.84 per cent; the range being 46 per cent (lowest) to 79 per cent (highest). The average lymphocyte count is 30.29 per cent; the range being 17 per cent (lowest) to 42 per cent (highest). The average monocyte count is 1.5 per cent; the range being 1 per cent (lowest) to 6 per cent (highest). The average eosinophile count is 3.24 per cent; the range being 1 per cent (lowest) to 12 per cent (highest). The average basophil count is 0.13 per cent; the range being 1 per cent (lowest) to 2 per cent (highest).

Papilloedema in Epidemic Dropsy, B. N. Bhaduri, *p.* 91.

Some Observations on Laboratory Examinations H. Ghosh, *p.* 95.

The Significance and Technical Consideration of Routine Cultural Examination. H. Ghosh, *p.* 97.

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ASSOCIATION NOTES

THE TRICHINOPOLY DISTRICT MEDICAL ASSOCIATION

(Registered.)

A monthly meeting of above association was held at 5 p.m. on Saturday the 24th August, '35 at the E. R. High School, Teppakulam, Trichinopoly, when about 45 members were present. Capt. Sangham Lal, F.R.C.S., I.M.S., District Medical Officer, Trichinopoly, presided and Dr. M. Ramaswamy Pillay of Kattuputhoor was 'At Home' to the members.

Dr. Sambasivan, M.B.B.S., demonstrated a case of congenital systolic murmur in a boy aged 12 which was originally demonstrated before the Association three years back when there was failure of compensation. The point of interest in the case is that in spite of the valvular lesion and failure of compensation previously, the boy is healthy and well developed. He next demonstrated an interesting and rare case of streptothrix of the lungs. The case simulated one of 'T. P.' but the absence of temperature and the sputum under microscope decided the diagnosis.

Capt. Sangham Lal gave notes of an operation he did a few days back for strangulated hernia. The strangulation got relieved before the patient was brought to the theatre, and on opening the sac bloody effusion was found. Though there was no acute abdominal symptoms an exploratory laparotomy was done when blood coloured serous fluid was found in the peritoneum and about 3 feet of small intestine was found to be kinked. The kink was set right and the abdomen closed.

Dr. R. Sambasivan read an interesting paper on 'HYPOVITAMINOSIS' and explained how minor deficiencies of various vitamins caused various ailments. He enumerated the different foods with different vitamins. There was an interesting discussion following the paper in which many members took part.

With a vote of thanks proposed by the Secretary to the Host, the Lecturer and others the meeting terminated at a late hour.

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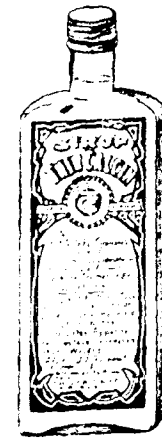
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XV

The monthly meeting of the Association took place this time at Ramachandrapuram on 24-8-35. Captain J. S. McMillan, I.M.S. presided. The Ramachandrapuram group of members were *at home* to the Association. 38 members from all over the District attended. Dr. T. Kanakaraju of Ramachandrapuram read a paper on "Tonsillectomy". Dr. T. Chelapathyrao of Ramachandrapuram read a paper of "Infant's Food including Patent foods". Dr. C. V. Subbarao read a paper on "Approach to the Bed side". Dr. V. C. Kamaraju of Cocanada read some case-notes of some interesting cases of "Acute Gastro-Enteritis in Children", and said that in his experience the sodium sulphate toxin elimination treatment, combating dehydration and acidosis with bicarbonate of Soda and Saline, by mouth if early, and intraperitoneally if late, on a rigid starvation diet and subsequent and correct dietetic treatment gave most encouraging results in the treatment of bacillary dysentery in children.

After an enjoyable dinner the guests dispersed.

Under the auspices of the Tinnevely District Medical Association a Health Exhibition was arranged at the Municipal Office, Palamcottah, on Saturday, the 14th August, 1935.

Lieut-Col. T. S. Shastry, I.M.S., the president, welcomed the guests and requested Mrs. D. D. Warren, the President of the Local Red Cross Society, to open the Exhibition. The Exhibition was thrown open by Mrs. Warren at 9 a. m. and she expressed in a short speech that such exhibitions are very useful and beneficial to the masses. Dr. R. Rama Ayyar, M.B.B.S., of Tinnevely Town gave an interesting lecture on the prevention

and causation of Tuberculosis, Leprosy and Cholera. The Exhibition was thrown open to the public till the evening. School teachers of the two Municipalities of Palamcottah and Tinnevely gathered, and lectures were given to them on all the infectious diseases. In the evening the Exhibition was open only to the women, and Dr. R. Jesubatham, L.M.P., gave an interesting lecture in Tamil explaining all the posters.

THE TINNEVELLY DISTRICT MEDICAL ASSOCIATION. PALAMCOTTAH.

The President's Function of the Tinnevely District Medical Association was held at its monthly meeting on Sunday the 25th August, 1935, at the Masonic lodge, Palamcottah. Members numbering 85 including some lady doctors gathered from all parts of the District. Some of the officials and non-officials graced the function. Lieut. Col. T. S. Shastry, L.M.S., the President, was "At Home" to the members and the non-medical guests. An enjoyable dinner was served to all present at 11.30 a.m. After dinner the guests were entertained to sweet music. M. R. Ry. S. Lakshmana Iyer, Head Clerk, District Medical Officer's Office, Palamcottah, who retired on 16-8-35, was presented with a silver plate and vessels by the District Medical Staff for his devoted service for 28 years.

Lieut. Col. T. S. Shastry, L.M.S., thanked the guests for their kind response to his invitation. He made an appeal to the audience to take keen interest in the welfare of the patients by giving free gifts to the hospital such as gramophone records, providing funds for the installation of a Radio Station and for equipping the hospital with pathology, X-ray, and Radium Institutes so as to make the Head Quarters Hospital an efficient and modern institution. M. R. Ry. Sadu Ganapathi Pantulu Garu, B.A., B.L., a leading Advocate of the place responded on behalf of the guests and thanked Colonel Shastry for his invitation and appreciated his keen interest in trying to alleviate the sufferings of humanity and to improve in many ways the efficiency of the Medical Profession in this District.

The business proper of the meeting began at 2.30 p.m. under the Presidentship of Lieut. Col. T. S. Shastry, L.M.S. The minutes of the last meeting were read and passed. Dr. J. T. Moses, L.M.P., showed an interesting case of a swelling in the abdomen. Dr. G. S. Narayana Iyer, L.M.P., of Moolaikaraipatti showed an interesting case of penile fistula. Interesting case notes on (1) "Hanging" urethra in a female, (2) a tumour



1. A female patient aged about 40 complained of hot flushes, insomnia, irritability and globus major for the last three years. Menstrual intervals were very irregular and the flow was very scanty. There was profound muscular weakness and general vasomotor instability. The patient looked markedly ill. Insomnia and irritability increased to such an extent that no real rest was possible for her. Due to these symptoms I prescribed along with Ovaro-Pituitary opocrins (A. F. D.), Elixir Bromo-Valerianate, because the latter would effectively conduce to her improvement in the mental balance, while the former would supply the deficient secretions. Six opocrins per day and one table-spoonful of the elixir after food twice a day was continued for a fortnight. The improvement in her condition was quite perceptible after this period. She slept well every night, her vasomotor symptoms were relieved, muscular strength improved and her irritability completely vanished. Her mental balance was restored and she was feeling her former self once more. The menstrual flow increased in quantity and was quite regular. After a month of this treatment she was completely all right. She was then given a two weeks' rest after which the treatment was again started. She is maintaining improvement in her condition very well with this line of treatment.

2. A young girl of 20 came to me complaining of severe dysmenorrhoea associated with scanty irregular menses. The pain usually commenced one or two days before the period and lasted for three to five days. The pain was very acute and lasted for a long time during the periods on account of which she had very little sleep. Due to all this she was in a particular state of nervousness which worried her most. So intense was the pain that she at times got nausea accompanied by vomiting of food or bilious matter. At the same time she experienced flushes of heat. She was prescribed Ovaro-Pituitary opocrins (A.F.D.) six of which she took every day. Along with this she was also recommended Elixir Bromo-Valerianate, one table-spoonful of which she took twice daily after meals. This combined regime was continued for six months, the dosage of the opocrins being increased to eight two days before and two days after the period. The pain gradually subsided until after two months of this treatment it vanished altogether. She was having a more and more comfortable time at each successive monthly period. After six months of this treatment, which she took regularly with a week's rest now and then, there was complete absence of the flushes of heat and there was not the slightest sign of nausea or vomiting. The state of nervousness had completely disappeared and the flow at each period was normal and absolutely painless. At the end of six months the treatment was discontinued and she had regular menstrual periods without any pain and unaccompanied by any sign of nervousness.

From the Diary of a Medical Practitioner.

ADVT.

JOURNAL OF SOUTH INDIAN MEDICINE

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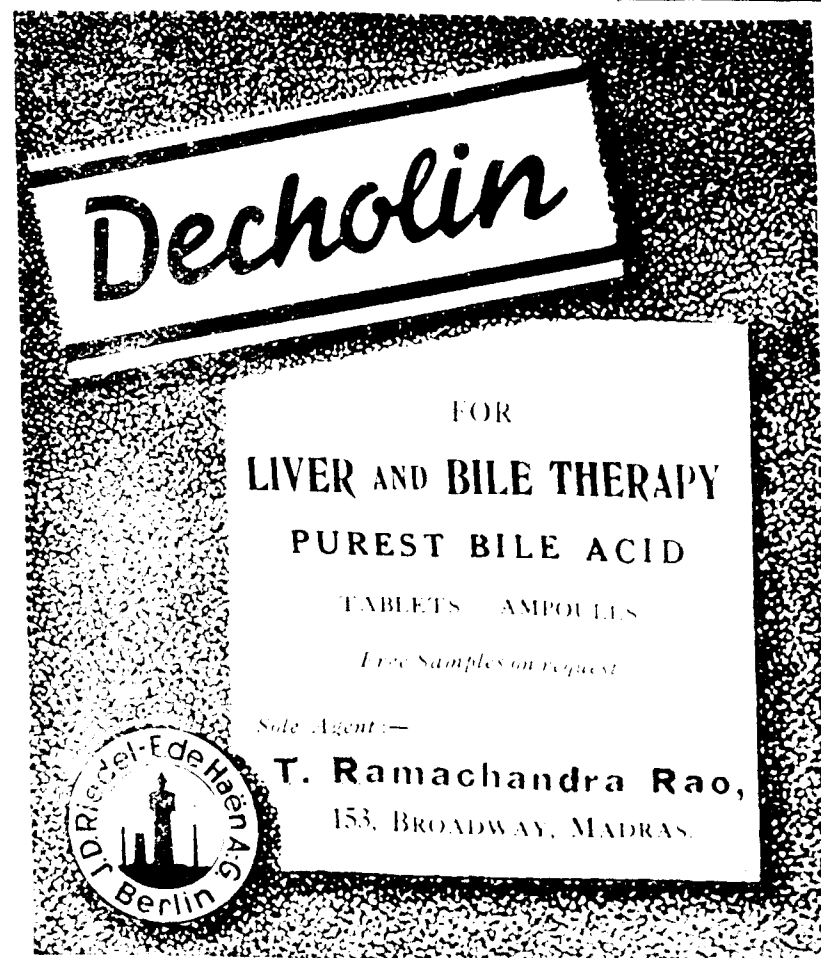
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on the posterior aspect of the urethral meatus in a woman, (3) thickened humerus due to syphilis, (4) massive cancer of the bladder, and (5) polypus in the rectum, were read. There was a lively discussion on these cases. Dr. K. Padmanabha Iyer of Tenkasi read an interesting paper on "Nature Cure".

After the discussion Lieut. Col. T. S. Shastry summed up the salient and important features of all the cases.

At 5 p. m. tea was served to the members. Lieut. Col. T. S. Shastry brought the meeting to a close by offering his cordial thanks to all those who helped him for the success of this function.

NOTICE

THE SOUTH INDIAN MEDICAL UNION

CLINICAL MEETINGS

SESSION 1935-36.

Members of the South Indian Medical Union and others desirous of reading papers at the Clinical meetings of the Union during 1935-36 are requested to send their names with the title of the paper they wish to read, to the Secretary, The South Indian Medical Union, Egmore, Madras.

K. C. PAUL,
P. RAMA RAU,
Secretaries

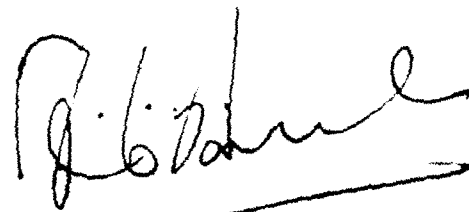
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