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EDITED BY
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AND
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CONTENTS

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INDEX TO ADVERTISEMENTS—SEE PAGE 52

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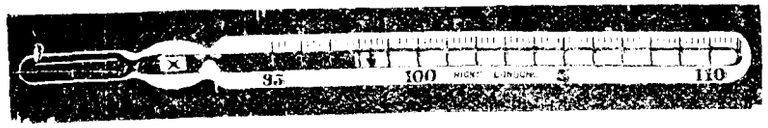

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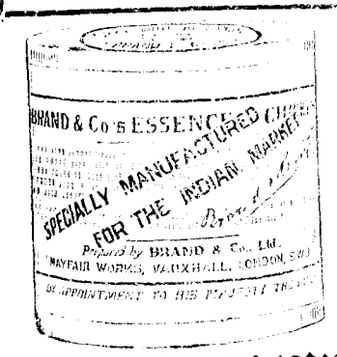

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ORIGINAL ARTICLES.

*THE POSSIBILITIES AND LIMITATIONS OF ARTIFICIAL PNEUMO-THORAX THERAPY AND THE CHOICE OF CASES FOR THE TREATMENT

BY

DR. M. KESAVA PAI, M.D., MADRAS.

The main principle on which collapse therapy in pulmonary tuberculosis is based is the enforced rest which the diseased lung is given, enabling it to undergo the natural process of fibrosis and repair in the minimum of time without the disturbing influence of respiratory movements. As an immediate result of the collapse there is a stoppage, more or less complete, of the absorption of toxic products from the cavities and the bronchial tubes which eject their contents during the shrinking of the lung. The tuberculous foci at the same time become limited and metastatis and extension of the infection in the affected lung is prevented by a mechanical obstruction of the lymphatics and blood vessels of the lung. When it is realised that the lung expands and contracts over 25,000 times in the course of 24 hours it is easy to understand how the stoppage of the pumping action of respiratory movements on the lymphatics and blood vessels leads to a minimizing of the spread of the infection from the affected foci.

It is now admitted that tuberculous infection takes place in the vast majority of cases in infancy and the first deposit of tubercle usually takes place in the hilus glands. The infection thereafter spreads by way of the lymphatics to other parts of the lung in the ordinary sub-acute and chronic cases, the apices being affected earlier than the other parts of the lung due, most probably as pointed out by Walsh [5, 6, 7] and others to the greater activity of the lungs at the apices and lesser activity

* Specially contributed "to The Antiseptic."

at the bases, which accounts for a corresponding difference in the suction of the infection via the lymphatics from the hilum towards these respective parts of the lungs. This lymphatic metastatis is put an end to by the collapse and enforced rest involved in pneumo-thorax therapy.

On the other hand, it has to be realised that collapse of the lung results in an increase of activity of the collateral lung, with an increase of its vital capacity and corresponding increase in the lymphatic and vascular activity [3]. This necessarily involves greater chances of metastatis in the healthier lung [4] especially when there are some active foci in it. The possibility of lymphatic metastatis across the mediastinum by lymphatic anastomosis from the collapsed to the healthy lung has also to be borne in mind and these factors must, no doubt, account for the failures of a certain percentage of cases subjected to the treatment, especially of such of them as show tuberculous activity in the collateral lung.

The pathology of the lungs in tuberculosis works as it were in a vicious circle. The toxæmia resulting from spreading infection in the affected lung lowers the systemic resistance and leads to spread of the disease in the opposite lung so that once the pathological process in the diseased lung is cut short by collapse, the healthier lung has better chances of undergoing repair due to the increased resistance of the body resulting from the stoppage of toxic absorption from the collapsed lung. It is the common experience of workers in pneumo-thorax therapy to find that repair as a result of the treatment not only commences in the collapsed lung but in the less affected lung as well. It is in this way that collapse of the more affected lung cuts the vicious circle and enables the reparative process to progress in all the foci in the body especially those in the collateral lung. Unless the more diseased lung is collapsed the pathological process progresses in both the lungs and in other parts of the body, spreading foci in their turn tending to an increase in activity and area of the other fresh foci.

The results of pneumo-thorax therapy depend on the nature of the collapse effected. A complete or good pneumo-thorax with few adhesions gives the best results, as it collapses the whole of the diseased lung including the healthy portions of it. A partial collapse will have a similar effect when it is selective *i. e.* when the adhesions have affected the healthier

parts of the lung, allowing the diseased foci only to collapse. Such cases of partial pneumo-thorax giving the most gratifying results are very common, the lung either collapsing antero-posteriorly or in lobes or portions of lobes. The less fortunate cases are those in which adhesions prevent to a greater or less extent the collapse of the diseased lung, allowing the healthy parts only to collapse. Even then, the curtailment of prospective areas of infection and the prevention of metastatis by the suction action of the portions of the healthy lung cuts short the rapid progress of the disease and often leads to a temporary improvement in the general condition of the patient. The most unfortunate cases are, of course, those with general adhesions and those in whom an originally good or partial pneumo-thorax is suddenly followed by an obliterative pleurisy [2] and consequent impossibility to follow up the treatment. Such cases are not uncommon and the obliteration is not easy to foresee or prevent. It is due mostly to a spreading adhesive pleurisy, but occasionally to a rapid absorption of the air in a patient on active exercise. It is one of the most annoying complications which the pneumo-thorax worker has to reckon with, disappointing the patient and thwarting the physician.

The choice of cases for artificial pneumo-thorax treatment is by no means an easy matter. Workers have differed to some extent regarding the standard by which the choice has to be made. Experience alone enables one to make the right selection. Physical examination should never be completely relied upon in making a choice of cases. A skiagram should invariably be taken before adopting this special line of treatment, for the X-ray very often takes us by surprise regarding the extent and nature of lesions. Miliary tubercle in an active condition cannot always be detected by physical examination and involvement of the peri-hilus region can rarely be diagnosed with certainty till the skiagram is actually inspected. I have known of cases where extensive miliary deposit was not diagnosed by physical examination, but detected by radiography. It is therefore absolutely necessary before attempting pneumo-thorax treatment to confirm physical examination by X-rays.

The presence or absence of adhesions is no doubt an important factor to be reckoned with, and the respiratory excursion is a fairly reliable indication of these; but even here, surprises are often in store for the pneumo-thorax worker. The method

of *light* percussion in an intercostal space in the axillary region, I have found, to give a fairly accurate idea of the presence of pleural thickening and adhesion. No case should be rejected as unsuitable on account of pleural adhesions till the needle has been actually introduced and found to fail in getting into a free pleura. Instances of a generally thick pleura giving the usual hazy opacity over the whole side of the chest have sometimes been found to be amenable to a good pneumo-thorax, with the usual gratifying results. Cases absolutely unilateral in the strictest pathological sense are rarely met with. A slight implication of the opposite hilum is the rule in the so-called unilateral cases. This should not be considered as a contra-indication, but acute active soft deposit around the hilum should be a warning that pneumo-thorax should either not be attempted or if adopted should be closely watched by X-ray appearances or fluoroscopy at every stage. Involvement of less than 1/3 of the contra-lateral lung either at the apex or at the base need not necessarily contra-indicate the treatment, and when signs of fibrosis and healing are evident there is every reason why the more diseased lung should be collapsed. Such a procedure, more often than otherwise, conduces to further healing. Implication of even more than one half of the healthier lung, if in the healing stage, can be taken as a suitable condition but advanced fibrosis and extensive implication is usually an indication that compensatory expansion is likely to be difficult. Individual experience and careful watching alone will solve the question in such cases. There is apparently no object in adopting the treatment in bilateral miliary infection in spite of the advocacy by enthusiasts of simultaneous, bilateral, partial pneumo-thorax. I have found in 2 or 3 cases in which I attempted it that the patients' discomfort and toxæmia did not justify the continuance of the treatment. It is possible that a combination of unilateral pneumo-thorax with Sanocrysin treatment will bring a good number of such cases into the region of successful therapy in the near future, especially when one lung is much more affected than the other.

One class of cases where pneumo-thorax treatment is of doubtful value is hilus tuberculosis with or without cavities close to the hilus. This is, of course due, as Bendows has pointed out, to the mechanical cause that the hilus region cannot collapse to any extent in pneumo-thorax. Again, cases with visceral and constitutional complications like

peritonitis, intestinal ulceration, diabetes and cachexia and advanced renal and cardiac disease are unsuitable. Even here, it is more the low condition of the system that is to be considered a hindrance to benefit by the treatment than the complication as such, for cases of early cardiac and renal disease, diabetes, laryngitis etc., with a good systemic condition are amenable to pneumo-thorax treatment. In fact, laryngitis has been known to be benefited by it. In fibroid phthisis where the lung tissue is incapable of contraction and in general pleural adhesions the treatment is naturally inapplicable.

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* MENTAL FACTORS IN THE CAUSATION OF BODILY DISEASE

BY

LT. COL. OWEN BERKELEY HILL, I.M.S., EUROPEAN MENTAL HOSPITAL, RANCHI.

The shrewd clinician who held that it is more important to know what sort of a patient has a disease than what sort of disease a patient has, undoubtedly showed a fore-knowledge of much that recent research has brought to light in respect to the functioning of the human mind. Among such additions to our knowledge is the demonstration of the existence of a psychic system of repressed wish-tendencies. This psychic system has been

* Specially sent for publication in "The Antiseptic."

termed for short, the unconscious. It is of importance to understand that this system is not to be conceived as passive but as functioning actively. Hence, we assume that there exist tendencies in human beings which can effect results without their knowledge of them. The analysis of neurotic symptoms offers most conclusive evidence of this, for analysis discloses mental antecedents of which the patient is wholly unaware but of which the symptoms or obsessive actions are the undoubted effect. Further, analysis of errors of every-day life confirms the conclusions suggested from the study of the neuroses. Abstractly considered, the business of living consists fundamentally of effort, due to the fact that man lives in the face of an environment which offers him resistance.

For each individual there are just two things that matter, his own self and everything else in the world as related to that self. In so far as other things aid or impede the assertion of the self they constitute a reality distinct from the self. Hence, to succeed in the task of living there must be a certain adaptation of the self to the rest of the world. But this is never an easy process. The self has urgent, imperious needs, while the world has stubborn adamantine qualities. It is the clash between these wants of the self and these qualities of the world that the difficulties in life, the innumerable mal-adjustments and mal-adaptations are born. This clash or conflict is evidently fundamental. It is "at the very root and source of life." It is the very stuff out of which life is made. Attempts have been made to find a physiological basis for it, namely, in the conflict between the autonomic and the sympathetic nervous system. Up to the present it remains doubtful whether the known facts justify our upholding such a view. Now, in modern medical psychology the term "conflict" has a specific use, namely, to denote a clash of two wishes or tendencies, one of which remains unconscious.

Now, it is not my intention to dwell this evening on those diseases which are referable in every case to conflict of this type, namely, the neuroses and the psycho-neuroses, of which neurasthenia and hysteria are respectively the best examples.

My desire is rather to call your attention to some ordinary bodily ailments which are usually treated by physicians and surgeons without any suspicion on their part that such ailments have primarily a psychopathic origin.

The first case I have selected is that of a highly intelligent woman of thirty eight who complained of pain in the eyes of some months' duration accompanied with difficulty in reading. A careful examination by an oculist revealed only 1 D of hypermetropia. Now thousands of people have this amount of hypermetropia without being conscious of it in any way. Therefore, it seemed, that there must be some unrecognised reason for her present susceptibility and past immunity, for her eyes had never troubled her before. The patient was encouraged to talk about herself. After a moment's hesitation she related the following story:

At the age of eighteen she had been seduced under promise of marriage. The marriage eventually took place. During the honeymoon the husband cooly explained to her that originally he had had no intention of marrying her when he gave her the promise, but on further consideration he had decided to carry out his pledge. This was a great blow to her womanly pride for she had thought that the marriage was one of affection. She had given birth to two children and when they were ten and twelve years old the husband became partially impotent. She kept true to him until she found out that he was carrying on with another woman. Then she considered it no disloyalty to take to herself a lover. Eventually, the husband was forced to notice her conduct. To avoid a scandal she promised not to see her lover again. This promise she faithfully kept at the expense of a feeling of loneliness and dissatisfaction with life. She tried to distract herself with reading and needlework with the result that there developed the pain in the eyes. She was given glasses and what was intended to be good advice. She got better but remained unduly emotional. The patient was then lost sight of for some time. Later on she appeared again, looking radiantly happy and well. She had resumed relations with her lover and had realised that the pain in the eyes was a very unimportant factor in her physical distress.

The next case is that of a girl who complained of ocular disabilities for which there was no adequate physical cause. On being asked if she were not in some trouble, she broke into an agony of weeping and said that her father outraged her twice. On the second occasion he was interrupted by the stepmother who attempted to stab her with a knife. What is the use of correcting one diopter of hypermetropia with a pair of glasses in such a case?

The next case I have picked out is that of a little boy who had an occasional squint. This little boy had a sister who stammered whenever her father spoke sharply to her. The father of these children was a martinet in his profession - the Royal Navy - as well as in his bearing towards his children. When asked if his little son always began to squint on his return home from voyage, he replied, "No, he begins to squint the evening before I arrive back".

My next is of a European who had lived many years in this country. He maintained that for a long time he had suffered much from the glare of the sun. He had consulted many oculists and had used all manner of dark glasses, e.g., amber-coloured glasses, chlorophyll-tinted glasses as well as the ultra-modern invention of Sir William Crookes. He had experienced no relief. He was asked: "What about your fear of the dark?" The effect was electrical. He admitted that he was terrified of the dark and said that when shooting in the jungle he would always arrange his plans very carefully to be able to return to camp by sundown. He took elaborate precautions to hide the cause of his conduct from his servants. All his life he had kept his phobia a close secret, even from his wife. It dated from early childhood and he could not account for it. It seems quite obvious that if he had had a genuine fear of the light he would not have chosen India for his life's work.

I recommend this case to your notice as I believe firmly that many cases of photo-phobia may be traced to a fear of the dark which begins in childhood.

An unmarried female patient had been operated on for floating kidney, appendicitis, uterine trouble and enteroptosis. A detailed examination of her history revealed that she had been engaged to be married six times and every engagement had been broken off sooner or later. Each of these major operations had been performed soon after an engagement had come to an end. She insisted that she had never, in any way, been to blame. When I refused to accept this statement she left the room and as she did so crushed her "ring" finger in the door-jamb.

Another interesting case is that of a boy of eight. He was left-handed. His father, who was a very keen cricketer, encouraged the child's left-handedness in the hope he would become a fine left-handed bowler. One day, the boy was sharply

reproved by his father for some minor fault. The boy promptly declared he was blind in his left eye. He was examined by an oculist and his left vision was found to be 6/24. This discovery of the oculist so annoyed the child that he at once became right-handed.

I will now relate a case of fracture of the leg below the knee which was almost certainly an expression of mental conflict connected with the patient's fondness for dancing. The injury resulted from a carriage accident and the patient was bed-ridden for weeks. The striking part of it was the lack of the manifestation of pain and the calmness with which she bore the misfortune. The patient had a very zealous husband. They used to spend part of their leave with a married sister. One evening, she gave an exhibition of her talent as a dancer. She delighted her relatives and friends but her husband was greatly annoyed and whispered to her: "Again you have behaved like a prostitute". The words took effect. That night she was restless in her sleep and the next day she decided to go for a drive. She chose the horses herself. Her sister wanted to go with her and take her baby. She opposed vehemently this suggestion. During the drive she was nervous and suddenly jumped from the carriage and broke her leg. After the disclosure of these details we can hardly doubt that this accident was really contrived. Also, we cannot but admire the skill which made accident provide a punishment so suitable to the crime!

The next case is that of a married woman with three children. One day, she stumbled in the road which was undergoing repair and fell and struck her face. The whole face was bruised, the eyelids blue and œdematous. Asked why she had fallen in such a manner she replied: "Just before the accident I had warned my husband who has been suffering for some months from a joint affection, to be very careful when walking in the road and I have often had the experience that if I warn any one against anything it always happens to me." As this explanation was so obviously unsatisfactory she was asked if she had not anything more to say. She replied that just before the accident she noticed a nice picture in a shop and wished to buy it at once for her children's room. She thereupon walked to the shop and stumbled over a heap of stones and fell without making the slightest effort to shield herself with her hands. Asked

why she was not more careful, she replied that perhaps it was a punishment for something that had happened to her a short while previously. She referred to an abortion which had been started on her by a quack and had to be completed by a gynæcologist. Asked if she had worried over this very much she said: "I considered myself wicked, criminal and immoral". She had often reproached herself with the words: "You really had your child killed". She had feared that such a crime could not go unpunished.

I feel sure that we are justified in regarding many apparently accidental injuries as really self-inflicted. There is in everyone a lurking tendency towards self-punishment. Usually, this tendency expresses itself in self-reproach until the required external situation accidentally presents itself. In other cases the punishment tendency assists until the way is open for the desired injurious effect. Such occurrences are, by no means, rare even in cases of moderate severity. The part played by unconscious intention is generally betrayed by the striking presence of mind which the patients show in the pretended accidents. In this connection it is well to remember that the self-inflicted injury which does not end in suicide has no other choice in our present state of civilisation but to appear as an "accident" or to break through as a spontaneous illness. Formerly, it was a customary sign of mourning to inflict some minor injury upon oneself.

I hope that I have now made it fairly clear to you that the physician, surgeon and the general practitioner should bear in mind whenever called upon to treat certain forms of illness and always when confronted with a so-called accident, that there may be a mental factor in the case which will certainly bear investigation.

BATHS

BY

RASIK BEHARI LAL, L.M P., P.S.M.G.,

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I hope that most of the readers are well-acquainted with 'baths,' their different kinds and uses. Yet, I am sure, very few take advantage of this most useful but least costly therapy. It is with a view to refresh their memories that I write these following few lines. I do not claim the originality of the subject.

* Specially contributed for "The Antiseptic."

Definition: Bath means immersion of body into liquid pure or medicated or subjecting the body to vapour or air.

The bath is 'general' when it acts on the whole body and 'local' when only a part is subjected to it.

For the sake of description I will divide the baths in the following way and will give the action and the therapeutics of each in detail.

- I. Water
  - Simple.
    - Cold
      - (1) Ordinary full bath. — Pouring water, tub bath, river, tank.
      - (2) Affusion.
      - (3) Spray.
      - (4) Sitz bath.
      - (5) Hip bath.
      - (6) Cold foot bath.
      - (7) Cold pack.
      - (8) Cold compress.
      - (9) Cold douche.
      - (10) Cold sponging.
      - (11) Ice bags.
      - (12) Freezing mixture.
    - Hot
      - (1) Tepid bath.
      - (2) Warm bath.
      - (3) Hot bath.
      - (4) Hot hip bath.
      - (5) Hot sitz bath.
      - (6) Hot foot bath.
      - (7) Hot water sponging.
      - (8) Hot water douche.
      - (9) Hot fomentations.
      - (10) Application of hot water bottle.
  - Medicated
    - (1) Sea bath.
    - (2) Saline bath.
    - (3) Carbolic bath.
    - (4) Acid bath.
    - (5) Alkalin bath.
    - (6) Sulphurated bath.
    - (7) Mustard bath.
    - (8) Carbolic acid & saline neem bath.
- II. Vapour
  - (1) Aqueous
    - (*a*) Russian
    - (*b*) Simple vapour
    - Medicated vapour
  - (2) Volatilized drugs.

III. Air, *e. g.*, Turkish bath.

Cold bath:—Temp. 35°—70°F, average 50° to 60°F.

It has a powerful tonic action. It causes capillary contraction and rush of blood to the internal organs specially the organs of digestion and gives tone to the muscles of the body,

shoulder and arm and thence over the right shoulder and arm and as much further as it will go and fixed and tucked carefully round the neck and legs. A basin of water about 10 °F. cooler than used in the pack is poured over the head and shoulders at short intervals. Rapid light friction and slapping all over the body and limbs are kept up from 5 to 10 minutes according to the power of the patient.

He is then uncovered and rapidly dried with warm towels, dressed and allowed light exercise.

Duration of the bath is said to be sufficient when the patient emerges out of the bath quite refreshed with skin decidedly hyperæmic. Fatigue is an indication of a prolonged bath.

Action:—Deepening of respiration, diminution of pulse-rate and temperature and increased muscular capacity.

Therapeutics:—Chlorosis, anæmia, neurasthenia, melancholia, hypochondriasis and some neuralgias.

Duration may be from 2 to 10 minutes shorter for tonic and longer for anti-pyretic effects.

Modification in temperature of water and the vigour of friction may be modified as needed according to the strength of patient.

For weakly patients another method is described for anti-pyretic action with the name 'Sheet bath' as follows:—

A rubber sheet or oil cloth is spread over a suitable bed and covered with a blanket. Upon this a sheet wrung out of water from 80°-50 °F. as may be indicated is laid and patient placed upon bed with his arms over head; left border of sheet is brought over the body to the right axilla, the lower portion placed between the legs to separate them. The arms are then brought down close to the side of body, the right border of sheet is carried across the chest and neck and tucked on the left side at the neck and round the feet.

Friction applied lightly as in drip sheet and water 50°-60°F. is poured over with a cup.

Duration 2-10 minutes.

Shivering with chattering of teeth is no indication to stop treatment unless prolonged.

Patient may be covered with blanket and rubber sheet and left for half an hour if desired to increase the anti-pyretic effect.

He may be rapidly uncovered when so desired, dried, dressed and put back to bed.

Action.—Anti-pyretic, soothing and tonic.

Therapeutics:—Reduces temperature in high fevers.

(2) *Wet pack*:—It has a similar mode of application as the previous one. Bed should be narrow. The rubber sheet and blanket are placed as before. A linen sheet well wrung out of water 70° F. or. less is spread over the blanket. The patient is so laid upon it that the upper border of sheet lies at the level of ears and lower one extends 18" beyond the feet. It is then wrapped round the patient as closely as possible. Then blanket is also wrapped over and secured round the neck and the feet. All depends upon the care taken to wrap the blanket so as to include all external air. A wet cloth may, with advantage, be wrapped round the head. Patient may be covered with more blankets if he feels at all chilly and be left from ½—1 hour. Room kept sufficiently warm but well-ventilated.

No friction is used and success of pack depends upon patient's own power of reaction, and if successful reaction will soon occur, he will feel calmed and soothed and may fall asleep, waking refreshed.

It is then desirable to stimulate the relaxed cutaneous circulation by means of brief immersion bath.

At the beginning of pack there is slight shock causing shivering for 5 or 10 minutes or even longer till the temperature of sheet is equal to that of skin. If shivering is prolonged the temperature of sheet should be lighter next time or hot water bottles used. When the patient becomes accustomed, the temperature of subsequent packs may be lowered.

Action:—Sedative, anti-pyretic.

Therapeutics:—As sedative in delirium, mania, neurasthenia and allied diseases, sleeplessness (some forms), and is also recommended in rheumatism, gout, anæmia, neurosis of digestion and as anti-pyretic in reducing the temperature in high pyrexia. In these cases, packs should be continuously changed as soon as blanket feels warm to the hand placed beneath the body, 4 or 5 changes may be necessary. It may be used to bring out rash in eruptive fevers.

Local packs:—May be applied to head, throat, thorax, abdomen or joints. These are ordinarily spoken of as wet compresses. Temp. 60°—70° F. From 2—4 layers of old linen

are used and cut to the shape and size of the part to be treated. They are wrung out of water, applied and covered with a piece of flannel large enough to cover the cloth from all sides to exclude all air.

Therapeutics:—Pharyngitis, laryngitis, tonsilitis and other throat troubles; pneumonia, broncho-pneumonia, phthisis, extreme fever, peritonitis, gastritis, appendicitis, colitis. In certain of these diseases specially respiratory ones the compresses require to be changed.

For chronic inflammatory condition of abdomen specially chronic congestion of liver in tropics these compresses may be worn from ensiform cartilage to pubis for five or six weeks continuously. A sort of dermatitis may occur after a week or so which is thought to be a good sign.

If applied at night it frequently relieves insomnia.

When such continuous applications are used two sets of bandages should be used to change daily. The used up bandages should be boiled for 15 minutes daily and between the dressings the abdomen should be well-washed, to prevent serious furunculosis.

Cold douche:—A single stream of water is forcibly directed against a part of the body. Its effect depends upon the size, height and temperature of stream and also on the surface of the body effected. A friction to the body at the same time is very advantageous.

Douche may be applied to the parts noted below:—

(a) *Head*:—In alcoholic coma, narcotic poisoning and headache.

(b) *Spine*:—In spermatorrhœa, melancholia and general debility.

(c) *Liver and spleen*:—Chronic congestion and enlargement.

(d) *Joints*:—In chronic inflammations and stiffness.

(e) *Perineum*—in pruritis ani, piles and spermatorrhœa by an ascending douche.

(f) *Vagina*:—In leucorrhœa.

(g) *Rectum*—In constipation and hæmorrhage.

Cold sponging:—Sponging the body with a sponge or towel dipped in cold water. After sponging, the parts sponged should immediately be dried and covered. It has a tonic and bracing effect.

It is useful in laryngismus stridulus, chorea, rickets and spermatorrhœa etc. It may also be used to reduce high pyrexia where bath or pack are inadvisable or are not accepted to by the guardians in India.

Ice bags:—They are meant for local application of cold to head in coma and delirium, chest in pneumonia and in palpitation of heart, abdomen in hæmorrhage. It may also be applied to chest and sucked in in bleedings from lungs and stomach as well as bleeding after operations in throat.

Leiter's coils may be used through which continuous stream of water flows out.

Freezing mixture:—Powdered ice 2 parts, sodium chloride 1 part. It is anæsthetic and vesicant if applied too long. It is used for minor operations and chronic rheumatism.

Warm baths:—They may be 'general' or 'local'.

It softens dermis and liquifies scaly secretions thus acting as 'detergent' in many scaly and scabby skin diseases. Stimulates local circulation and lessens those of internal organs, and thus it relieves pain of intestinal, biliary and renal colic. It relaxes tissues in laryngeal spasm and infantile convulsions. It stimulates secretions of sudoriferous glands and is useful in many kidney diseases and uræmia may be averted.

Great care must be taken during a hot bath. It should always be given in a closed room, perfectly dried and covered. In case of weaker patients, they should always be put back to warm bed. A cup of hot milk, tea or water helps diaphoresis.

According to the temperature of water hot baths may be divided into 'tepid, warm, or hot' baths.

Tepid bath:—Temperature 85°—95° F.

It has a detergent, sedativeand anti-pyretic effect.

It is useful in restlessness and pyrexia as well as in skin diseases.

Warm bath:—Temperature 95°—100° F.

It is useful in fevers and threatening inflammatory affections *e. g.* pneumonia, bronchitis, etc.

Hot bath:—Temperature 100°—106° F.

It has more powerful effect than that of warm baths.

Hot hip bath and hot sitz bath:—These are useful in amenorrhœa, dysmenorrhœa, sudden cessation of menses from

acold, dysuria, cystitis and other diseases of pelvic and genertive organs.

Addition of a little mustard re-establishes menstrual flow more quickly.

Hot foot bath:—It is a household remedy and can be used without any medical help.

It is useful in incipient coryza, congestive head-ache, epistaxis, infantile convulsions, some forms of insomnia and to restore menstrual discharge stopped by cold.

Cold foot bath in about 2 " of water with friction is good in cold feet, and insomnia therefrom.

Hot sponging:—Sponging with hot water, the head, neck and temples relieves head-ache in influenza, catarrh and other diseases.

Hot douches:—(1) a very hot douche between 110°—115° F. given in uterus is a very good method of checking post-operative hæmorrhage.

(2) Hot douche enemata is given in cholera and collapse to increase temperature of body, temperature as indicated.

(3) Hot or cold vaginal douche is serviceable in leucorrhœa in females.

Hot compresses or fomentations:—Consists of cloth, sponge or flannel wrung out of very hot water, pure or medicated, to be applied to any surface of the body. This is useful to relieve pain from any part of body and is therefore useful in (1) lumbago, sciatica, and other neuralgias;

(2) colic, renal, intestinal and tympanitic;

(3) pain in connection with eye diseases specially Iritis;

(4) inflammation. In the incipient stage it cures it and if far advanced then hastens suppuration, thus relieving pain of abscesses, whitlows, boils, and carbuncles etc.

The method of application of fomentations requires to be described here, as I have seen many doctors making mistake in ignoring the details of this application thereby creating dissatisfaction to their patients and to themselves about the benefit which could be obtained by this method.

Flannel two to fourfolds should be well-dipped in boiling water or even boiled for a few minutes; it should then be taken out by means of a pair of forceps and put into a wrunger made of a stout towel or duster with sticks attached to both ends.

The water is then well-squeezed out by twisting the sticks in different directions and the flannel immediately applied over the part and covered with India rubber sheet or oiled silk an inch bigger than the flannel in all directions. Over this is put a thick layer of cotton wool and bandaged, In no case, water should be allowed to remain unsqueezed as it is likely to give rise to burning and eruptions. For full effect of this application it should be changed very frequently, say every 1 hour or so.

Stupes:—A variety of fomentations called stupes is generally used in case of abdomen and eye diseases in which the flannel after being wrung out of water is placed over the area under treatment and as it gets cooler another piece of flannel is kept ready to replace it. Thus two pieces are replaced alternately, part not being allowed to be exposed to air. Applying stupes with only one piece and leaving the part exposed between stupes is faulty and dangerous as well.

Turpentine oil is sprinkled over the wrung-out flannel if counter-irritant effect is desired and laudanum if sedative effect is desired or a little opium or poppy beads are put into warm water used,

Hot water bottles:—This actually does not come within the description of baths, but is described here as water is used in this method. These are generally applied covered in cloth or flannel to flanks or feet to overcome collapse.

Medicated baths:—The baths which contain same salts besides pure water. Most of the following are very useful and worth-trying:—

Sea bath:—On account of various saline ingredients held in solution sea-bathing is specially invigorating and stimulating to the skin, particularly when the water is boisterous. The temperature being more uniform than other waters it is easily borne by the weak patients.

They are useful for asthma and some other respiratory troubles.

Saline bath:—In foreign countries there are many mineral spas which play an important part in medical therapy, but here in India, the profession has drawn very little attention to this side. I have heard of several lakes of such sort in India but I am not in a position to say anything about them at present.

Dried salts obtained by evaporating mineral waters may be obtained to prepare 'Brine' baths which may be

advantageously applied in lumbago, sciatica, chronic rheumatism and chronic inflammatory disorders of pelvic viscera.

Soda bath prepared by adding washing soda ½-1 lb to a full bath and bath taken for ½ to 1 hour in chronic rheumatic conditions like fibrositis as well as in skin diseases causing itching.

Carbolic bath :—1 in 80, used to give bath in cases of sloughing and suppurating wounds to clean them and act as antiseptic.

Acid bath :—Bath is prepared by mixing 8 oz. of diluted nitro-hydrochloric acid to 1 gallon of water and a flannel roller 1 foot broad is soaked in it at 98°F. wrapped twice round the liver area and covered well with oiled silk leaving a margin. This bath should be renewed morning and evening, worn for several days. It is very useful in hepatic disorders.

Alkaline bath :—Prepared by dissolving crystallised sodium carbonate dr. i to a gallon of water, is useful in removing scabs and scaly incrustations in skin diseases, blephritus etc.

Sulphurated bath :—There are some spas in foreign countries containing sulphur. It can be prepared at home by means of the proprietory preparation sulphagna. It is useful for scabies.

Mustard bath :—Prepared by mixing ½ to 1 dr. of powdered mustard seeds in 1 gallon of water.

It is a powerful stimulant to skin, it quickens the appearance of exantheuratous eruptions. It is also used as sitz or hip bath for menstrual disorders as described above. It should be used from 5 to 10 minutes.

Carbonic acid bath :—It is a stimulating saline bath containing sodium chloride 3%, calcium chloride 1%, carbonic acid free upto 3 grams to a litre.

It is recommended in heart diseases, functional or organic.

Neem bath :—It is prepared by adding decoction of leaves of neem (melia azadirachta) to ordinary bath. It may be general or local. It is largely used in India in various skin diseases, specially scabies, boils and urticaria. It is also given in wounds and ulcers as a washing before dressing.

It is given to clear scabs and infectious material from the body after cure from infectious diseases especially small-pox, chicken-pox and measles.

Vapour bath :—May be simple or medicated.

Simple vapour bath .—Patient is seated on a cane-bottomed chair and covered round with blankets upto the neck and

steam generated by boiling water over a spirit lamp placed below the chair.

In serious cases patient can be laid on a charpoy without any beddings and covered over with blankets and one blanket wrapped all round the legs of the bed, one or more kettles placed below the bed to generate steam.

Russian bath is a simple vapour bath with exposure at different temperatures.

These baths cause severe diaphoresis and relieve the system of matters affecting the body.

They are useful in rheumatism, gout, malarial fevers, renal and skin diseases.

Russian bath is said to be risky to patients with weak hearts and there is much danger of heat stroke.

Medicated vapour baths:—These are generally local and on the respiratory tracts in pharyngitis, laryngitis, tonsilitis, bronchitis, pneumonic phthisis etc. They may either be inhaled in steam or pure. The following drugs are used:—

In steam:—Acid carbolic, tincture benzoin, cresol etc.

Pure:—Ether, chloroform, amyle nitrite, oxygen, etc. The uses of later drugs are well-known to the profession and need not be given here.

Volatilized drugs:—Calomel and sulphur are volatilized over water bath in the same way as ordinary steam bath. The former is generally useful in syphilis and the later in scabies.

These baths should be given for ½ hour, the patients should not be left alone lest they may faint during the bath. The vapours of calomel may be inhaled from time to time with advantage but that of sulphur will cause suffocation in the throat and irritation to the eyes.

Air bath:—Also called Turkish bath is given by burning a spirit lamp under the bed clothes which are suspended over a frame work.

It is useful in the same diseases as steam bath and is less dangerous than Russian bath.

It can be used locally for stiff-joints by enclosing them in copper chambers and then applying heat.

CASES AND COMMENTS

INTERESTING CASES.

BY

K. N. PRADHAN, NAGPUR.

(1) HYPERMETROPIA IN DIABETES.

Mr. N. of K. aged 56, told me in January 1923 that he was for a long time suffering from glycosuria. He was not advised to get his blood examined for sugar and so had not got it tested by an expert. He was slightly deaf due to otosclerosis. He came for difficulty in looking at distance and also for reading as well. Retinoscopy was −·50 D sph both eyes. He took the following correction for constant use—·50 D sph for distance 6/6+2·50 D sph J1 at 33 cm.

In January 1925 he came again and gave the following history. Two and a half months since diabetes or glycosuria had increased. So he was put on fast and vegetables; though sugar was reduced appreciably his sight had become bad. He saw through mist since one week. On examination vision was found to be as follows. Both eyes 6/36 with glasses and with plus 2·50 D sph J8 only. Pupils active and small; disc normal but with bent blood vessels. Was it glaucoma commencing? Tn. was normal without Homatropin. Retinoscopy was plus 4 D sph both eyes, both meridians. He was prescribed the following glasses. The glass used for near work namely plus 2.50 D sph was useful in bringing the vision to normal *i. e.* 6/6. For near vision plus 4 D sph made him read J1 at 33 cm.

After one month he met me and told that he could see very well for distance for near work by the glasses originally prescribed in 1923. Authorities say that the increase of diabetes brings on myopia; here, decrease of diabetes brought on or rather increased hypermetropia. Here, his blood sugar was unfortunately not taken, yet with decrease of sugar in his urine and fasting, his retinoscopy changed from minus ·50 to plus 4 D sph. Again, with full diet and according to him with no sugar in his urine the whole of the hypermetropia was again replaced by myopia. Why and how the lens changes occur is not yet definitely settled, hence, it is not discussed here. I have only narrated the facts as they actually occurred.

(2) CORNEAL ULCER.

An adult, twenty five years of age, came from Hosangabad District. He had a corneal ulcer in the left eye. Conjunctival irritation was not much but there was ciliary injection, photophobia, slight pain and lachrimation; no granulations on palpebral conjunctiva. Except the portion which was stained with Fleurosein the cornea was bright and smooth. No K.P. No hypopion. Pupils could be dilated fully after putting in homatropine and atropine 1% for three days twice a day. Red reflex was present, and tention was not increased. Duration of the disease was one and a half months. The patient and his medical attendant were afraid, rather always afraid that any time secondary infection may commence and then the eye would surely be destroyed. On admission to the Mayo Hospital he was given anti-diphtheric serum 5c c. and a few drops of the serum were dropped on the ulcer without dilution and the eye was kept bandaged. Locally atropine was continued. On the 7th day a second dose of anti-diphtheric serum was given and the ulcer commenced to heal; within a week's time of admission the whole cornea had cleared up without any trace of ulcer. His vision had improved much, it was not tested before he left the hospital. Scrapings from the ulcer were not examined. How the anti-diphtheric serum acted on his chronic condition I can't explain. I believe even milk injection would have been sufficient.

(3) SUB-CONJUNCTIVAL HÆMORRHAGE DUE TO WHOOPING COUGH.

In the epidemic of last year two anxious parents brought their children aged 2 and 4 respectively. Both had sub-conjunctival hæmorrhages of about one week's duration. Margins on all sides were yellowish white, the central ring was dull red; it extended in one case on the inner side and in the other on both sides. Red reflex was good and retina and disc were found normal. Boric ointment was given and the anxious parents were definitely told that the whole thing would surely clear off without affecting vision.

Why are so few cases seen of sub-conjunctival hæmorrhages in spite of the fact that practically every child in India suffers? Will these children always be liable to hæmorrhages throughout their lives? Is it some congenital or acquired condition of the blood vessels in these particular children with a tendency for hæmorrhages?

EPITHELIOMA OF ORBIT AND X-RAYS.

An old man of 60 with thick arteries was admitted to the hospital for a fungating tumour of the right orbit; no trace of eye-ball could be recognized in the mass. The eye-brows were partially destroyed, there was swelling on the nasal bones, on the cheeks in the malar and antral region. An incision round the whole mass was quickly deepened and the whole mass including the periosteum and its remains to the apex of the orbit were scooped out. The orbit looked like a specimen in the anatomical museum. It was found that the antrum was clear but the œdema had extended under the malar bones to the temporal fossa, on the inner side the ethmoids destroyed and septum perforated. After removal of the growth recurrence was expected particularly on the outer side. So, he was given weekly X-ray exposures for three months by the X-ray specialist of the hospital During this period his pulse was so slow and the extremities so cold that the house surgeon had ordered camphor oil injections. He had also attacks of head-ache.

When he left the hospital there was no sign of recurrence. No plastic surgery was done to cover the big cavity directly communicating with the meninges as the patient was unwilling to submit to further operations, and plastic surgery means to the unpracticed any number of small operations. Patient will have to wear motor goggles or a bandage over his right socket till his death.

DARK BLINDNESS

BY

RASIK BEHARILAL, CAWNPORE.

I mean by dark blindness a disease or symptom in which one is unable to see in darkness either in day or during night but can see well with light. There is no question whether such darkness is natural or artificial. There is no mention of such a disease in text-books on eye diseases. It apparently looks like night blindness but correctly speaking these two conditions are quite different from each other.

In 'night blindness' a patient cannot see in the night either with natural or artificial light, while during the day no artificial darkness would have any effect; on the contrary, in 'dark' blindness one can see in light either natural or artificial

but is unable to see in darkness not only during the night but also during the day, in a closed room.

The difference can be put up in tabular form as follows:—

	Day light	Day closed room	Dark nights	Moon light	Artificial light
D. B.	Positive	Negative	Neg.	Neg.	Positive
N. B.	Positive	Positive	Neg.	Neg.	Neg.

To make it more clear I will cite below a case which I saw some time back from which the learned readers can well make out the difference in the two diseases.

Patient:—A boy 10 years of age, fairly nourished with no apparent physical disease.

Family history:—Nothing particular.

Previous history:—When the patient was a child three years old he got some sort of eruptions on his face for which an ointment was applied (probably from an alopathic). This medicine irritated the eyes causing congestion of conjunctivæ and severe lachrymation. The ointment as well as all other medicines applied for the cure of the eruptions did not benefit the patient at all, but the disease was only cured when the treatment was discontinued.

The condition of the eyes continued in the same state, in spite of all available treatment for a period of six months and subsided when the treatment was hopelessly stopped.

Since then, the patient cannot see during darkness.

Present condition:—Patient can see well, read and write during the day time, but just after sun-set his sight is so blurred that he can neither get out of bed nor can he see even a human figure standing at a distance of a single foot in front of him. Again, he can read well with artificial light but his sight does not help him in the moon-light. During the day time if he is brought into a closed room slightly dark (where others can easily read) he cannot see anything (like a perfect blind) for a few minutes, but as time passes he begins to get sight first of the bigger objects. By and by, he can see well and can even read books.

During the day if one of his eyes is kept closed by means of a bandage so that he cannot see with that organ, and is opened at evening he can see well with that eye during the night as others do.

And if both the eyes were similarly treated he could use both eyes in darkness. This shows that there was some special effect produced by the rays of light on the sensory tract of the eyes, which was dulled with darkness or, in other words, his eyes were hyper-sensitive.

Physical appearance:—His eyes appeared normal in shape and size, tension normal, but pupils were slightly contracted, midriatics blurred his sight while myotics had no effect on the sensory functions.

Treatment :—I suggested that he should put dark lens in front of one of his eyes during the day, made up like a smoked goggles so as to exclude all light from the eye.

I request all the readers to let me know if any of them would further enlighten me on the subject as regards cause, diagnosis and treatment.

A WANDERING TUMOUR

BY

P. S. SRINIVASAN, L.M.P., CONJEEVARAM.

A boy, aged 22 months, was brought to me for treatment for a new growth of bone in the region of the buttocks.

History :—About 6 months back, the child had a reddish looking elongated tumour about 2½" in length on the left buttock, about 1" below the crest of the ileum. The child had no discomfort or fever on account of this. Local applications and poultices were applied and the tumour grew smaller and smaller in size and it was finally distinguishable as a thin tough substance resembling bone. I saw this case and advised removal of this foreign body. In spite of my assurances to the mother of the child that it could only be a foreign body, most probably a steel needle or a thin sharp piece of wood, the mother was not convinced, and she said she was positively certain that the child never cried and any pressure on the foreign body failed to produce any impression on the child. The child was again put under the treatment of a Hakim, who applied a blister over this foreign body. The mother found this foreign body on the front of the thigh, 2 days after the application of this blister and 2 days later, was again seen in the lumbar region. The wandering nature of this foreign body upset the mother and the child was again brought to me for operation.

At this stage the foreign body was found to be obliquely about 2½" in length, and about 1" below the crest of the ileum, directed more anteriorly than posteriorly. Under chloroform, an incision was made along the line of the foreign body and the slippery foreign body was caught with forceps and extracted. The foreign body was found to be a steel sewing needle with a bright and sharp point. It is likely, that the needle could have moved from place to place on pressure.

TOBACCO CHEWING AND EPILEPSY

Omission of the former cures the latter.

BY

R. CH. PANDA, L.M.P., MEDICAL OFFICER, PARIKUD, (ORISSA).

Sadabo, a young girl of 15 or 16, the sister of my dispensary sweeper, was subjected to constant fits for a period of two long years. She was matured in her 11th year and was quite normal for a year more. There was neither the slightest indication for the disease to follow. This young girl was addicted to tobacco chewing, which is, as a matter of fact, a common practice among that class of people in these parts. She used to chew one full tobacco leaf worth about ½ a pice a day and she was chewing this even from her young-hood. Her menstruation was normal and it played no part in producing the fits she was suffering from. In her 13th year, she was proposed for a match and everything was ready for the marriage to take place. But, all on a sudden, she was attacked by the fits and the marriage had to be postponed till she was cured of the malady.

Heredity :—She was the 4th of the six children of her parents, the latter being alive. All the members of the family are alive and show no ill-effects in them.

Previous history :—Nothing particular.

General condition :—Good—a stout young girl, well-nourished and no defects to indicate the disease. Menstruation was normal.

Fits :—The history of the beginning of the disease is quite obscure, but it was well-remembered that as days passed the number of times per day and the time taken by each fit was increased day by day.

One day, I was lucky to see the actual attack at my dispensary. There was a distinct aura and soon after that she

cried for help. When her brother ran up to her she fell down and began to shiver her limbs very voilently. The limbs could not be kept at rest by any amount of force. The period lasted for about 8 minutes, when she regained her consciousness and began to search for her clothing &c. It appears this was the typical instance of all her attacks.

For two long years she was suffering from this malady. She had taken many kinds of medicine from village quacks but finding no relief sought admission into my dispensary in the beginning of September 1925.

Treatment:—On the 1st day she was given a purgative of calomel and sodii bicarb with 2 grs. of santonine and the following mixture was prescribed:—

Rx:—Mag. sulphas	℥iii.
Pot. bromide	
Sodii bromide	
Amon bromide aa	gr. xv.
Spts. amon aromt.	℥i.
Tr. valarian amon.	m. xxx.
Inf. buchu	oz iii.
M. F. T.	
Ozi. T. D.	

Her bowels were regular and there was no trace of any intestinal worms. She was advised to take this mixture for a fortnight.

At the end of that period, it was gratifying to note, that the frequency of the fits diminished. Daily instead of 15 to 20, she was having 8 or 10. So, she was advised to continue the mixture for a fortnight more. Meanwhile, I was trying to secure either luminal or some other effective drug instead of the mixture but luminal came a day after the fare.

At the end of the month I found that the mixture had given her good results. The frequency had come down to 2 or 3 a day, and the interval was enhanced. Instead of every day, she used to have once in 3 or 4 days. Still I was not satisfied, as wanted its complete disappearance.

I examined the girl once more for any natural defects in her structure and heart but could find none. I ascertained her habits. Then I was told that she was *addicted to tobacco chewing*. I instructed her not to touch tobacco if she expects a complete cure, and she had to abide by my instructions at once.

To my surprise, from the moment she had given up tobacco there was no trace of fits of any sort. No more medicine was given and she was warned once for all that in case she renewed her habit of tobacco chewing she would be encountered by the disease again. It is more than a year since she was discharged cured but there is no recurrence of the disease. Four months after she was cured she had her nuptials and she lives in her new home quite well.

Points of interst:—

i. Prof. Savill says that in about 75% of cases the fits start before the age of fourteen. Here, the fits commenced in her 15th year.

ii. Heredity has no part to play here.

iii. The menstrual period is a common age in females (Savill) but here her menstruation was normal and it played no part in the disease.

iv. Reflex irritation is mentioned as a cause. Here, probably, the irritation is caused by the *nicotine* in the tobacco that the girl was addicted to chew.

A CASE OF PLEURISY WITH EFFUSION

BY

AWAT T. SHAHANI, M. B., B. S., MEDICAL OFFICER,
J. W. DISPENSARY, KARACHI.

Isardas Lokumal, aged 51 years, a clerk in the Customs Office, came to this dispensary on the 1st November 1925, complaining of fever, cough, pain all over the body and sore throat. The symptoms appeared to be typical of influenza; he was treated for this complaint and in a week's time appeared to have recovered.

Four days later, I was called in to see him in his house as he was complaining of breathlessness. On examination he appeared to be suffering from asthma. There was no pain in the chest, the temperature was normal and the pulse 84. He was kept on anti-asthmatic mixture, but with no improvement.

On the 16th November I was again called in to see him. To my surprise, I found that his chief symptom was pain in the abdomen, with breathlessness; the heart was pushed downwards and far to the left of its normal position; the temperature 100° F.; pulse 140. On the right side of the chest there was

dullness extending from the third costal interspace downwards. The patient complained of a painful tumour in the epigastrium also; this, on examination, proved to be the liver, which was pushed downwards. The condition was thus obviously one of pleural effusion into the right pleural cavity, although the patient had never complained of pain in the chest.

Blisters were applied to the right side of the chest and a mixture containing magnesium sulphate, potassium iodide and digitalis was given. His condition did not improve and on the 20th November the chest was aspirated. About two pints of clear straw-coloured fluid was withdrawn and 2 c.c. of this was injected subcutaneously into the abdominal wall. The patient had an irritating cough after the aspiration, but the right side of the chest was now strapped and a mixture given containing potassium iodide, digitalis, nux vomica and stimulating expectorants, together with purgatives when necessary. Fortunately, the pleural cavity did not refill, and recovery was rapid; within two months his condition was normal.

Points of interest in the case are:—(1) Pleural effusion as a sequel to what appeared to be typical influenza, with early symptoms of breathlessness but no pain. (2) The insidious onset of the condition. (3) Its rapid progress, since the right pleural cavity appeared to have been filled with fluid during the interval between November 16th and November 20th. (4) His rapid recovery; the chest did not refill and there was no collapse of the costal parietes.

I am much indebted to Dr. V. E. Nazareth, M. D., who assisted me with this patient.

AN INTERESTING CASE OF ROUND—WORM INFECTION

BY

DR. D. G. CHOURIKAR, WUN (BERAR).

On 6-9-26 I was called in to see a boy of 2½ years. I went and saw the boy in the following condition:—

i. Tossing restlessly in bed with occasional cry and convulsions.

ii. Abdomen distended, painful on pressure and gurgling noise.

iii. Temperature 102°F.

iv. Eyes shut; when opened forcibly the eye-balls were found turned upwards.

v. No response to call or anything. I asked of his father the history of illness who narrated in the following manner:—

Six days back, the boy was playing as usual, but all of a sudden he fell down unconscious, temperature became subnormal, pulse thready; abdomen distended and had occasional cry and convulsions. The relatives at once went to a native physician who came down there and gave one Matras; and with the help of doctor he gave glycerine syring, which brought out nothing, but the distention became less marked. After an hour or so, temperature went above the normal, pulse became alright; but there was no change in other conditions The physician continued his treatment for the following 6 days but to no effect. The father of the child also told that the physician only tried to guard the temperature, which he did not allow to fall below 100°F. The boy remained in the unconscious state for these 6 days and so the father came down [illegible]

I examined the child, and taking the case to be of worms (which are the common foe of children), prescribed

(i) *Rx.*—Santonine gr. ii.
Calomel gr. ii.
Sodii bicarb gr. iv.
M. ft. powder into 2, one morning and evening.

To be followed by oz i of castor-oil next morning.

(ii) Liniment Terebenthine to be applied to the abdomen and fomentation.

The next morning I went to see the boy, and learnt that the child passed 3 round-worms. Temperature came down to 100°F.; but the restlessness and convulsions were still present. This morning, I gave for restlessness and convulsions

(i) *Rx.*—Tr. belladonna m. i.
Chloral hydras gr. i.
Aqua ad dr. iii.
M. ft. m. such, 2 doses morning and evening and

(ii) *Rx.*—Bismuth salicylas gr. v.
Salol gr. v.
Sodii bicarb gr. x.
M. ft. pulvis into 4 powders, one every 4 hours.

On the following day, temperature came down to normal. He was not so restless, got sound sleep. Abdominal distention disappeared. I gave the same powders and one grain of santonine at bed time. The boy did not open his eyes yet. I continued the powders for 3 days as an intestinal antiseptic. On the sixth day of my treatment the boy opened his lids of his own accord but to my surprise I found that the child lost his vision. He could not see the objects, nor catch anything held in front of his eyes. He could move his eyeballs. I observed the eyes for 4 days and then told the relatives to get the eyes examined by an eye specialist. They did so. Some days back, I received a letter from his father that the eye surgeon told him that there was detachment of optic nerve and could not help for the cure; however, he gave some medicine, which he told may do good. The doctor could not attribute this loss of vision to anything special.

My apology in sending this case to this journal is to know the cause of the loss of sight. To my mind, it may be due to the severe tonic convulsions during the attack; but I have not seen nor read such a case during my practice though of short period. I request my professional brethren to let me know through the medium of this Journal whether they have seen such cases and if so, what line of treatment they adopted after loss of sight.

I enquired of any hereditary disease in the family, but no positive reply was given by the parents but the boy had a little squint in both the eyes, otherwise, the child is robust and healthy. I do not know the condition of sight now, as the boy is far from the village.

MY IMPRESSIONS ON A PHYSICAL COUNTER-IRRITANT—HIRUDO

BY

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While I was at Bandysholla in Spring Field of Nilgiris, as the Medical Officer of the Madras Forest College camp in the year 1924, I had many occasions to study leech-bite cases. Our camp was on the marshy slope and the grassy ground was full of leeches which used to give great trouble. There were

many cases of leech-bite bleeding and the methods employed to arrest such hæmorrhages were various and a knowledge of these will be useful to those residing in such areas and practising medicine. But a general idea of leeches is not out of place and as such, I have given a brief idea below regarding the leeches in general.

The hirudo belongs to the phylum annelida. It is of medical interest because leeches were used as physical counter-irritants but now wet cupping and venesection have been employed to a greater extent and the leeches are lost to therapeutics as the opinion of not abstracting blood is gaining ground. Still, the Ayurvedic physicians use the leeches wherever they require a counter-irritant action or depletion. In India there are many different varieties of leeches which are collected from marshes and tanks. British Pharmacopœa has recognised only two kinds and they are, therefore, officinal leeches. They are as follows:—

1. H. Medicinalis and (2.) H. Quinquestriata. (fine striped) varieties. The other leeches of importance are Limnatis Nilotica (Horse leech) and Hæmadispa Zeylanica the latter variety being most active; and the place where I held my investigations abounded in this.

Nature of the soil. Land leeches inhabit the grasses and jungle lands of tropical and sub-tropical countries. The ground leeches are affected by rain and moisture and dew. Tank leeches like to be always in muddy water. Paddy fields often contain this kind of leeches. It is not an uncommon thing to find these creatures clinging to the legs and feet of those who work in paddy fields during the weeding-out-season.

Zoology. The leeches are bilaterally symmetrical worms with a moist cuticle and a body composed of segments. The body is cylindrical, body cavity being well-developed. There are a blood vascular system, an excretary system represented by nephredia. The alimentary canal runs from the mouth to the anus. The nervous system is a ganglionic chain which is divided in front to enclose the intestinal canal. The leeches are hermaphroditics. Genital orifices are two in number. The extremities are provided with suckers. The mouth contains two or three teeth. The mark after leech-bite is generally triradiate or triangular. H. Zeylanica may transmit flagellates of the genus Herpetamonas.

Now my camp was in the place where H. Zeylanica abounded as already referred to. On an average I found this variety to be 1" to 1¼" long and very thin before sucking blood. These used to stick on to the grass or leaf and then cling to the body of people or animal when chance occurs. Some of the camp men came to me with bleeding from their legs. These minor pests gave great trouble and one day a leech bit me on my right foot though I wore sandals. Blood on the sole of my foot only attracted my attention. It will be interesting to note down here that Napolean's army was troubled very much by leeches during the retreat through the Sinai Peninsula. Many of my leech-bitten patients suffered from ulcers at the site of the bites. The area used to swell and ulcerate. The primary quiescent period prevents the patients from taking any special attention to the leech bites. Even after two or three months the swelling and subsequent ulceration used to ensue.

Therapeutics. Used to relieve congestion in pleurisy, pneumonia, pericarditis, ovaritis etc, etc. Hirudo is used in thrombosis as it prevents coagulation.

Hæmostatics after leech bites. I tried liquor ferri perchlor, adrenalin, alum, silver nitrate and even the "Needle and thread method." Application of cotton wool soaked in liquor ferri or adrenalin with firm pressure bandage and elevation of the limb if on a foot or leg used to be very effective in checking the leech-bite hæmorrhage. The leech that bit me I put into a cup of normal saline and the phenomenon observed was very interesting. The moment I put it in the saline it began to vomit blood that had been drunk and it was very funny to see the poor leech spitting out blood thereby giving the saline solution a red hue. The blood was coming from the oral extremity and not from the caudal extremity, and so I declared it as vomiting. Of course, saline water is an emetic.

The leech did not die even after complete expulsion of its stomach contents. Thereafter, every patient that came to me for treatment of leech bite and the leech could not be removed, I used to wash with saline and at once the leech used to fall down and the bleeding from such a separation of the leech entailed only a comparatively less hæmorrhage. Manson injected salt solution by means of forceps etc., into the alimentary canal for separation. In my experience, I found,

this washing the leech and the part bitten with this lotion to be very effective.

A research study on the alimentary canal of these creatures was not possible in my camp and as such, their part as intermediary hosts of Herpatomonas could not be investigated.

Prophylaxis in leech-bites. Proper foot-wear is essential in traversing such tracts as are infested by leeches. Labourers and coolies in certain areas where leeches abound, used to smear their legs and feet with tar and then leeches used to keep away from biting on tarred areas.

Conclusions. 1. Leech Hæmadispa Zeylanica occurs in Bandysholla, Nilgiris.

2. Their bites were unawares and caused bleeding followed by a quiescent period of two or three months. This was followed by swelling and subsequent ulceration.

3. Liquor ferri perchlor and liquor adrenalin together with bandage are helpful and are the best measures in arresting hæmorrhage from their bites.

4. Saline (sodium chloride) solution normal has a depletary emetic action on H. Zeylanica. The sticking leech may be removed easily on the application of salt water without any trouble and bleeding after such removal is comparatively less.

5. Proper foot-wear is a preventive measure for leech bites.

6. Possibly, H. Zeylanica is an intermediary host of Herpatomonasp.

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OIL OF CHENOPODIUM AND CARBON TETRACHLORIDE

BY

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These two drugs are now used extensively as anthelmintics in the treatment of ankylostomiasis. Carbon-tetra-chloride, is more effective than oil of chenopodium. It has the advantage of being cheap and easy for mass treatments. Moreover, 1

or 2 treatments with this will be enough to effect a cure even in highly infected cases. But it is, on the other hand, more dangerous to the human system than the oil, as it has caused deaths in several instances. Its use, therefore, must be with great care. It should not be given to those addicted to alcoholic drinks, to very young children and to those having cirrhosis of liver and other disorders of the liver.

Oil of chenopodium is a safe drug and can be given to very young children. I have used this in children from 1 year upwards without any untoward result. But its use also contra-indicated in jaundice, nephritis and highly-debilitated patients. It has a great advantage of being very useful in ascaris. It must be given in xv. to xxx minim doses to adults. Smaller doses as m. x. as stated in the "Antiseptic" for September 1926 by Dr. M. G. Ghause are not effective, for it requires a second or even a third treatment.

In mixed infections of round-worms and hook-worms the combined administration of oil of chenopodium and carbon-tetra-chloride, in my opinion, will be the universal treatment. The cure in both the infections is known to be very efficacious.

My routine treatment is as follows :—Early in the morning, in empty stomach, m. xv. of oil of chenopodium in one ounce of castor oil will be given and two hours after this carbon-tetra-chloride, m. xl. in 2 ounces of saturated Epsom salt solution are given.

It is a noticeable fact that this combined treatment is effective in Tinea Soleum and in my treatment I have seen many such patients have discharged tape-worms after this treatment.

A few weeks before the writing of this article I treated a patient suffering from tape-worms as above and on the following day he discharged two tape-worms each measuring 2 and 1½ yards respectively. I examined both the worms and found the heads in tact. But, unfortunately, after this treatment the patient has developed asthma, which he had not before. It seems that this very patient, about 3 or 4 years ago, had taken treatment at the Government District Hospital for tape-worms with male fern extract and expelled only one tape-worm without the head.

I wish to know why he developed asthma this time. Is there anything to do with carbon-tetra-chloride?

The Antiseptic

DECEMBER, 1926.

A REVIEW OF THE MODERN THEORIES ON THE PATHOGENESIS OF CATARACT.

The pathogenesis of cataract is a subject of great controversy. One school of thought attributes it to various conditions such as malnutrition, degeneration etc, while another school associates this condition with the known laws of chemistry and physics. But, perhaps, both factors are inseparable in this complex process.

Dr. W. Stewart-Elder and others advance the theory that the primary cause of cataract is associated with the direct action of incident radiant energy of any wave-length on the crystalline lens increasing the lability of its colloidal system and deranging the autoxidation system upon which its metabolism depends. This renders its proteins more prone to coagulation by changes in the hydrogen-ion concentration, changes in the salt content, osmotic changes determined locally by the action of radiant energy on the lens capsule or by general metabolic disturbances, and by possible continuous photo-sensitisation.

Experimentally, cataract was produced by long wave-lengths. (Hess and Kiribuchi); by infra-red waves (Richen, Vogt, Muller, Krauz, etc.); by visible rays with the infra-red and ultra-violet excluded (Langenbeck, Herzog and others); and by ultra-violet rays (Burge, Adams and others.) Short wave-lengths of radium and X-rays also have been found to produce cataract; while sensitizers reacting photo-chemically to long wave-lengths, play a part in the production of cataract. (Howell). Henbel showed that the injection of hypotonic solutions into the eye made the lens opaque and that similar intravenous injections produced a like result.

Clinically, it has long been recognised that cataract can readily follow the passage of an electric current through or near the eye, due to the electro-chemical action and also concussion effects. The occupational cataract, common among workmen who are exposed

to high degrees of heat, such as molten glass etc., was concluded by Crookes, to be due to heat-waves; and the theory suggested by Parsons and supported by Hartridge and Hill, that the main factor in the ætiology of cataract is malnutrition or irregularly varying nutrition due to changes in the composition of the aqueous or to the liberation of toxins by the action of heat-waves falling on the iris and ciliary body, is now generally accepted. Therefore, it is argued that this variety of cataract is a complicated pathological condition consequent on a chronic mild inflammation of the ciliary body or a degenerative change induced by periodic variations in the nutrition. But, clinically, there is usually no evidence of any pathological change in the iris of the men affected. The fact that the opacity is a posterior polar one has been cited as analogous to a complicated cataract following a chronic cyclitis; but its occurrence is amply accounted for by the concentration of radiant energy by refraction through the cornea and the lens, by the absence of convection currents in this region and by the large accumulation of radiant energy here when emitted from a source subtending a large solid angle. Further, slit lamp has revealed that the intimate structure of the glass blowers cataract is widely different from that of complicated cataract. Turning to the theory that cataract is due to malnutrition consequent on certain changes in the aqueous, apart from being highly oxygenated, it probably plays the part only of a vehicle in the nutrition of the lens; and therefore the only change that capillary dilatation will bring about will be the alteration of the colloid crystalloid content; and this will have a minimal effect on the nutrition. Any effect the osmotic variation will have on the fluid traffic will be a tendency for water to flow out of it, a reverse of the effect necessary to induce opacity. On the other hand, it is observed, that in Italian glass-workers who work very near to the furnace, corneal opacity is common; and this is obviously the direct result of the incident radiant energy. It may be argued that the cornea does not always turn opaque before or with the lens. This can be explained by the greater concentration of energy in the lens when the radiating source subtends a large solid angle. Further, Dr. Stewart is of opinion, that physiological repair of sub-maximal damage is much less evident in the lens and the cornea is more able to cope successfully with a noxious agent acting over a long period of time and at the same time, however, while the direct action of the incident energy upon the lens itself probably is the fundamental factor in the ætiology, the other is almost certainly of importance secondarily in bringing about the conditions necessary for the flocculation of the proteins already rendered labile by the denaturing action of heat and light.

Senile cataract is, probably, largely due to ultra-violet rays. All of us are aware that senile cataract is more common in India and matures earlier than in Europe. In America, Walter has shown that cataract becomes more common as the equator is approached. Similarly, there are many more records to show that cataract is more common in those places where the people are exposed to the tropical sun to a greater extent. It is stated that 95% of the Indian cataracts commence in the lower quadrant of the lens and it is here that the incident light falls more directly. Dr. Stewart writes in his Thesis that the large portion of the solar energy absorbed by the lens can produce both thermic and abiotic effects and that it is highly improbable that the solar energy induces direct coagulation. The changes are almost certainly of the much more subtle nature—a diminution of the glutathione content lessening very gradually the efficiency of the autoxidation system, and a change of the proteins into a more labile state so that they are easily coagulated by other factors. Sooner or later, the actual occurrence of cataract is determined by changes in the hydrogen-ion concentration, in salt content, in osmotic conditions or in nutritional disturbances.

It is argued against the theory of the direct action of sunlight, that most of the senile cataracts begin in the periphery, where the lens is protected by the iris and not in the pupillary aperture where the light falls. This criticism is readily answered. The greater portion of the shorter waves which are dispersed are reflected at right angles and will thus affect the periphery towards which they are concentrated by internal reflection and most of them are absorbed. It is in this region the younger and more actively growing fibres are situated. These will, therefore, be the first to be effected by the deterioration of autoxidation system. Further, most of the fluid interchange into the lens occurs at the periphery and hence, the effects of any change in the nature of the ocular fluids will be first seen here. It is advanced by others that senile cataract was due to disturbed nutrition owing to pathological changes in the ciliary

epithelium, with consequent degeneration of the lens. But the same arguments apply against this, as we have considered in the discussion of occupational cataract.

Various other forms of cataract are described. In diabetic patients, senile cataract is comparatively common and appears at a relatively early age. The main factor, says Dr. Stewart, which determines the high incidence and early occurrence of senile cataract in diabetes, is the fact that both sugar and acetone in small quantities sensitise proteins, including the lens proteins, to the denaturing action of light. While the true characteristic form of diabetic cataract is largely determined by the fact that the diabetic state, by subjecting the lens to an osmotic deforming force and abnormal fluid traffic, induces the condition more readily, accelerates its rate of development and tends to alter its type. With the rise of sugar concentration in diabetes, the osmotic pressure of the aqueous tends to decrease, and hence fluid tends to flow into the lens. If the process is mild the lens swells and is deformed and the eye becomes myopic. If the change is greater and the inflow of fluid more rapid, actual droplets are formed under the capsule and the transparency of the lens is impaired by the irregular dispersion of light between the two media of different refractive indices—aqueous and lens fibres. Cataract is thus formed with great rapidity. Conversely, a reverse osmotic flow is set up and a normal or hypermetropic refraction results. The so-called cataract of cholera is said (Fichs) to be due to the abstraction of water from the lens due to the general dehydration, but Dr. Stewart says that the opposite process, as in other forms of cataract, is probably at work.

The determining factors in the formation of complicated cataract are probably malnutrition and the influence of toxins acting directly on the lens substance or indirectly by altering the permeability of the capsule. Lamellar cataract is due to a number of globule-like vacuoles which are the remains of degenerated or undeveloped fibre cells, a developmental change which is to be correlated with similar hypoplastic changes in the dentine, skeletal and cutaneous tissues, as a result of a general constitutional disturbance.

P. G. A.

CURRENT TOPICS.

OBSTETRICS & GYNÆCOLOGY.

The Diagnosis and Treatment of Placenta Praevia.—J. Barris, F. R. C. P., F. R. C. S. in a paper on this subject read before the British Medical Association on 7th July 1926 concludes that early diagnosis of placenta prævia is essential. Primarily, it should be ascertained whether the bleeding is from the cervical canal or from disease of the lower genital tract, as for instance, carcinoma of the cervix, which can be easily done with the aid of a speculum and the finger. If the bleeding is through the cervical canal it should be decided whether it is accidental hæmorrhage or is due to placenta prævia. If there is no mal-position, the head is engaged and albumen is present in the urine a diagnosis of accidental hæmorrhage is suggested. On the other hand, the presence of placenta prævia may be conjectured if the bleeding has been repeated, the head is high, there is mal-position and albumen is absent in the urine. Yet, the only certain way to diagnose placenta prævia is to feel the spongy placenta through the cervical canal. Blood clot or vesicular mole should not be mistaken, the former is very friable and the finger can be easily pushed through, while in the latter, bleeding usually occurs much earlier in pregnancy, the uterus is of an undue size in relation to the period of amenorrhœa, the internal ballottment cannot be obtained and the fœtus cannot be palpated through the abdomen. In those few cases where the cervix is not sufficiently dilated to allow the finger, attempt should be made to establish the diagnosis by passing a metal dilator through the canal, for if on withdrawing it bleeding occurs, the presence of the placenta can certainly be inferred.

The treatment should be based on the nature's method of arresting bleeding from the placental site; and this is threefold—thrombosis of the uterine vessels and contraction and retraction of the uterine muscle. Of these, retraction is the important factor, for the shortening of the muscle fibre is permanent. Now, retraction can only be efficient if the uterus is empty and hence the only efficient way to stop the bleeding is to terminate the pregnancy, and it is not proper to risk the mother's life in order to increase the viability of the fœtus.

The choice of the method of terminating the pregnancy must be so adopted as to arrest the hæmorrhage temporarily

during the process of delivery by means of pressure of some sort upon the exposed placental site, and to conduct the delivery at such a time and manner as the patient is fit to bear it with a minimum amount of injury to the maternal tissues, further hæmorrhage and shock. Hence, our intervention must be prompt, but the actual delivery must be slow. The temporary arrest of hæmorrhage and the subsequent delivery may be affected in different ways—"slight cases" are best treated by rupture of the membranes and a tight abdominal binder. This method is an ideal one, but it is necessarily limited in its application to a certain group of cases in which strong pains are present, the cervix is dilated, the lie is longitudinal and the placenta is not easily reached. For these, this is all that is required and is to be strongly recommended; it entails little interference and the results are good. If the vertex is presenting, a firm abdominal binder is applied; if the breach is presenting, a leg should be brought down after rupturing the membranes, and in either case the labour is allowed to proceed naturally. Plugging is inadvisable, except as a very temporary measure, due to its risk of sepsis and of internal hæmorrhage.

The use of hydrostatic bag has many disadvantages and is not suitable for the emergencies of general practice. The method of plugging by the half-breech possesses certain great advantages, for no special apparatus is required; an anæsthetic is often unnecessary, and continuous pressure upon the placental site is definitely secured. Especially, if the mother's condition is not good it is advisable, in that it not only stops the bleeding but it allows the mother to recover and to deliver herself naturally later on. It is, undoubtedly, the best method in the majority of cases and is especially applicable in general practice. Recently, Willett brought forward the ingenious suggestion of exerting pressure upon the placental site by traction on the fœtal head by means of an instrument which is a modification of the hæmostatic scalp forceps employed in cranial surgery. The method appears to be simple and applicable to those cases in which the cervix is not sufficiently dilated to allow the bringing down of a leg.

Certain selected cases may be treated by Cæsarean section. In this, all vaginal manipulations are avoided, the risk of further bleeding during the subsequent delivery is overcome, it gives the best chance to the child and it avoids for the mother any risk of lacerations of the cervix. But this method

is not suitable in patients already suffering from shock and from severe hæmorrhage. The method is advisable in the case of an elderly primigravida in good condition who is strongly desirous of a living child in whom the fœtus is alive at or near term, and the placenta covers the os, which is small and rigid. Finally, institutional treatment is strongly recommended in all but the "slight cases." *P.G.A.*

Ante-partum Accidental Hæmorrhage.—G. Fitzgibbon (Journ. Obstet. and Gynæcol. of British Empire, Summer No. 1926, p. 194) discusses the nature and treatment of ante-partum accidental hæmorrhage, and distinguishes two types; in the first the bleeding is due to simple and truly accidental ablation of part of the placenta, and in the second to a toxæmic condition due to hæmatoma or apoplexy of the uterine wall and following chronic nephritis. When there is external bleeding the fluid is dark and does not clot, being the hæmorrhagic serum expressed from coagulated blood which is retained in the uterus or in the uterine wall. The muscle fibres are healthy and there is no rapid bleeding at any time. FitzGibbon considers that treatment should be directed towards restoring the enfeebled circulation, the labour being allowed to terminate naturally, which will, in most cases, occur spontaneously after recovery from the most cases of collapse. This hæmotomatous condition of the uterine wall involves, but does not originate in the placental site. With a live fœtus the patient is treated on palliative and expectant lines and allowed to complete labour without intervention, but if the uterus is tense and painful the membranes are punctured. Intravenous saline injections may be needed if collapse is severe with the induction of labour after recovery. If the fœtus is dead, labour must be induced; the uterus is controlled and ergotin and pituitrin are given, though FitzGibbon has never seen any indication of post-partum hæmorrhage. Plugging the vagina is not indicated since the bleeding is believed to be due to a slow percolation and the author considers Cæsarean section totally wrong for a rapid and persistent bleeding, its resutls being worse than those afforded by any other form of treatment. In support of these views FitzGibbon gives the results of his treatment in sixty-four consecutive cases with three deaths, one of which was followed by hysterectomy; he considers, that a patient who cannot recover from collapse is also incapable of surviving hysterectomy.

Treatment of Menstrual Disorders.—E. Novak (Therapeutic Gazette, May 15th 1926, p. 315) discusses the treatment of menstrual disorders in the light of recent physiological research. He thinks that since the amenorrhœa associated with increasing obesity is undoubtedly of endocrine causation. Organo-therapy appears to be the most logical and least harmful form of treatment, and though at present frequently unsatisfactory in its results, Novak considers that the further development of biochemical methods will eventually lead to improvement in this direction. In the treatment of dysmenorrhœa atropine, given to the point of saturation and commencing several days before the period is expected, often relieves when analgesic drugs fail; in some cases where this is not effective the presence of a definite causative anatomic lesion, such as a small interstitial or submucous myoma, must be suspected. Pituitary, ovarian, or thyroid extracts are disappointing. Dilatation of the cervix often gives good results and stem pessaries are to be condemned. The functional uterine hæmorrhage of puberty, when mild, tends to spontaneous cure, but when severe, diagnostic curettage is indicated and in most cases results in permanent cure. Novak himself has had good results following the daily use of pituitary extract. In persistent functional bleeding near the menopause complete cessation follow radio-therapy, and though this treatment, if cautiously used, may be advocated in younger patients, the danger of producing pemanent amenorrhœa and sterility must be explained to the patient; many gynæcologists prefer to rely upon a repetition of the curettage rather than have recourse to radium in young women.

Ergotamine Tartrate in Obstetrics.—C. J. Gremme (Nederl. Tijdschr. V. Geneesk., April 3rd 1926, p 1387) states that ergotamine tartrate is a reliable drug which has a stronger action than other preparations of ergot and does not give rise to any infiltration after injection. It has chiefly been used in Swiss clinics, where it has been found that the dose of 1 c. c. originally recommended is too high and has been reduced to 1/2 c. c. In labour it should be used only during the third stage, when it is said to be extremely valuable to hæmorrhage due to uterine atony, and it is also useful for sub-involution. In the puerperium it is indicated when it is not certain whether the membranes have been completely expelled and involution is not complete. In such cases 1/2 c.c. is injected daily intramuscularly.

Pernicious Vomiting in Pregnancy.—J. L Auderbert and A. Galy Gasparrou (Paris Med., June 19th 1926, p 593) remark that in cases of hyperemesis gravidarum in which purgation and treatment of uterine infections or mal-positions have failed to effect improvement the physician must be on guard against inducing abortion too early, so that the fœtal life is sacrificed unnecessarily, or too late, at a time when the mother's life can no longer be saved. If the family or personal antecedents of the patient point to an hysterical etiology immediate and absolute isolation is essential, followed by treatment by suggestion, if necessary. Suggestion may take the form of an "operation" consisting only in examination under other anæsthesia, or the exhibition of methylene blue pills, the patient being told to expect cessation of the vomiting if the urine became blue. The effect of many treatments, such as injections of serum from pregnant women or animals, application of tampus, and correction of uterine deviations, falls within the same category. In the absence of a history or stigmata of hysteria the vomiting may be regarded as being probably of toxæmic origin; isolation should be combined with purgation hydro-therapy, intra-rectal and hypodermic injections of serum and treatment by adrenaline and blood transfusions. In certain cases, whether toxæmic or fundamentally hysterical, treatment fails; the authors discuss the various signs which have been described or proposed as justifying in these cases the termination of pregnancy. The pulse frequency is of importance; very quick rates, such as 140 a minute, are not inconsistent with vomiting which is purely hysterical and amenable to suggestion, but a quick rate which becomes progressively augmented at repeated examinations, in spite of efficient treatment, is of grave import, and points to the necessity for induction of abortion. Loss of weight is a sign of little value; the case is quoted of a patient who had lost more than two stone in four weeks, yet was cured by isolation and suggestion. Signs of hepatic insufficiency—sub-icteroid tinge or the smell of acetone in the breath—are of grave prognostic significance, but, in exceptional cases, are consistent with vomiting which is curable by suggestion. Careful study of the systolic and diastolic blood-pressure is of importance; as Fieux and Balard have shown, the former is diminished and the latter increased in hyperemesis gravidarum, and with improvement the systolic and diastolic pressures rise and fall respectively. Oliguria is always present,

but an increasing oliguria in spite of treatment justifies the speedy termination of pregnancy. The presence of bile pigments in the urine, and increased concentration of urea in the urine combined with augmentation of the purin bodies, acetone and especially aceto-acetic acid persisting and increasing in amount in the urine, an increase of the urinary amino-acids are all grave signs, more significant than an increased ammonia-urea coefficient. In examination of the blood acetonæmia and increased urea content point to kidney blockage and are of grave significance. Morbid nervous manifestations—delirium, hallucinations, hyperpyrexia, and polyneuritis—are ominous signs and, if they have appeared, induction should be performed at once, although it may very possibly prove to be too late.

Causes and Treatment of Uterine Hæmorrhage without Gross Physical Signs.—Beckwith Whitehouse, M. S., Lond. F. R. C. S. and others had a discussion on this subject at the Annual Meeting of the British Medical Association, Nottingham, 1926. They conclude that menstruation is the monthly abortion of the decidua of an unfertilized ovum, that the menstrual discharge is the lochia of an unfertile abortion and the pre-menstrual endo-metrium is the menstrual decidua and its development and life are dependent upon the corpus luteum; and that menstrual abortion is initiated by death of the unfertilized ovum and retrogression of the corpus luteum. Dr. Whitehouse classifies pathological uterine hæmorrhage into four clinical groups. 1. Epimenorrhœa or too frequent periods which is the clinical manifestation of the hyper-activity of the sex complex. 2. Menostaxis or a prolonged period, which is an incomplete unfertile menstrual abortion. 3. Menorrhagia or a severe menstrual hæmorrhage, practically amounting to the popular word "flooding". This is the result of uterine insufficiency which may be *(a)* developmental *(b)* inflammatory or *(c)* degenerative and this insufficiency may be associated with lesions in the metrium or the endo-metrium. 4. Metrotaxis—or metrorrhagia, which includes all hæmorrhages independent of the menstrual cycle and is quite distinct from the irregularity of menstrual abortion. This is commonly the reflection of outside influences upon the uterus, the accessory factors most commonly associated with irregular uterine bleeding being functional hyperthyroidism and hypersensibility of the sympathetic nervous system.

Treatment:—Good results are obtained by the application of X-rays to the thyroid in the irregular hæmorrhages of puberty as well as in menopausal hæmorrhage.

A simple currettage frequently cures menostaxis.

In menorrhagia, currettings are most usefully performed while the hæmorrhage is still in progress. In some cases it is best to combine with radiation of the thyroid. Intra-uterine application of radium is another useful therapeutic measure available. Prof. G. S. English and Maslen Jones think that X-ray treatment applied to the ovaries gives good results in cases of excessive hæmorrhage. In cases of hæmorrhage due to sub-involution and metritis, Maslen Jones is of opinion, that if the condition was not of longstanding currettage followed by repeated intra-uterine injection of sterile glycerine is most efficacious; while Beckwith Whitehouse looks upon currettage as mainly a diagnostic measure and that it must not be regarded as the last word in the treatment of uterine hæmorrhage.

P. G. A.

OPHTHALMOLOGY.

Sodium Chloride in Treatment of Detachment of the Retina.—Bolle describes his method used successfully in six cases of primary detachment of the retina. The first eight or ten sub-conjunctival injections, each of 1·5 c.c. of an 8% solution of sodium chloride, were made in the region of the detachment. Two or three injections were given weekly. Then two injections were given fifteen minutes apart, one of a 2 or 4% solution was injected in the region of the detachment; the other of a 6 to 10% solution at the opposite point. The amount of each was never over 1·5 c.c. In detachment of the entire retina, the two injections of each solution were given simultaneously. The injections were followed with hot compresses. All the six patients seem to be definitely cured since no recurrence has been observed up to six years. Bolle emphasizes that the treatment succeeds *only in* recent cases. The benefit from the lively osmosis thus induced is manifest by the next day.

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ignificance of Retinal Hæmorrhages.—A discussion on this subject was opened by Mr. R. Foster Moore (London), whose paper was read before the Secretary of Ophthalmology by Mr. A. Christie Reid (Nottingham). Recent investigations by Dale and Laidlaw, Dale and Richards, and Krogh had, he said, added new interest to the subject, and he put forward the

following classification as reasonable (excluding such retinal hæmorrhages as arise from disease localised in the eye):—

(a) Disorders of metabolism—(1) Renal disease; (2) diabetes; (3) scurvy.

(b) Diseases of the hæmatopoietic system—(1) Arterio-sclerosis; (2) severe anæmias (or severe cachexias); (3) leukæmias; (4) infective endocarditis; (5) Vaquez's disease; (6) hæmophilia.

(c) Obstructions to the venous flow—(1) Thrombosis of the retinal veins; (2) severe thrombosis of the cavernous sinus; (3) sub-arachnoid hæmorrhage; (4) papillœdema; (5) during birth; (6) severe compression of the chest.

Krogh had shown, said Mr. Moore, that the capillaries have outside their endothelial lining a loose meshwork of actively contractile cells (Rouget cells) which are under nervous control. By means of these cells the capillaries are capable of extreme contraction or dilatation. The transition between arterioles with a complete muscular coat and capillaries is sharp and abrupt. On the other hand, the transition between venules and capillaries is more gradual, for the venules have, at first, like the capillaries, an outer coat formed of a wide-meshed net-work of Rouget cells, through the meshes of which free interchange between the blood and tissue fluids can occur as in the capillaries. No passage of cells from the blood into the tissue spaces occurs in conditions of health. Experiments seem to show that what makes such passage of cells possible from the interior of the capillaries is a poisoning or impaired nutrition of their endothelial cells. Certain poisons seem specially to affect the capillary walls, so that they no longer maintain an inviolate barrier against the passage of cells from their lumen. In diabetes or nephritis, such toxins are, probably, the cause of the hæmorrhages. In leukæmias, pernicious anæmia, and cachexias, defective nature of the blood may perhaps act in the same way on the endothelial cells.

Passing on to the different types of retinal hæmorrhages Mr. Moore enumerated eight types:—

(1) Flame-shaped hæmorrhages—These are the commonest; they may be very small, seldom very large; are situated in the nerve fibre layer, and are a common type in renal retinitis and arterio-sclerosis.

(2) Rosette or blotch hæmorrhages—small, situated in the deeper layers, found especially in diabetes; multiple, more or less circular, with an irregularly crenate edge.

(3) Diamond-shaped hæmorrhages with pale centres—seen more frequently in the anæmias and leukæmias.

(4) Large mottled hæmorrhages—Usually near the disc, or along the temporal vessels; probably, due to a leak from a larger vessel than a capillary, but the source cannot usually be identified.

(5) Pre-retinal or subhyaloid hæmorrhages. Most frequent in the muscular region. May occur in vascular disease, frequently in leukæmia.

(6) The hæmorrhages of infective endocarditis. Due almost certainly to lodgment of minute infected emboli, and so must be on the heart side of the capillaries. Few cases of the disease occur, said Mr. Moore, in which retinal hæmorrhages are not present. It is more common in this disease than in any other to see the blood extending along the vessels as though it were effused into the peri-vascular sheath.

(7) Hæmorrhages associated with sub-arachnoid hæmorrhages. In fractures, or cerebral hæmorrhages, and in ruptures of aneurysms of the circle of Willis; probably caused by obstruction to the venous flow.

(8) "Cotton-wool patches". White patches, probably the result of hæmorrhages, seen in some cases of anæmia, and usually associated with hæmorrhages of other types, may closely simulate early renal retinitis.

Absence of hæmorrhages in cases of chlorosis, formerly a common disease, was, Mr. Moore said, very interesting when contrasted with their almost invariable presence at some time in the course of fatal cases of leukæmia and pernicious anæmia. In arterio-sclerosis retinal hæmorrhages are not directly due to the increased arterial pressure; the pressure in the capillaries is lower than normal probably, and the hæmorrhages may be an expression of the consequent impaired nutrition of the endothelium. Hæmorrhages due to obstructed venous outflow may be classified into:—

(a) Cases of general venous engorgement. (1) General constitutional conditions, such as whooping-cough or vomiting; (2) the hæmorrhages produced apparently by the process of birth; (3) severe compression of the chest,

(b) Due to a local cause outside the eyeball. (1) Subarachnoid hæmorrhage; (2) papillœdema; (3) some cases of thrombosis of the cavernous sinus.

(c) Due to a cause within the eye-ball. (1) Obstruction of the central retinal vein or one of its tributaries.

In all these groups, apparently, the back pressure due to the obstruction is the cause of the leakage.

It would seem, then, Mr. Moore concluded, that leakage of blood occurs: (1) from arterioles, from lodgment of infected emboli (as in infective endocarditis); (2) from the capillaries, either from poisoning of the endothelium, as in renal disease, or from impairment of its nutrition, as in the anæmias; (3) from the venules, from mechanical causes, as in a hindered venous outlet from the eye. As regards the change which takes place in retinal hæmorrhages, it may be said. that all hæmorrhages simply fade away, gradually becoming smaller and undergoing no other change in colour. The length of time required for their complete disappearance varies enormously. Mr. Juler has found retinal hæmorrhages in 15·5% of new-born infants, apparently produced by the process of birth. These hæmorrhages may disappear in so short a time as four days. Large dense hæmorrhages, on the other hand, may take many months for their complete absorption. Hæmorrhages, no matter how large, produce no permanent change in the retina unless the external limiting membrane is lacerated.

BOOK REVIEWS.

OPHTHALMIC SURGERY AND SIGHT TESTING.

By Dr. M. A. Kamath, M. B. & C. M, Chidambaram, 1926. 150 pages. [Published by the author].

Dr. Kamath in the production of his Ophthalmic Surgery has very much improved upon his "Notes on Ophthalmology," which we had the pleasure of reviewing in the January 1923 issue of the Antiseptic. Though primarily intended for students, very many useful additions have been made so as to make it useful for the general practitioner. Most of the practical tips that go to make ophthalmology in general practice a success are included The up-to-date methods of treating various eye diseases are briefly referred to. Special features of the book are the excellent chapters on cataract and refraction and general optics, We

suggest that this useful book be prescribed as a text-book in all the medical institutions in India.

OBSTETRICS AND GYNÆCOLOGY.

By Joseph B. DeLee, A.M.M.D., J. P. Greenhill, B.S.M.D., and John Osborn Polak, M.D. (Vol. V in the Practical Medicine Series — General Editor, Charles L. Mix, A.M.M.D.) Series 1925. 570 pages. Illustrated. [The year book publishers, Chicago].

Dr. DeLee and J. O. Polak are to be congratulated on the production of a very nice and instructive year-book containing the summarised views expressed in some of the leading medical journals. The whole book is divided into two sections — Obstetrics and Gynæcology. The former deals with pregnancy, labour, puerperium, the new-born and the latter deals with menstruation and its disorders, ovaries, displacements and injuries, infections, tumours and malformations and sterility. Among the many interesting portions those deserving special mention are those dealing with hyperemesis gravidarum, placenta prævia, hæmorrhage in the last trimester of pregnancy; foreign proteins; gonorrhœa; uterine and cervical tumours; eclampsia; intra-cranial hæmorrhage in the new-born; use of radium; post partal care; and Cæsarian section (cervical). Most of these articles are carefully selected and are well worth reading.

DISEASES OF THE NERVOUS SYSTEM.

By H. Campbell Thomson, M.D., F.R.C.P. and George Riddoch, M.D., F.R.C.P. 4th Edition; Revised; With 12 colour and 12 black and white plates and 102 figures in the text 541 pages. 1925 [Cassell & Company, Limited.]

The authors have endeavoured in this book to marshal the main facts of nemology in a concise and yet thoroughly readable manner. While taking into account all the notable advances made in recent years they have made it particularly useful to all students and general practitioners by the careful exclusion of all that is debatable.

Among the additions and rearrangements are the chapters on methods of examination, compression paraplegia, and subarachnoid hæmorrhage, while the heredo-familial disorders have been grouped together in a separate section (Section VII). The profuse manner in which the text is illustrated makes the reading all the more interesting and the information more easily understood. The well-known house of Cassell have to be congratulated on the splendid get-up of the book

which, we hope, will surely be in the hands of all students and general practitioners.

A TEXT-BOOK OF PHARMACOLOGY AND THERAPEUTICS.

By E. Poulsson, Professor of Pharmacology in the University of Christiania—English edition, edited by W. E. Dixon, M. A., M. D., F. R. S. 519 pages. [William Heinemann Ltd.]

Professor Poulsson's "Pharmacology" is a standard work throughout Germany and the Scandinavian countries. Its translation into English should be welcomed by all interested in pharmacology as a science and therapeutics as an art because it gives us the continental view of drug actions. The book includes an account of the most recent remedies introduced into medicine which have been found of proved value, and gives ample space to the newer synthetic drugs. The drugs are divided into six principal sections. The first section includes organic substances acting specifically after absorption on the nervous and muscular systems. To the second section belong the numerous organics that chiefly act locally—at the seat of application. The third and the fourth groups contain the inorganic bodies. The fifth section is formed by digestive ferments and foodstuffs used for therapeutic purposes and used in fixed doses. The last division deals with a section that is as yet not much developed but which, we are sure, will, in the near future, rank among the most important methods of treatment—that of anti-toxins and bacterial products. We are sure this book will be useful to the student requiring one text-book for both pharmacology and therapeutics and hope, that it will find a place as a reference work in the library of every practitioner.

EYE-SIGHT CONSERVATION SURVEY: BULLETIN 7.

Issued by the Eye-Sight Conservation Council of America, Times Building, New York City. Pages 219. Price S. 1-0-0. Compiled by Joshua Eyre Hannum, M E., Research Engineer, Eye-Sight Conservation Council; Edited by Guy A. Henry, General Director, Eye-sight Conservation Council, America.

The aim of this report is to present pertinent facts gathered from the review and the surveys in the form of a brief resume of the most important literature and findings. The book deals with eye hygiene, eye diseases, eye defects, eye-sight and education, eye sight and occupation, eye protection and illumination. The concluding chapter comments interestingly on the struggles with poor eye-sight of noted

persons. This book is sure to be instrumental in arousing greater interest in this subject of vital importance to society and also to stimulate greater effort to further the cause of eye care. It is written in a plain non-technical language and will be found to be of interest and value to both the layman and the medical man.

BAILLIERE'S NURSES' COMPLETE MEDICAL DICTIONARY.

Edited by H. Clifford Barclay, M.D., F.R.C.S.E., etc. Author of "Elementary Anatomy and Physiology for Nurses." Third Edition. Pages 248. Published by Bailliere Tindall and Cox, 8, Henrietta St., Covent Garden, London.

This book is a small medical encyclopædia which can be carried in the pocket. The meaning of many scientific terms that a beginner meets with is explained fully. In this edition, a large number of new words touching the subjects of elictricity, midwifery, the ultra-violet rays, X-rays and contraception are added. It will be a useful and handy book to the student nurse working in the various departments of a hospital.

FAVOURITE PRESCRIPTIONS.

By Espine Ward, M. D., pages 96. London (J. and A. Churchhill) 1926. Price 5 sh. net.

This is a small book containing a large number of prescriptions which should be of great use to medical practitioners. The first chapter gives the dosage of most drugs used in general practice. The second chapter gives some hints for the treatment of poisoning. These are concise and handy and are sure to be useful for ready reference. The third chapter gives a lot of many useful prescriptions but one searches in vain for the remedies for such common diseases as ankylostomiasis, cholera, K. A. &c. One also misses such well-known remedies as Luminol for Epilepsy and Veratrone for Eclampsia to mention only a few. But, in spite of all this, it is a very useful book to the commencing practitioner who will find the interleafing an additional inducement.

ACUTE INFECTIOUS DISEASES: A HAND-BOOK FOR PRACTITIONERS AND STUDENTS.

By J. D. Rolleston, M. A., M. D. (Oxon.) Senior Assistant Medical Officer, Grove Fever Hospital, London, etc. Pages 376 Published by William Heinemann (Medical books) Ltd. London. Price 12/6 net.

This is a study of the literature of some of the commoner acute infectious diseases, such as diphtheria, cerebro-spinal fever, typhoid fever, mumps, measles etc. Some of the well recognised infections such as influenza, puerperal fever etc., are not mentioned. The work is mainly based on the author's personal clinical study including a short description of the bacteriological and pathological aspects of each disease. The book will be very useful for both the practitioner as well as the student.

MUSQUITO REDUCTION AND MALARIAL PREVENTION.

By J. A. Crawford, M.B., Ch.B. Capt. R.A.M.C. and B.S. Chalam, L.R.C.P. & S; L.R.F.P. & S. 102 pages. Illustrated. 1926. Price Rs. 3. [Oxford University Press].

One is never too late and one has never exhausted the material in dealing with the subject of malaria—a disease which looks so simple and easy to stamp out but yet is prevalent over a very large area of the world and whose ravages are evident in manifold directions. In India alone it is estimated that some four millions of people are treated for malaria and, we are sure, an equal number are *not* treated in allopathic hospitals. Drs. Crawford and Chalam are to be congratulated on the production of a very handy volume on the subject of Malarial Prevention. The first chapter deals with the life cycle of the plasmodium The authors then give us a short description of the class Insecta. From egg through larva and pupa to the adult or Imago the life history of the musquito is given in a simple manner A short chapter then deals with the habits of the musquito. But, by far the most important chapter is that dealing with preventing work. Measures to avoid the human reservoir and to kill the plasmodium in it; to exterminate the anophelini by natural and artificial enemies are all fully discussed. We strongly recommend it to all well-wishers of preventive medicine—both professional and laymen for, it is more on the latter that the successful extermination of the malaria depends.

INDIGENOUS SYSTEMS AND MEDICAL SCIENCE.

By W. Burridge, D.M.M.A. Oxon. Professor of Physiology, King George's Medical College, Lucknow. Published by the Pioneer Press, Allahabad.

This is a treatise on the origin and development of Modern Medical Science, wherein the author succinctly narrates the various stages which medical lore had passed through in the hands of both Eastern and Western savants, before it was perfected and placed on a scientific basis. The author condemns the present attempt at reviving the indigenous

systems of medicine in India as retrograde and, while he is willing to accord these systems due praise for their age, says, he can only assign them at the present day, a place in the museums, as venerable relics of the dead past. With due deference, however, to the learned author, we are of opinion, that these systems of medicine have not been sufficiently explored as yet by modern scientists, and that, instead of altogether relegating them to the limbo of oblivion, they might be unearthed, sifted, tested and the valuable properties thereof, which they still contain in abundance and which, unfortunately, are hidden from scientific view, be separated and treasured up, as gold is from gold dust, for the use and benefit not only of the suffering humanity in India, but also of the world at large. In view of the recent startling discoveries in the field of the two allied sciences of Botany and Chemistry, wherein the old Hindu theories respectively of plant-life and chemical values of certain metals have been upheld as scientific truths, we think the time has not yet arrived for the last word being said on this subject.

DRUG REVIEW.

VIRILIGEN.

No physician is unfamiliar with patients similar to this: "Male: past fifty; lack of strength; listless; no definite disease; lack of general bodily and sexual vigor; condition reached gradually and without apparent cause; very desirous of some treatment to restore to normal."

It is no secret that energy of the body is liberated by physiological oxidations and that these oxidations are, in a large measure, regulated by the internal secretions. The autonomic sexual reflexes, also, are controlled by the endocrine system.

With patients such as the above, endocrine therapy is clearly indicated, either oral or hypodermic. If the patient is strongly influenced by psychic elements, a combination of oral and hypodermic generally works to best advantage.

Viriligen (G. W. Carnrick Co., 421, Canal Street, New York City) is a successful pluriglandular remedy designed for such patients. It presents extracts of anterior pituitary, suprarenal cortex, lymph, brain, and spinal cord substance, orchic with 1-10 grain of thyroid. It may be procured in tablets, capsules, or ampoules.

ACKNOWLEDGMENT.

MELLINS FOOD 1927 CALENDAR.

We acknowledge, with thanks, the receipt of two advance copies of pictorial calendar for 1927, published by Messrs. Mellins Food Ltd., London, S. E. 15. The calendar is beautiful and attractive, and, we feel sure, will serve as a constant reminder of the good and nourishing qualities of their renowned food product. We are pleased to announce to our readers that the first five hundred who make application to their agents Messrs. Spencer & Co., Madras, will get one copy of the Calendar *gratis* on production of this notice.

BOOKS RECEIVED.

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

The Nature of Tumour Formation.—By G. W. Nicholson M.A., M.D., Published by Messrs W. Heffer & Sons Ltd., Cambridge. Price 6s. net.

Favourite Prescriptions.—By Espine Ward, M. D. (Balfast). Published by Messrs. J.A. Churchill & Co., 7. Great Marlborough Street, London W. 1. Price 5s. net.

A Text-Book of Domestic Medicine & Surgery.—By G.T. Wrench, M.D., B.S. (Lon.) Published by Messrs. J.A. Churchill & Co., 7, Great Marlborough St., London W. I. Price 6s. net.

Human Physiology.—By John Thornton, M.A. & William A.M. Smart M.B.B.S. (Lon.) Published by Messrs. Longmans Green & Co., 39, Paternoster Row, London E.C. 4. Price 10 s. 6d net.

General Therapeutics Vol. VI.—By Bernard Fantus, M.S., M.D Published by Messrs The Year Book Publishers; 304, South Dearborn St., Chicago. Price S. 2·25.

Indigenous Systems of Medical Science.—By W. Burridge, D.M., M.A. (Oxon). Published by the Pioneer Press, Publication Department Allahabad, U.P. Price Re. 1. Postage Extra.

Cancer.—By Major John F. Hall-Edwards, L.R.C.P., C.L.M., D R., M.E. Published by Messrs Cornish Brothers, 39, New Street, London. Price 2 s.

The Endocrine Organs.—By Sir E. Sherpey Schafer. Published by Messrs. Longman's Green & Co., 39, Paternoster Row, London E.C. 4. Price 20 s.

Ophthalmic Surgery and Sight Testing.—By M.G. Kamath, M.B., C.M. Published by the author.

The X-ray in Embroyology and obstetrics.—By W. A. Newman Dorland, A.M., M.D., F.A.C.S. and Maximilian John Hubeney, M.D., F.A. C.P. Published by Messrs. Bruce Publishing Co., Saint Paul. Minn.

High Blood Pressure—its Variations and Control.—By J.F. Hallis Dally, M.A., M.D. B Ch: (Cantab) M.R., C.P. Published by Messrs. William Heinemann (Medical Books), 20, Bedford St., London. W.C. 2. Price 12s. 6d.

The Practical Medicine Series—General Medicine. Published by Messrs The Year Book Publishers, 304, South Dearborn St., Chicago. Price dol. 3·00.

Handbook of Medical Electricity and Radiology.—By James R. Riddle, F.A., F.P.S. Published by Messrs. E.S. Livingstone, 16 & 17, Teviot Place, Edinburg. Price 8 s. 6 d. Postage 6d.

The Hygiene of the Home.—By John J. Mulloney, M.D. Published by the Cristopher Publishing House, Boston, U.S.A. Price dol. 2·00.

Correcting Speech Defects and Foreign Accounts.—By Grace A. McCullough and Agnes V. Birmingham—Published by Messrs. Charles Scribner's Sons, New York

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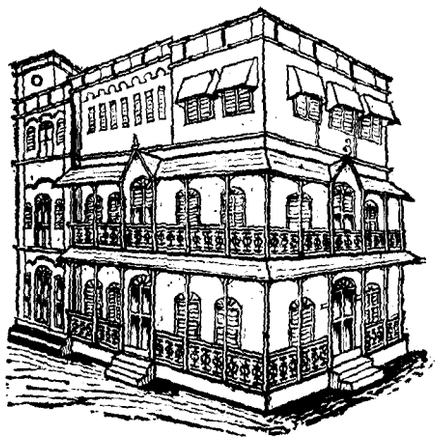

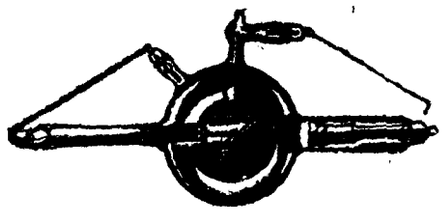

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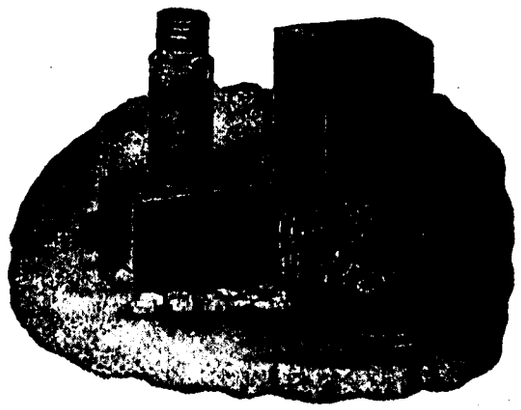

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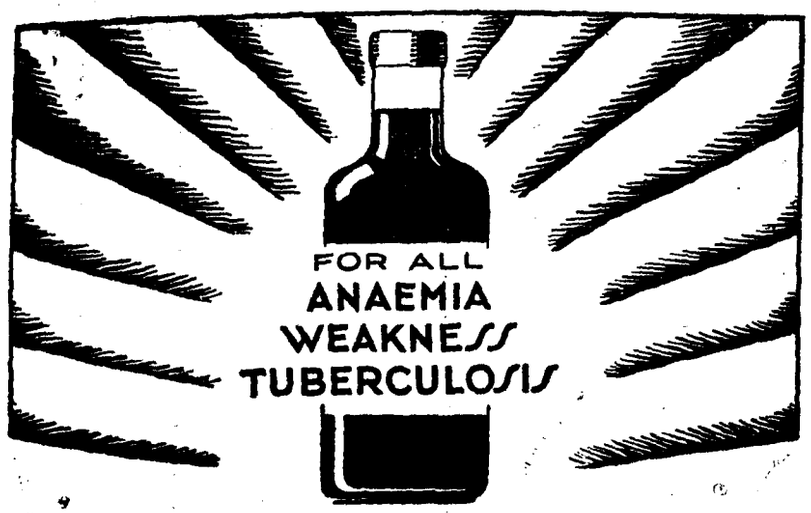

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