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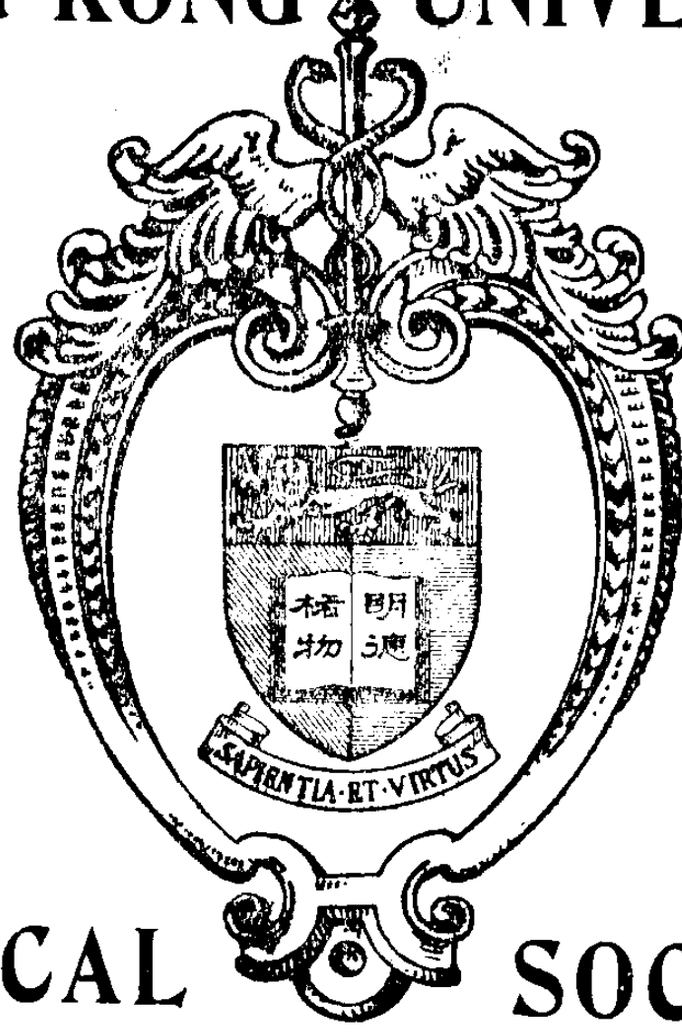

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AFFECTIONS OF THE EYE IN GENERAL PRACTICE.

by

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Diseases of the Eyelids.—No. 1.

It will be my endeavour, in this series of articles on the commoner affections of the eye met with by the general practitioner, to make clear, as far as writing possibly can, the treatment necessary for such cases, and to indicate those cases which should be seen only by one whose whole time is occupied with ophthalmology.

The doctor in general practice is frequently called upon to suggest treatment which will tide the case over until further specialised assistance is obtainable. Sometimes masterly inactivity is the best treatment possible, but, on the other hand the patient may refuse to see the specialist and insist upon his own doctor treating the case throughout, e.g., it sometimes comes about that the doctor is forced to nurse a case of glaucoma for several weeks, a case which should have been operated upon during the first three days of the attack.

There are simple rules which can guide the general treatment of most eye diseases, and I intend to explain, in the following series of articles, the best course to pursue.

The first article will begin with the affections of the eye-lids, gradually taking the various anatomical structures of the eye and its adnexia from before backwards in the articles to follow.

The eyelids are composed of layers from without inwards of skin, connective tissue, muscle, (orbicularis palpebrarum), cartilage (tarsal plate), then a layer of meibomian glands and their ducts. Closely apposed to the tarsal plate and the glands which are largely embedded

in the plates, is the conjunctiva. At the margin of the eyelids are the eyelashes which grow outwards from the anterior edge. At the posterior edge or lip of the margin of the eyelid, the stratified epithelium of the skin passes into the columnar epithelium of the conjunctiva. On the margin of the eyelid, by means of minute orifices, open the meibomian glands. There are other small glandular ducts opening both into the hair follicles and on the surface as well.

Infection may spread along a meibomian duct. It is a frequent complication in a common attack of conjunctivitis. Usually the lower lid which was red, now becomes swollen, and if the outer surface of the eyelid is palpated by the finger, a localised swelling is felt. If this swelling is not incised at once, the lid will become greatly swollen and painful. The inner surface of the eyelid should be rendered anaesthetic by rubbing a little solid cocaine on its surface. If there is a tarsal cyst forceps available, slip it over the eyelid with the ring on the inner side. Clamp so that the swelling is surrounded by the ring and evert the eyelid. By means of a small knife preferably a Beer's knife, a vertical incision is made inside the ring. Pus will at once exude. If a curette is put into the wound, and gently rotated, a small amount of soft granulation tissue will come away. The small wound will bleed freely for a few minutes, but a pressure bandage for several hours is all that is necessary. Continue the treatment of the conjunctiva with simple boracic lotion for the next two days.

What is seen more commonly is the nonsuppurative type of meibomian cyst called a chalazion. There is not a conjunctivitis present, but a small swelling not quite at the edge of the lid, at first the size of a lentil gradually increasing to that of a pea. They are not painful, but on account of disfigurement, a patient will seek advice.

If the swelling is recent, say at the most, three months, the treatment will be exactly the same as already described for the suppurating cyst. Remember the incision must always be a vertical one. If tarsal cyst forceps are not available, the lid can be everted on the finger, the incision made, and the contents removed by means of a currette. There is not so much bleeding with this type, but it is wise to bandage the eye for a few hours. On the removal of the bandage, wash out the eye with luke-warm boracic lotion.

Occasionally hard glands are met with. As a rule these have been present more than three months. They consist of solid fibrous tissue, and cannot be removed by curetting. They must be removed through the skin. The operation is not at all an easy one, for frequently the small gland cannot be distinguished from the muscle bundles amongst which it lies except by those who are constantly removing them.

The operation is done with 2 per cent. novocaine injected subcutaneously, and cocaine applied inside the eyelid. When the skin is

divided horizontally the fibres of the orbicularis muscle are parted. The cyst is seized by means of toothed forceps, and dissected out completely. It is usually found to have come through the lower edge of the tarsal plate. A suture is necessary to close the wound.

The commonest type of swelling of the eyelid is the stye or hordeolum. This is a suppurative inflammation of Zeiss' glands which are the sebaceousfollicles of the eyelashes. In the early stages, the small gland becomes swollen, and usually the whole edge of the lid is oedematous and painful. An abscess forms which generally points close to the roots of the eyelashes. Styes occur in crops, and often, even in healthy people, become quite a nuisance.

For this condition most parents know to use hot compresses, and often allow the abscess to burst. It is better for the doctor, when the abscess is just pointing, to puncture it with the point of a fine knife. If the end of the handle of the knife is placed within the eyelid, gentle pressure will evacuate the pus. Then a hot boric fomentation should be applied and repeated for several hours.

If styes come in crops, I find the best treatment is as follows. Constant bathing with warm boracic lotion together with a little soft ointment consisting of 10 per cent. boracic acid and 2 per cent. Hydrarg. Ox. Flav., this to be applied by means of gentle rubbing into the margins of the eyelid, also allowing a little to get within the lids.

If styes are associated with boils, especially in adults, the urine should be tested for sugar. If styes still persist, then a staphylococcic vaccine may be employed. Tonic treatment, such as the use of iron and arsenic should be used. Often the correction of an error of refraction will produce good results.

It must be understood that all instruments used in the above minor operations must be sterilised by boiling for at least three minutes.

Occasionally an abscess at the margin of the eyelid will burst its walls, and the bacteria, gain access to the connective tissue beneath the skin. Some time ago I had such a case under my care. The pus had spread upwards beneath the skin and eyebrow on to the forehead. I made a wide horizontal incision beneath the eyebrow, and evacuated an eggcupful of pus. A small rubber tube was left in the wound for 24 hours. The condition quickly subsided, and in a few weeks, the eyelid was once again quite normal.

Another and most unsightly disease of the eyelids is blepharitis, which is a chronic inflammation of the margins of the lids. It may appear in two or three different forms. The edge of the eyelid may appear red, which is sometimes produced by excessive smoking, and is seen commonly now-a-days in young women. The cure of such a condition is the removal of the cause, together with the use of a weak astringent lotion.

The chronic variety, known as squamous blepharitis, shows small white scales resembling dandruff accumulated at the roots of the eyelashes. The eyelashes fall out readily, and so disfigurement results.

In ulcerative blepharitis, when the white scales or crusts are removed, underneath are found small ulcers which distort and destroy the hair follicles. I have seen eyelids entirely bereft of eyelashes owing to this cause. If the blepharitis is associated with a conjunctivitis, and scales have not formed, what is found instead are small dry particles of inspissated pus. This is one of the causes of styes, so that not alone should the eyes be bathed with lotion, but the crusts removed by sharp rubbing with warm sodium bicarbonate lotion, 10 grs. to the ounce. In the scaly form, the scales must be completely removed by the constant use of such an alkaline lotion as sodium bicarbonate, and the edge of the lids gently massaged with the finger smeared with ungt. Hydrarg. Ammon. 8 grs. to the ounce (paraffin molle) or Hydrarg. Nit dil. 40 grs. to the ounce.

In the ulcerative form, the former ointment would be less painful to apply. The edges of the eyelids should be so treated night and morning. By the end of a few weeks, a distinct improvement if not a complete cure will be found.

In old chronic cases the edge of the lid should be touched with a fine camel hair brush dipped in tincture of iodine. This is painful treatment but it gives exceedingly good results. On no account should the iodine pass the margin of the eyelid.

Finally, a condition sometimes found in elderly people who have suffered from a conjunctivitis, is eversion of the lower lid, or ectropian. The conjunctiva round the lower eyelid has become swollen, and it is due to the swelling of this membrane that the lid becomes everted. Tears pour over the cheek, and the constant wiping aggravates the condition.

In such cases there is no need to think of operation. The simple painting, every other day, of the swollen conjunctiva with zinc sulphate, 2½ grs. to the ounce, the patient using a much weaker zinc lotion himself several times a day, will completely restore the lid to its natural position.

Diseases of the Conjunctiva.—No. 2.

The eyelids are lined by an exceedingly sensitive membrane, the conjunctiva. It is closely applied to the tarsal plate. If the lid is everted, fine streaks are seen running perpendicular to the margin. These are the ducts of the meibomian glands numbering from 20 to 30, but are somewhat fewer in the lower than in the upper lid.

Above the tarsal plate of the upper lid, the conjunctiva is loose and lies in folds. It is then reflected on to the eyeball. These loose folds

permit of free movement between the eyelid and the eyeball. The conjunctiva passes across the eyeball, and is modified on the surface of the cornea so as not to interfere with the transparency of the latter. It is continued on to the lower eyelid and is again closely apposed to the lower tarsal plate. The parts where the conjunctiva is reflected from the eyelids on to the eyeball are known as the superior and inferior fornices.

It will be seen then that the conjunctiva is a sack, open in front (the palpebral fissure), which completely protects the eyeball and the orbit from loose foreign bodies and infection.

The conjunctiva overlaying the eyeball is a loose elastic membrane containing many blood vessels and nerves. The ocular portion can be readily picked up with forceps, and this manoeuvre is made use of when holding the eye in a fixed position during the performance of an intra-ocular operation.

Between the epithelium and the sclerotic is a layer of loose connective tissue. The blood vessels lying in this tissue are almost transparent. One can see the blood corpuscles running in rouloux through the finer arterioles by means of the slit lamp. All these vessels are intensely dilated and engorged during an attack of conjunctivitis, or during the process of repair of an injury to the eye.

On the other hand the palpebral conjunctiva is firmly adherent to the tarsus.

The conjunctiva and the cornea are kept in a moist condition by the tears which are secreted by the lachrymal gland situated in the outer and upper part of the orbit. Normally the secretion is just sufficient to keep the surfaces of the lids and cornea moist. While under the stress of emotion, tears flow freely as the lachrymal ducts are unable to drain away the excessive amount of moisture which therefore flows on to the cheek. The margins of the eyelids are lubricated by the secretion of the meibomian glands.

For some time after a severe attack of conjunctivitis, a considerable quantity of white mucoid secretion is found at the inner canthus which must not be mistaken for pus. This is seen practically at the termination of an acute gonorrheal conjunctivitis.

Bacteria are found in the conjunctival sack, carried there by dust and wind. Most of the organisms normally present are non-pathogenic. Diplococci, indistinguishable from pneumococci, are found. Staphylococci are found, generally the albus variety, but in a mucopurulent attack of conjunctivitis the staphylococcus aurius is found. Streptococci, most fortunately, are rare. Occasionally B. coli also is present.

The mechanical action of the tears continually keep the conjunctival sack clean. If the lids are bandaged, the temperature of the

sack is raised which will increase the number of bacteria. Few eyes can remain bandaged for long without a conjunctivitis appearing.

Possibly the commonest form of conjunctivitis met by the general practitioner is a simple acute or catarrhal conjunctivitis. The eye will appear slightly reddened with only a small amount of discharge found on the margins of the lids on waking from sleep. This condition passes imperceptibly to a more congested condition of the conjunctiva together with a thicker mucous discharge. Various terms are applied to this condition. Amongst uneducated people it is often described as "blight," and commonly the condition is described as a "cold in the eye." Certainly cold is required to lower the resistance of the tissues in the presence of bacteria. During the Railway Strike last year, many train travellers had to reach Town by means of open motor cars. Among these I saw some of the worst forms of this catarrhal conjunctivitis. The disease is contagious so that, when a patient presents himself with only one eye affected, he should be warned most urgently not to wipe both eyes with the same handkerchief. He should be told not to use a handkerchief to the affected eye at all, but to use old pieces of linen or cotton wool and to burn these after wiping the eye.

In poor families the disease may spread through a whole house.

If this condition spreads through a school it is known as "pink eye."

In the severer forms, when the lids are everted, pus will be found in the fornices. The epithelium of the cornea becomes slightly oedematous, so that a patient may complain of seeing coloured rings around lights. The discharge is at first mucous, but gradually becomes more purulent. The eyelashes are matted together.

The symptoms consist of discomfort, itching, soreness. Neither pain nor photophobia is marked. If the cornea becomes involved, then the pain and photophobia are prominent. It is this form which is most commonly met with by the practitioner. Most commonly it is acute, but sometimes chronic and with little discharge.

The various forms of conjunctivitis are caused by different organisms. Frequently the Kock-Weeks' bacillus is responsible. This is a very slender rod staining badly with methylene blue. The organism is rapidly destroyed by drying. It is known to cause very definite epidemics.

If the conjunctivitis is caused by the pneumococcus, the development of a hypopyom ulcer should be borne in mind. There is more oedema, and a membranous film may form, which is known as pseudo membranous conjunctivitis. Like the pnemuococcic infection of the lungs, it ends with a crisis, the organism rapidly disappearing.

During influenza epidemics, a conjunctivitis is often found due to the influenza bacillus.

A form of conjunctivitis may be produced by the staphylococcus aureus. Such a form is frequently found in those who work in a dusty atmosphere.

Instead of mentioning at first the various forms of treatment, let me urgently make the following rules. Never bandage an eye that is discharging. I have seen an infection spread from the bandage, over the face, and, in one case (a lady) the infection spread upwards, over the forehead, through the hair to the back of the scalp. All the hair had to be removed and large scalp fomentations applied. Remember then not to bandage an eye from which there is a purulent discharge.

Do not use Hydrarg. Ox. Flav. This is the commonest mistake practitioners make when they meet this condition. The essential thing in the treatment is regular irrigation.

With the average mucopurulent conjunctivitis, my treatment is as follows. First the eye is washed out with warm boracic. The lids are then rubbed over with 15 per cent. Protargol. This is not painful, and thus the agony produced by silver nitrate painting is avoided. To the patient I give Gutt. Protargol 5 per cent., to be dropped into the eye night and morning. The patient on waking finds the lids glued together. The discharge should be washed away with a little warm boracic. Then a drop or two of the 5 per cent. Portargol instilled. Allow this to remain in the conjunctival sack for 20 or 30 minutes and then wash out with Lotio Hydrarg. Perchlor 1/10,000. A patient should not be given a stronger lotion than this. I have known of 1/200 Hydrarg. Perchlor. having been given, with most disastrous results to the cornea. The resistance of the surface cells was completely broken down, and both corneae destroyed.

At mid-day the eye should be washed out with Lotio Hydrarg. Perchlor. 1/10,000 alone. Before retiring, the 5 per cent. Protargol drops are again instilled, allowed to remain for 20 minutes, washed out with Perchloride lotion, and a small piece of 10 per cent. boric acid (paraffin molle) applied within the lids. Such treatment will soon reduce the inflammatory condition of the conjunctiva. If the case is not doing well, it is because the patient is not carrying out the doctor's instructions properly.

A patient will often ask, " But how can I bathe my own eyes ?" If he has someone to help, this can easily be done by dropping the warm lotion from a piece of soaked cotton wool, the lower lid being held down, allowing the lotion to gain access to the lower fornix. If it is possible to procure an undine the lotion can easily be poured into the eye.

If the case is somewhat obstinate, repeat the painting of the lids with 15 per cent. Protargol. The application of the ointment is by means of a small glass rod. The lower lid is pulled down with the fore-finger of the assistant, while the rod, held horizontally, places a small piece of ointment into the lower fornix. At that moment the patient is told to look down with the result that the upper lid following, is held down by the finger over the glass rod which is gently withdrawn sideways. This is undoubtedly the best way to put ointment into an eye.

Sometimes one is forced to use 2 per cent. silver nitrate, never as drops, but swabbed on the everted eyelids by means of a small piece of cotton wool wrapped round an orange stick or match. The excess of silver nitrate should be washed out of the sack immediately.

Let me repeat then three "nevers." Firstly, never tie up an eye which is discharging. Secondly, never use yellow oxide of Mercury in such a condition. Thirdly, never use silver nitrate in the form of drops.

When all discharge has ceased, the eye should be bathed thrice daily for a week, with the following lotion. Pulv. Acid boracis gr. 16, Zinc. Sulph. grs. 1, Aqua Rosae to an ounce, to be used with an equal quantity of warm water.

One patient I saw had not returned to her doctor, but had continued to use the Protargol for over six months. When I saw her the sclera of each eye appeared quite black, due to intense silver staining of the conjunctiva. This was a permanent stain.

Two of the most serious forms of purulent conjunctivitis are as follows: ophthalmia neonatorum occurring in newborn children, and acute blennorrhoea of adults.

It is an unfortunate fact that the general practitioner commonly sees cases of babies a few days old suffering from this disease. There are many different forms of treatment which has produced confusion in the minds of many medical men, so that at times the most abject failures result from treatment.

This disease is a preventable one. It is acquired at birth. Credé's prophylactic treatment of dropping a 1 per cent. Silver Nitrate solution into the eyes of the infant immediately after birth has greatly lowered the incidence of this disease.

Frequently a mother at the time of the birth of her child is in grave danger and it often happens that a doctor is so concerned with the life of the mother, that if the child appears to be healthy and vigorous, the requisite amount of attention is not given to it. The doctor should see the nurse actually putting the drops within the baby's eyelids. If Silver Nitrate is not available, 10 per cent. Protargol can be used, but I believe the use of Silver Nitrate is the safer procedure.

May I suggest a further prophylactic measure to be found on page 547 of Tweedy and Wrench's *Practical Obstetrics*, the douching out of the vagina with an antiseptic solution during the second stage of labour in all women who are found to be suffering from purulent discharges.

This disease is responsible for a large proportion of all blind people. The figure varies greatly. Fuchs has placed it at 10 per cent.

The purulent discharge is usually noticed on the third day, although babies are often brought to hospital several weeks old and still suffering from the disease.

The clinical appearance is as follows. Both eyes are usually affected at the same time. The lids are swollen and sometimes stuck together. Sometimes the pus, thick and yellow, is found oozing from between the lids. When this has been washed away, and the conjunctival sac cleansed, the bulbar conjuctiva is found to be red and swollen, but not to such an extent as the conjunctiva lining the lids. Sometimes the palpabral conjuctiva is enormously swollen and bleeding.

If the lids are stuck together, the doctor should put on his glasses if goggles are not available, before parting the lids, as the pus will often squirt out with some force. Pus entering the doctor's eye is an accident that sometimes occurs. Should it occur, the doctor's eye must at once be thoroughly washed out with warm boracic lotion and his lids touched with 15 per cent. Protargol. This applies also if the same accident happens to a nurse.

If the case is fresh, on parting the lids, the corneae are seen to be clear, but if there has been delay in bringing the case to the doctor's notice, he may find the corneae dim or somewhat steamy in appearance. It may be definitely ulcerated, or it may be actually perforated with the iris as a rule filling the hole.

The method of examining such a child has been described in innumerable text-books. It is as follows. The nurse holds the child on her lap facing the surgeon. The baby's head is placed between the surgeon's knees. The nurse holds the child's hands against its body. The surgeon steadies the head, and examines the eyes. I prefer what I think to be a much more useful method. While on a table, wrap the baby around with a sheet so that the little arms are pinned against the side and cannot be moved. A nurse can place a hand on each side of the baby's head to steady it, and so allow the doctor to open the eyelids, and gain a good view of the conjunctiva and cornea. This should be done under a good light. It is the method we have adopted at the Western Ophthalmic Hospital.

The pathology of these cases is very interesting. At the London Lock Hospital where a ward is devoted to such cases we have found that 100 per cent. were due to the gonococcus, whereas at some of the

large Ophthalmic Hospitals 70 per cent. or so alone were due to the gonococcus, the remainder being due to the B. coli streptococci, pneumococci and staphylococci. One case I had, which was unilateral, with half of the cornea sloughing in a nine days old child, was due solely to the staphylococcus aureus. However, the dense yellowish pus emanating between the red swollen eyelids is pathognomonic of the true gonorrheal ophthalmia.

The treatment of these cases is urgent. Hourly irrigation is the chief feature. At the outset the lids should be firmly swabbed with 2 per cent. Silver Nitrate. The excess is at once washed out from the conjunctival sack. Remember, Silver Nitrate drops must *not* be used, otherwise it is certain the cornea will suffer from erosion. Neither should any strong antiseptic be used, and although many solutions have been recommended, all that is required is constant irrigation with a mild antiseptic without caustic qualities. Such a thing as a stronger solution of Hydrarg. Perchlor. than 1/10,000 should not be used. I have seen a case which was propressing favourably to have 1/200 Hydrarg. Perchlor. solution applied, with the disastrous result of both corneae sloughing, the child being completely blind.

What is the explanation? The cornea is defended by a fine epithelium which, if destroyed, can allow infection to reach the substantia propria of the cornea. I have applied 2 per cent. Silver Nitrate to the eyelids of an adult and have at once examined the epithelium with a corneal miscroscope and slit lamp. I found the superficial cells had been so affected as to produce the appearance of having been burnt by a caustic. No wonder some authorities believe Silver Nitrate should not be used at all. But for several years all of the babies taken into the ophthalmic ward of the London Lock Hospital, have had Silver Nitrate applied at the outset. Also at other hospitals I have done the same, and I have never seen anything but good come from such treatment. I do not advocate the use of Silver Nitrate daily. Fifteen per cent. Protargol will do as well.

Where the mother must attend her own child, painting the eyes daily with 15 per cent. Protargol in the morning by the doctor or nurse, and hourly irrigation with warm boracic lotion, together with one drop of 5 per cent. Protargol in the evening, will bring about a thorough cure.

At hospital therefore, the eyelids are painted for the first time with 2 per cent. Silver Nitrate. To the mother I give boracic lotion and 5 per cent. Protargol drops. The mother is told to bathe away the discharge from the eyes as soon as any appears. If the disease is slow in abating, it is most probably due to the mother not cleansing the eye frequently enough, therefore the help of a nurse should be sought.

It is not possible to place every child in a hospital ward, nor, indeed, is it necessary if the case pursues its normal course. The most

important part of the treatment is the constant irrigation with a warm weak lotion.

Such a ward as the Ophthalmia Ward at the Women's Lock Hospital in London is exceedingly useful, as here we take in both the mother and the child, each for appropriate treatment. Should any of my readers be associated with such a ward in any hospital, may I suggest that none but babies suffering from ophthalmia neonatorum are given beds in such a ward. The disease is frightfully contagious. Where a baby's eyes can recover, an adult's can only recover with the greatest difficulty.

During the course of treatment, should the slightest sign of corneal haziness be found, ½ per cent. atropine drops should be put into the eyes. A fact, I have noticed is that the cure is much more rapid if ½% atropine drops are instilled each day in all cases of ophthalmia neonatorum. After a corneal ulcer gives way, the iris is usually found filling the perforation. Infection is thus kept without the eye so that the same irrigation can still be used and, in some cases, a useful eye results. Unfortunately many eyes in adults show large anterior synechiae together with dense corneal scars. They are the result of an attack of purulent conjunctivitis in infancy.

HYPNOTISM AND PSYCHOTHERAPY IN MEDICAL PRACTICE. *

by

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In a former paper † I have discussed the various mutual relations between the psychical and physical component of the human organism and we have seen what great influence the psyche is able to exert on the body in physiological as well as in pathological life.

Although this influence, the power to produce somatic reactions by the way of the psyche, is generally recognized as being very effective, the medical profession still does not make sufficient use of it for therapeutic purposes. Many medical men look upon psychotherapeutic methods as a sort of unscientific humbug and consider it beneath their professional dignity to be bothered with the psychical problems of the patient. But the psyche is a factor which we have to deal with in the same way as with physical signs, and a right conception of the psychical personality does not only help in conceiving the right diagnosis but is also an essential guide in treatment. *There is an objective picture of the disease and a subjective one.* The physician often rather cares for the first, the patient naturally more and often only for the second. Both have to be considered, the latter not less than the first, in as much as the latter does not always disappear when the organic disease has been cured, especially so in a neurotic individual, who may prove inexhaustible in the variety of displaying subjective symptoms.

It is evident that the numerous complaints which have their root in the psychical life of the patient can only be influenced by psychical means, hence the main domaine for the application of a rational psycho therapy are the many forms of neuroses and phobias. The main feature in a neurosis is the failure in mental adjustment to the environment. The inner conflicts arising out of this situation manifest themselves in outward symptoms. Such disturbances of psychical equilibrium often take place at important changes in life (entrance into school, engagements, marriages, changes of occupations and domicile). Life in the tropics with its many opportunities for emotional wastage is especially liable to produce abnormal fatigue and mental irritability.

But psychical treatment is also indicated in those organic troubles which develop from a neurotic basis, so called organic neuroses, and further in organic diseases, overlapped and complicated by psycho neurotic symptoms, like spastic conditions in asthma, oesophagus and

* Read before the Hong Kong Chinese Medical Association.

† Caduceus, May 1928.

gall-bladder affections, to mention only a few of them. Thus we often may rather speak of *psycho-somato* therapy than of psycho therapy alone.

If medical psychology is neglected by the medical profession and if we do not care to study psycho therapeutics and apply them where they are indicated we need not be surprised to see all sorts of quacks and christian scientists flourish and attract the attention of patients.

Psychical treatment was by no means entirely ignored in former times. Hippocrates and Galen already emphasized the importance of mental influences in the cure of disease and ancient medicine which to a great extent was in the hands of priests is full of records of miraculous healing in which auto-suggestions in conscious and hypnotic conditions play an important part. The Temple sleep of the old Greeks and Egyptians, the Yoga sleep of the Indians and the performances of magic by the fakirs are phenomena of auto-suggestion and auto-hypnotism. The curative effects of the breathing exercises of the old chinese doctors, of prolonged meditation with profound introspection and of the modern so-called *autogenic* organ exercises are due to the influences of suggestion.

Hypnotism as the oldest and most effective method of influencing the human psyche has not only interested people of all times but has more recently become the subject of scientific investigation. Especially Bernheim and his school at Nancy have the merit of having introduced hypnotherapy into scientific medicine. When 25 years ago, I visited Nancy to study Bernheim's methods, I was struck by the many possibilities of successful applications which I saw demonstrated by this method.

Hypnotherapy is based on scientific principles, physiological facts and psychological experiences, which we may encounter daily in our life. It is difficult if not impossible to give a correct definition or explanation of the physiological process and the nature of hypnotic sleep. We are not even able to explain the processes of normal mental activities, but we can say that the *hypnotic condition is a perfectly physiological phenomenon,* for all hypnotic symptoms and signs have their analoga in non-hypnotic life. Hypnotism has of course nothing to do with magnetism, spiritualism and other of the so-called occult sciences.

Susceptibility to suggestion is the chief feature in hypnotism. We all are more or less subject to suggestions, and the knowledge of their nature and effects does not in the least protect us from occasionally becoming their victims. The power of suggestion is immense, and as a psychical stimulus and emotional factor usually not realised in all its details and consequences, although there are instructive examples enough in history and daily life which demonstrate its mighty influence. The religious miracles, the cures in Lourdes and similar

places are typical examples of the astounding effects that can be produced by simple suggestion with following exalted emotions.

Power of personality, authority and also love, play an important role as suggestive agents, thus the prescription of a famous professor of medicine may work wonders which an obscure country doctor with the same directions would never be able to produce. The influence which religious leaders have exerted on the great masses is mainly due to their great power of suggestion, but even lunatics have been successful in deceiving educated and intelligent people, and for the multitude there seem to be no limits to the belief of the most stupid and senseless suggestions.

The infatuation and complete spiritual subjugation of the last Tsarina to the " new prophet " Rasputin with its tragical consequences not only to the Imperial family, but to the whole country is one of the most gruesome and spectacular examples in modern history of the effects of personal influence by suggestion. The great war viewed from the psychological stand point, has furnished the best examples of wide spread mass suggestions. Especially in the beginning and in the countries most actively concerned the conditions for effective suggestions were extremely favourable; the spirits of the population were pitched to the highest degree of expectant attention and ready to believe everything they wished and desired in their imagination; criticism, reason and logical reflection were discarded and even visible proof had no convincing effect. On the other hand the war produced reactions of a quite different nature in as much as hysteria and neurasthenia disappeared, all petty sorrows and troubles were forgotten and the women did hard and strenuous work in hospitals and in other occupations which they never would have felt able to do without this immense psychical stimulation.

All these phenomena including the coarse sense delusions can be easily produced in striking similarity in hypnotic trance.

But also in daily life without special anticipation *delusions of each of our senses are frequently experienced.* Thus many persons will distinctly perceive a feeling of heat when nearing a stove, although there is no fire in it. A lady friend of mine could not sleep one night on account of the sticky air in the room and asked her husband to open the window. " What a relief to breath the fresh air!" she exclaimed and quickly fell asleep. On awakening the next morning she found that the sleepy husband had opened the door of the wardrobe!

When dreaming, we accept the most phantastic pictures without criticism. It is therefore not astonishing that a person in hypnosis, a condition similar to sleep, will accept the hypnotizer's suggestions as real. We further have to realise that *in the hypnotic stage* of consciousness *mental stimulation can produce a more powerful physical reaction*

than ordinary will power does under normal circumstances since in the former condition all counteracting and inhibiting factors like criticism, judgement and fear are entirely eliminated.

We can of course also influence a person—but usually to a lesser degree—by *simple* suggestion and persuasion without hypnosis; for instance by exchanging opinions and arguments which might convince him to adopt our view and follow our suggestions.

I have stated before that all hypnotic phenomena have their analogy in conscious life. This also holds good for the so-called *rapport* by which term is understood that the medium, in spite of being in deep dream consciousness, still continues to hear the hypnotiser's words and follows his orders. A mother who is not disturbed in her sleep by the loud noises on the street will awake upon the slightest cry of her baby; or a doctor in the hospital, indifferent in his sleep to all kinds of sounds, will readily awake upon the gentle tapping of the calling night nurse. During the war the soldiers used to sleep the soundest sleep in the trenches amid incessantly continuing heavy gun fire, but awoke as soon as the firing stopped or some new unusual noise like the ringing of the telephone was perceived.

The *posthypnotic rappert,* the phenomenon which is illustrated by the act performed by the person according to the orders received in hypnotic dream consciousness also has its parallel in conscious life. Whilst walking in the street in vivid conversation with a friend the aspect of a letter box suddenly may remind us of our intention to post a letter. We might post it quite unconsciously and the association with the letter box also may remain absolutely in our subconscious mind, so that later we will not remember having posted the letter at all. In a similar way the events in hypnosis are dormant in the second or subconsciousness, but are awakened by the stimulus of association; then the person is urged to act according to the imposed suggestions. It is like an inner voice which commands " You have to do it " and from which, even in every day life, most people can not free themselves, just as we can not simply discard an unpleasant sensation out of our mind, which occasionally, arises in connection with a thought of some highly disagreeable incident in our life.

The same phenomenon we find in pathological conditions especially in certain forms of phobias in which the source from which a fixed idea or phobia had arisen becomes repressed out of the memory, but continues to work subconsciously in our mind, we nowadays speak of these phenomena as incarcerated affects or psychical complexes. I shall refer to them later, but will give here only an illustrating example. A girl in charge of a child leaves the room. Soon afterwards she hears a sudden shriek of the child, which has fallen out of the window. Later, on each occasion when opening a door, she felt a curious sensation

of fear and anxiety which developed in a regular phobia, the real cause of which was not known to her.

It may seen astonishing that even a simple hypnotic suggestion is able to produce quite extraordinary effects, but if we realise how a thought or idea arising from a single word or even a single written character may set afire our mind and imagination we will find no *difference between normal psychological reactions and those in hypnotic or posthypnotic condition.* Let us for instance take the following example: A lady expects her husband arriving with the children on the next steamer from home. She receives instead a wireless telegram with the word, "*Stranded.*" Now imagine her excitement and anxiety, the revolution this word produces in her expectations and hopes! What a series of associations and consequences may arise out of the situation. Then what an altogether different effect should have been produced, if by a slight omission and change of letters the word had been, "*Landed.*"

In hysterical individuals with a very susceptible nervous system a dream may have very marked after effects comparable with post hypnotic phenomena. A girl dreamt that two men were pursuing her on a lonely road and she ran as fast as she could until she fell down entirely exhausted. Next morning she awoke with complete paralysis of her legs. Although of purely functional nature this kind of paralysis may nevertheless persist for months and years. In one case of my own observation a boy of 15 years whilst walking on the street had witnessed a motor car accident. Soon afterwards he developed a complete motor and sensory paralysis of one arm which resisted every treatment for years. In hypnosis the boy revealed the fact that he had seen the driver lying under the car with his arm badly crushed. With adequate hypnotic suggestions in relation to the accident the paralysis gradually disappeared. Likewise in the case of the girl the hypnotic treatment would consist in letting her go through the same dream events again but with suggestions of a harmless ending in the sense of a curative effect.

These examples show that *in hypnosis we have not only a very powerful therapeutic agent but that we are further able to obtain information with regard to etiological factors* hidden in the subconscious and also with regard to many secrets which the patient otherwise would never give away and which may furnish us with useful hints for treatment.

Hypotherapy, as we have seen, works through the effects of suggestion. To many medical men the idea of "deluding" the patient may seem repugnant, but do they not themselves, when they are seriously ill, often feel rather more comforted by pleasant suggestions

than by medicine? Is it at last less scientific to produce curative effects with the psychical co-operation of the patient than with the mere material help of drugs? If we restore the speech of a patient with hysterical aphasia or cure a neurotic dyspepsia by means of electricity and drugs or with hypnotherapy is irrelevant with regard to the success: one method is as scientific as the other, *ultimately the reactions take place through the same channels.*

Impressions conveyed from outside through our sense organs as well as conceptions and ideas originating in our mind may also be characterised as *signals* which lead to organic reactions. *The effect is the same whether the signal is given as a suggestion in hypnosis or produced by a real sense impression.* Thus the hypnotic suggestion made to an individual, that he stands naked in the snow produces the same symptoms and signs as a person, really standing in the cold, would display. In these experiments the changes in size of the cutaneous blood vessels can be proven by the capillary microscope. To the same extent as normal intake of food also pseudo-feeding is followed by secretion of pepsin, hydrochloric acid and pancreatic juice. Ascending and descending of the stomach can be observed by X ray examination as a resulting reaction on the suggestion of an exciting or depressing nature.

All these observations demonstrate, that *with hypnotherapy we are able to produce the most astonishing effects on the circulatory, respiratory, digestive and glandular apparatus,* that we can reproduce signal symptoms, similar to those, which in daily life, evoked by impressions from outside, together with mental associations, create and tend to revive and maintain neurotic conditions. By linking these signal symptoms with associations of a non-irritant character the patient can be helped in gradually overcoming the neurosis. An example will serve for illustration: A girl was hypersensitive to roses, which promptly caused her an attack of asthma. On closer examination it was found out that artificial roses had the same effect. The picture of the rose proved to be only the signal for releasing the attack. The neurotic character of the asthma as a purely conditional reflex reaction was thus clear. Adequate suggestions in hypnosis destroyed the effectiveness of the characteristic signals and hereby checked the release of the reflex, with the result that the attack never occurred again.

Certainly not all cases of asthma belong to the category of the nervous reflex type, but even cases, in which there is no clear evidence of a neurotic background, can be benefited by hypnotherapy. The excitability of the vegetative system and the susceptibility of the organism to allergic substances is generally much increased in asthma; with *hypnotherapy this hypersensitiveness can be lowered* to the effect that the organism would then respond only to a larger quantity of allergic

substances than before, the defence against the latter thus becomes strengthened with the result that in mild cases an attack can successfully be prevented. There are cases even of severe asthma reported in the medical literature in which all kinds of treatment including changes of climate were of no avail until with hypnotherapy a permanent cure was established.

The effects of hypnotic suggestions on the skin and their good results in psychogenic dermatoses are especially striking. In 1911 at the neurological conference in Frankfurt a lady was demonstrated who developed a blister on the skin within a quarter of an hour after the suggestion was given in hypnosis that a hot iron had touched her on this particular spot. R. Schindler reports the case of a 32 year old woman who presented the picture of a chronic endocarditis with high temperature and diffuse ecchymoses all over the body. During four years she was treated in a hospital with various drugs and methods without result until one day a large blister which had developed as the result of an hypnotic suggestion had revealed the true nature of her troubles. Subsequently she was treated and soon afterwards perfectly cured by hypnotherapy.

The neurotic form of *urticaria,* in its nature a reflex reaction of defence, and certain forms of *eczema and pruritus,* the latter frequently an equivalent of masturbation, are also accessible to hypnotic treatment.

The secret of many remarkable cures with hypnotherapy does not lie so much in the success of relieving the patient from his prevailing nervous symptoms as in the *creation of better mood and the feeling of happiness and self-confidence;* appetite and sleep improve and in consequence mental and physical efficiency increase. O. Bunnemann reports a case of a surgeon who for 14 years suffered from a chronic ulcerating eczema of the arm, following a burn with X rays. When in depressive mood the condition of his arm always became decidedly worse. At last he went to a specialist who treated him with hypnosis and since then the eczema began to dry up and heal. He himself attributes the remarkable effect to the transformation of his depressed mentality into a condition of high spirits and hopefulness.

Certain cases of *hyperemesis gravidarum, irregular menses and nervous climacteric troubles,* the latter often a subconscious camouflage of a dying sexuality, can also successfully be treated with hypnosis; thus menstruation of a three weeks period has been changed into a permanent circle of four weeks by a single hypnotic suggestion.

Proctostatic obstipation as a result of a spastic condition of the sphincter ani, which frequently, especially in young women stands in intimate connection with the *vita sexualis,* is also accessible to

psychical treatment; local therapy in these cases would certainly make matters worse.

With *nervous children* from the school age onwards hypnotherapy is the method of choice since most children are very susceptible and therefore easily hypnotized, but lack the higher qualities of understanding and intelligent co-operation necessary for the more complicated analytic methods. In cases of *enuresis nocturna* for instance I have succeeded with suggestions in hypnotic sleep like the following: "You can not wet the bed any more, as from now, you will always wake up before." But simple suggestions given in the proper way and at the right time will often do just as well, the mother who "blows away" the pain, when her little boy has bumped his head, instinctively applies suggestive therapy. In further giving or promising a piece of candy she awakens the *feeling of pleasure* which, as we shall see later, is a wonderful help in psycho therapy. In habits of longer standing a more elaborate hypnotic treatment is needed. Thus in *habitual vomiting*, which often is found due to a previous experience in connection with a disgusting dish, the remembrance of which has entirely faded out of the child's mind, we would reproduce the responsible event in hypnotic sleep again but with the tendency to dismantle it from its disgusting effects, hereby creating a wholesome change in the inner attitude towards the former event. It wants a good deal of medical diplomacy and painstaking efforts to strengthen the newly gained position, for only if the new attitude is firmly established the cure can be regarded as permanent. We further must not forget to pay attention to the *influences emanating from school or family;* the latter especially is a great dynamic factor in constantly furnishing psychic traumata and thus producing the nervous child. *Epileptiform fits* are not infrequently seen as outward manifestations of a fear complex in relation to a family member. Unless the dangerous effects of a nervous and over anxious mother or a neurasthenic father are eliminated there is little hope for a permanent cure of such a child.

A nervous child has to be treated early, for out of what usually is looked upon as a purely bad habit more serious conditions and defects may develop which lead the child to the fixed idea of considering himself free from all duties and responsibilities, in consequence of which a feeling of inferiority arises which increases the neurasthenia.

I have dwelt somewhat at length on hypnotism and its therapeutic effects, *for hypnosis represents the original method which gave rise to the development of the later so called psychotherapy.* Hypnotherapy certainly has to be considered only as a special form of psycho-therapy and much of what I have said with regard to hypnotherapy also holds good for these other psycho-therapeutical methods, to which I have to refer soon.

Modern hypnotherapy as I have tried to demonstrate is no longer the former treatment with hypnotism; we do not content ourselves with simply freeing the patient by hypnotic suggestion from his pathological symptoms but we go further and by making use of the experiences gained from the patient in his hypnotic sleep we try to change his attitude towards his pathological condition. Since in hypnosis the plasticity of psychical sensations is increased the suggested sensations of pleasure and happiness will gradually overpower the unpleasant feelings and further, if those suggestions are firmly linked with pleasant sensations of the senses and affective emotions, they become more and more fixed in the subconscious, the patient becomes indifferent towards the formerly irritating agents and thus gains control over them.

With the progress in the understanding of psycho pathological conditions and with the modern conception of neuro-and psycho pathias as reactions of our individual psychical personality also a change in therapeutical methods has taken place. The more or less passive attitude, the kind of psychical anaesthesia in which the patient was kept with hypnotherapy has been more and more replaced by methods by which the patient is stimulated to co-operate more actively in solving his inner conflicts.

Thus the method of psycho-analysis developed. It is to the merit of S. Freud of Vienna, to have worked out this well defined psychical method of treatment, stimulated by his observations in Bernheim's clinics in Nancy, and to have started the new movement of Psycho therapy some thirty years ago.

Freud endeavoured to get at the root of the psycho-pathological symptoms by carefully searching and analysing the patient's ideas and conceptions with regard to their genesis and nature, the factors which oppose cure and their inner connections. By encouraging the patient to report in free associations, Freud pretends to obtain an insight into the inner structure of the psychical mechanisms. The kind of the Ego which is directed towards the outward world is always in fight with the tendencies of the inner Ego, which emanate out of impulses in the unconscious. These impulses may originate in psychical traumata of early infancy, even as early as birth itself—Freud speaks of the trauma of birth!—and constantly are at work as desires or libidines incarcerated in the un—or sub-conscious. This *doctrine of the libido complex stands in the centre of Freud's phycho-analysis.* Like the energy in physics which may appear as light or heat, so the libido may manifest itself in various transformations and qaulities. *Libido is psychical energy* diverted on manifold subiects. It acts in the way of a tension which seeks an outlet or a definite neutralisation. There is often a desire for obtaining something which has not yet been obtained, a desire which usually will never be realized.

Most of these effects, hidden in the subconscious, are in the opinion of Freud in some way related to the sexual sphere. Thus he creates the so-called Oedipus complex, developing out of the early adopted psychical attitude towards the parents whereby the child's inclinations instinctively tend towards the parent of the opposite sex. Another complex in Freud's psycho-analysis is the castration complex. The same idea is expressed later by Freud's pupil Adler in the inferiority complex, but without its exclusively sexual character.

The later period of Freud's work is marked by his view that many events in life have a symbolic meaning and in this form influence our mind. Thus the downhearted feeling before a pending examination has its origin in the castration complex, the pupil suffers symbolically from the fear of castration. According to another interpretation cancer is the expression of the lost sense of life or the fight between the wish to die and the will for life but without aim. Freud further analyses the dreams, the secret judges of the human psyche, but hereby often looses himself in absurd interpretations and word play conceptions. A standard dictionary on dream—interpretations has been worked out and gives us many examples of those phantastic speculations and aberrations from the path of scientific reasoning.

The danger of Freud's doctrines lies in the numerous potentialities of distortion and misinterpretation of the so-called inferred facts and symbolisms and further in the generalisation that all psycho pathological manifestations stand for some kind of an inverted libido. We must not forget that these so-called complexes, repressed out of consciousness, are pure conceptions, devised to explain the phenomena of thought and behaviour as effects of abnormal sensations. The dominating role at last which Freud concedes to the sexual complex is certainly not justified and is mainly responsible for having brought the whole psycho-therapeutic movement somewhat into disreputation.

In this connection it is interesting to "analyze" Freud's own personality. Freud is an Austrian Jew. The Jewish race is characterised by an outspoken sexuality; Jewish medical men and savants are often attracted by sexual problems and it is not mere coincidence that most of the specialists for venereal diseases and the professors of sexual ethics are Jews. This fact probably explains a good deal of Freud's characteristic attitude, his tendencies and the origin of his views. Besides Freud's *analysis is not free of metaphysical and spiritual elements*, but in spite of the many weak points in his method and teaching Freud deserves the merit of having attracted our attention to the research on an hitherto much neglected field; his pupils and followers have worked out his ideas in other directions and on different lines.

Alfred Adler, probably influenced by the philosophy of Nietsche brings the personal problem to the foreground and bases his system of individual psycho-therapy on the *human desire for value and might,* the power libido and the conflicts arising out of the feeling of impotence and inferiority; feelings which originate in congenital and acquired mental and physical frailities and debilities.

Power and value play an important role in human *life* and we all try to get the most of it. The child who smashes his toys or tears her dolls, demonstrates the innate tendency of power and might. The individual who does not feel able to compete successfully in what daily life requires and lacks the energy to take the necessary decisions, becomes discouraged. In his endeavour to compensate for his inferiority the failing success manifests itself in neurotic symptoms which serve as a sort of displacement and justification for his inability to find an harmonious contact with the surrounding world.

Jung, another pupil of Freud regards the psycho-neurotic manifestations not as reactions of the past but as *defence and security reactions* against influences and events of the present and future. Others still hold other views and follow their own methods of treatment and the various schools already begin to combat each other in fruitless discussions. Certainly many of the various views and ideas are not new but old experiences expressed in other forms and conceptions.

I may further mention here that some writers consider the re-pression into subconsciousness rather as a healing process than a source of further irritations.

In summarising our observations on the different doctrines we can say that the *psycho-therapy movement is still in its infancy* and much unnecessary ballast has still to be cleared away before it will become a general method of treatment.

But no matter how much we accept of the present teachings of psycho-therapy it can not be denied that this new movement brought on a great interest in psychical actions and reactions and a far greater understanding of the psychical needs of our patients and as a result of this the *treatment of the various kinds of psychopathias has much gained in rationality and effectiveness.* The experiences in psycho therapy teach us to abstract from our own Ego, ideas and views and to learn to think as the patient thinks and to feel as he feels, so that intuitively we know how in a certain condition he would react on a certain stimulus of the outer world.

Unless we understand the problem of the subsconcious and are thoroughly acquainted not only with the libidines and anomalies of character but also with the ideas and intentions of our patient, in one word with the complete picture of his psychical personality our

therapeutic efforts will only be tentative and will lack the rational background and the efficiency which is necessary to create that degree of self-confidence and self-respect in the patient which enables him to solve his vital conflicts and to release him of his anti-real and unsocial behaviour, so that at last he might get strengthened to build up a new personality which better fits in with the surrounding world.

The process of analysing the often very intricate psychical problems of an individual and of correcting the faulty development of his conceptions and libidines may require weeks and months. But once the physician has reached the goal in guiding the patient safely on the right way and sees him follow the right direction one feels not less satisfied than after a successful operation. In quizzing the patient one has of course to be careful not to influence his thoughts by ones own suggestions, which besides misleading us to false conclusions, may, if they do not prove right, hurt and irritate the patient's feelings. Not always will the patient support our endeavour with every possible assistance, but he might set up a good deal of unconscious or even intended resistance to prevent us from coming to the clue. Occasionally a correct answer is obtained by taking the patient by surprise, one may also ask a woman for instance to tell just the thing she does not want to tell. Exaggerated *negativisitic behaviour* with regard to certain points often *means rather positive affirmation*. An occasional lapse in speaking or a mental error may also lead to the right path in the solution of the problem. Thus in a case reported by J. H. Schultz, a 30 year old lady stated during the course of an analysis that, when riding home in her motor car along the lonely 50 miles road she always was afraid of her driver: "I must always think; now I am alone with this fellow and he can do anything with me that *I* like." This reaction was the more remarkable as in her conscious personal feeling and attitude the lady displayed sexually a rather frigid behaviour.

Another example, one of my own experience, demonstrates well how a cure can be affected when the real pathogenic complex is recognized and repressed. A healthy lady, 35 years of age, had been through several pregnancies without any trouble to speak of, especially she never had suffered from vomiting. All the deliveries had been quick and uncomplicated. After an interval of over 5 years after the birth of the last child, the menstruation which always had been regular before, had stopped and on account of this event the patient came to see me. It was too early to diagnose pregnancy with certainty, but very likely she was pregnant. I then had gained the impression that she was afraid of having another child and that she was not at all pleased with the idea.

Some time later, when there was no doubt about her condition she consulted me again, this time on account of very severe vomiting which persisted for many weeks and had resisted every treatment.

She could scarcely keep any food in her stomach and had become rather weak. Knowing from the first time when I saw the lady, that she had an aversion against having another child, although *she emphatically denied such feeling*, I felt sure that this negativistic psychical attitude was working perhaps quite subconsciously in her mind all day long with the categoric imperative: "*I do not want another child.*"

This psychical complex had manifested itself in an organic symptom, the vomiting, as a symptom of defence. That my diagnosis was right was proven by the result of the treatment. After a long talk with the patient and—what in this case was still more important—with the husband I succeeded in convincing the lady that there was no danger involved in another confinement and I further succeeded in completely changing her mental attitude towards the expected child. She became happy and from that moment the vomiting never occurred again. The child was born without further complication and the mother loves her last baby now most of all.

I have mentioned before that hyperemesis gravidarum can be checked by hypnotic treatment. But also simpler methods like suggestion and persuasion may have the same effect. The *psyche* of a woman in pregnant condition is easily accessible to impressions and suggestions from outside and even the most intelligent and logically thinking women are surprisingly poor critics during this period. The physician therefore ought to take this good chance to free such a patient from her troubles with the simplest possible methods. Surely the *intimate mental associations of vomiting with pregnancy* are to a great extent responsible for the hyperemesis. Such associations become *fixed already in the young girl's subconscious mind* in the way of a psychical complex and come into play when the mysterious process of motherhood makes its first appearance.

If once the patient is convinced that the source of his troubles lies in his psychical life his confidence in purely psychical treatment will grow; it is then necessary, provided our diagnosis of a pure psychopathia is correct, that we discard every treatment of a special organ and distract the patient from his organo-centric ideas; otherwise a new complex may arise, for in a neurotic there always remains a certain tendency for the "flight into disease" as a kind of refuge from where the patient does not like to be extorted.

Inhibition and compulsory neuroses are especially liable to recur if the patient continues to live exposed to the same influences of harmful surroundings, which, as we have seen, particularly in children determine to a great extent their activities. Removed into a new atmosphere where new impressions and associations soon repress the dangerous mental connections with the old environment an effective transformation will be more easily secured. The task of psycho-therapy

therefore is not fulfilled when the patient after a thorough analysis has been brought to a clear understanding of the causes and nature of his troubles, for knowledge alone does not cure. When the psycho-pathological mechanisms at last have been destroyed the constructive work of psycho-therapy has to set in. New energies and mechanisms of a sound and wholesome nature have to be developed, the will power and courage of responsibility have to be strengthened. "*Reason and will power represent our purest and best self*" says Lao Tzse and Buddha teaches "*Who defeats his passions, defeats the evil.*" Of course it would be futile simply to tell the patient: "Be energetic, do not do this or don't do that." By actually letting him go through new and even rough experiences under careful guidance we must demonstrate to him the possibilities by which he can overcome his faulty ideas and conceptions. Only then he will learn to adopt himself to the requirements of social life.

That a person may thus become entirely changed does not seem extraordinary when we realise the sudden change of those who, after a life of psychical unrest and depression, full of self-reproach and feelings of unfitness and worthlessness, through certain religious influences go through a kind of *psychical renaissance* and feel uplifted by the confidence of being now on the right way and finally become happy and content in perfect harmony of inner life.

In all our therapeutic efforts we must not neglect to introduce pleasure values into our synthetic work of treatment. The *pleasure principle plays a most prominent part in life.* The long list of intoxicating beverages and drugs in all countries of the world sufficiently demonstrates human craving for pleasure. Whether we adhere to Freud and endeavour to direct perverted libido into sounder channels or according to Adler, attempt to strengthen the individual's feeling of security ultimately the new situation must be supported by pleasure producing elements so that the patient will feel rewarded and satisfied with the change.

In some respect psycho-therapy can be compared in its results with the confession of the Roman Catholic church. "*Confess and Believe,*" these two words have a wonderful effect! But the consolidation, a person might seek for psychical needs, he might just as well find in a sympathetic physician of loving understanding whom he can trust to get advise in so many embarassing situations of life and to whom he can open his heart in confidence without fearing that the doctor might look at his or her troubles from a moralising and condemning standpoint since he sees in them pathological manifestations, symptoms of general human frailities and debilities, of which nobody can claim to be free; the extent to which they develop and mould an individual's nature wholly depending on the influence of heredity and surrounding milieu.

Thus by overcoming the *feeling of guilt, the source of so many neurotic symptoms*, the patient looks at his symptoms more objectively from an unpartial point of view. As after a confession, this *inner catharsis or purification*, which often requires a good deal of self-sacrifice, helps the patient in starting a new life on new principles.

The cathartic method inaugurated by Frank acts in its extreme form like the *shock therapy* with a very strong faradic or galvanic current, on the application of which a functional paralysis may quickly disappear.

Naturally we do not always get the same effect with the same method, individuals react differently. The degree and extent to which a person may respond can be estimated by his reactions on outward stimuli of daily life. A nervous individual will certainly react more strongly and sometimes quite out of proportion to the value of the causal event. We speak of a catastrophal reaction if an incident has seriously shaken the psychical equilibrium, to an extent that the counteracting reflex mechanisms do not suffice to restore it.

A similar but only temporary reaction on shock we find in the *reflectory catalepsy of animals* especially in insects (simulation of "death" in certain beetles). In a neurotic individual a shock may be followed by an increasing psychical disorganisation.

The idea of the shock therapy which has its analogy in the ceremonies of expelling demons in the primitive races, is to cure *similia similibus* and thus let the patient experience all the formidable events of the past again by actually reviving in his phantasy even the minutest details to make the picture as impressive as possible. We also may try to repress the effect of the original event by producing an even stronger affect but of an opposite nature. By repeatedly reproducing these pictures with adequate interpretations the events become objectivated and lose their terrifying character; the patient thus gradually becomes indifferent towards them.

An essential quality which a physician who applies psychotherapy should possess, is that of an authoritative educator. Virchow once remarked, that the medical men ought to become the educators of the human race and surely they are, the most adequatedly prepared persons for this task. No person better than the family doctor can supervise and guide the activities of his patients and keep them within the proper limits of their mental and physical capacities, without fostering exaggerated expectations, which to realise the patient will not be fit or able.

The pediatrist especially can do much useful work in treating *children with characteriological anomalies*, which often correspond to the neurotic conditions of the adult. Here a well directed education in the sense of an individualising psycho-therapy may prevent

the development of a neurosis. Many early detected *anomalies of a sexual character* which, as all who are concerned with nervous and mental work know, are not rare, can be directed into normal channels, but if not treated will gain more and more possession and power in the individuals life and finally will unfavourably determine his attitude and behaviour in sexual matters, often leading to conviction. Nothing is to be gained by sending a young man to prison for a sexual delict which arises out of perverted libido and want of mental balance on the basis of an constitutional debility. These unfortunates suffer a good deal through the inner conflicts which arise out of their natural physiological feelings and the conception of immorality and sin, which one has associated quite wrongly with sexual anomalies. *These individuals are psychically abnormal* therefore pathological individuals which must not be looked upon as parias of the world nor should they be punished, which would increase their feeling of guilt and inferiority; they rather deserve the sympathy than the severe criticism of the public and should be treated if possible in special institutions with all modern means of psycho-therapy.

Many such individuals have been restored in this way to normal life and behaviour again.

The criminologists at least should consider these cases not solely from the criminal point of view but also from its medical aspect. *Sex psychology and sexual pathology are fields which should more generally be studied by the medical profession;* but also the men of law, pedagogues and clergymen should have some knowledge of them in order to come to a better understanding of these mental conflicts and to be able to co-operate harmoniously with the physician in helping mankind to a better social adjustment.

What choice of treatment we ultimately make does not so much depend on the nature of the disease as on the psychical constitution, intellect and culture of the individual; a certain amount of intelligence and interest in the matter is necessary for the success of psychical treatment.

Sometimes we might find it useful, to combine various methods and we need not stick to one single procedure.

Psychical treatment wants a good deal of *tact, common sense, skill, psychological understanding and ability to assimilate* ones own with the patient's ideas and feelings and last, but not least, experience in handling the patient. From the Chinese technique of "face saving" we may learn valuable hints for the use of psycho-therapy.

A thorough analysis of a somewhat complicated case naturally requires some length of time which the general practitioner scarcely can afford to spend over a single patient.

But there are enough cases, for instance among the so-called functional paralyses which can be cured by a short hypnotic treatment.

Even by good advice or an earnest warning given by a psychologically trained doctor in the proper way and at the proper time a patient might be benefited more than by a treatment with drugs.

It is therefore highly desirable that *every physician should at least possess some general knowledge of psycho-pathology and psycho-therapy.* The psychical element takes such an important part in the ailments of the present time that not only the mental specialist but also the general practitioner constantly sees himself confronted with mental problems, which to meet successfully, he ought to be properly prepared. *A right valuation of the symptoms* can only be reached by thoroughly understanding the psychical personality and the first is as *essential for the diagnosis and treatment* as the right " valeurs " are in making a good picture.

Training in *psychological medicine* should therefore form *a part of the equipment of the medical students*, in practice it is surely not less useful than the wisdom of the endocrine disorders; but even neurological and psychiatric knowledge is still far from adequate to the needs of the average physician.

"*Nil nocere*" is one of the foremost principles in therapeutics; but is this principle always strictly observed in medical practice? Do all doctors realise what psychical shock may be inflicted to a patient by the carelessly uttered diagnosis "high blood pressure"? "Blood pressure" has become a sort of a *catch word* which does more harm than a germ which produces physical infection, and which like Damocles' sword may scare away all further joy out of life.

To many it is a verdict of death threatening in the near future and thus a constant source for fear and anxiety, bound to ennervate any patient and to make him sooner or later a nervous wreck. A skiagram showing an enlarged heart or some irregular outlines of the stomach may have similar effects when handed to the patient who as a layman never can have the right understanding of such an object.

A physician with psychological experience will certainly avoid inflicting on his patient such psychical trauma and on the contrary will do everything *to eliminate the fear complex. Many of the organic neuroses are iatrogenic diseases, bred in the doctor's consulting room.*

Certainly with psycho-therapy we may inflict no lesser mental injuries and in putting analysing questions we have to be careful not to infect an innocent patient's mind with hitherto unthought of ideas especially of a sexual character.

There is another reason which should stimulate medical men to acquire sufficient knowledge of psycho-therapy and its principles and that

is to *conserve psychical treatment as a scientific method* of practical medicine and to prevent laymen taking advantage of our neglect and encroaching upon a field on which they do more harm than good and thus bring the method into disrepute. Psycho-analysis has already become a sort of a craze in America; lay analysts attract large crowds of certain classes of people, and not the least of them are women! This movement in itself is pathological, a kind of mass neurosis, which seems to me not free from a masochistic element, a craving for psychical self-flagellation.

Psycho-therapy should be taken seriously and kept free from all unscientific speculations.

Let us imagine a psycho-analyst who lacks medical training and knowledge and who treats a person with psycho-therapy for what in his opinion is nervous dyspepsia but in reality is a beginning of cancer of the stomach!

The Christian scientists are to be reproached for the same great mistake; only their entire lack of knowledge and understanding of physiological and pathological facts gives them the courage to preach the dogma of the omnipotence of mental healing which of course is absurd.

Psycho-therapy must remain in the hands of the men of the medical profession who alone are able to make a correct medical diagnosis and accordingly to choose the adequate method of treatment.

Psycho-therapy is an interesting subject and will amply repay those who study and practise it not only with subjective satisfaction over good results but also with the gratitude of the patient who has been restored to psychical health.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

by

D. W. Beamish, Major R.A.M.C.

A case of this disease occurred in the Colony during June 1928.

Acute yellow atrophy is said to be not uncommon amongst the Chinese population, but there is no available record of any previous case occuring amongst British Troops in this colony.

It is not, however, because of its rarity that it is thought worth while writing a few notes on this case, but because we are constantly admitting cases of mild jaundice.

When this case was admitted, there were other mild cases of jaundice in the wards, and the case in question appeared to be no different from these.

Private P.

Age 21, 3 years total service, 1 year in Hong Kong.

No previous illness.

Admitted on 22nd May, 1928, complaining of a yellow tint in his skin, and feeling out of sorts for 2 or 3 days.

Condition on Admission.

Heart and Lungs—Normal.

Abdomen —No enlargement of Liver—Constipated.

Urine —No albumen—Bile pigments present.

As we have had a number of jaundice cases associated with infection by Ascaris lumbricoides and in spite of a negative result for ova from the stool, he was given Oil of Chenopodium m.x at 2 hourly intervals up to a total of m.xxx.

This is the routine procedure here for Ascariasis as advocated and carried out successfully at Singapore. No Ascaris adults however were voided, and it was considered we were dealing with an ordinary case of catarrhal jaundice.

25th May, 1928.

No change in the general condition, and no further symptoms or signs. Jaundice no worse.

26th May, 1928.

Vomited in the evening and the temperature rose to 100.4. Blood examined for Malaria with negative result.

28th May, 1928.

Jaundice deepening, Van den Burgh test gave a negative direct, but positive indirect reaction indicating a toxic or haemalytic type of jaundice.

30th May, 1928.

Patient now looked definitely ill, and appeared to be getting weak; Jaundice very deep, vomiting a constant and trying symptom. The urine contained a trace of albumin, otherwise was negative, by direct microscopic examination and on culture.

The blood fixture was as follow:s—

Total red cell count	7,000,000 per c.m.
Total white cells	15,000 ,, ,,
Haemoglobin estimatum	87%
Colour Index	0.64

Differential Count:—

Polymorphonuclears	83%
Lymphocytes	10%
Large Hyalines	3%
Eosinophyles	4%

This count with the moderate leucocytosis indicated inflammatory reaction somewhere; clinically there was nothing obvious in this connection.

It would most likely however be due to a certain amount of accompanying acute Cirrhosis. (See later in the Post Mortem report).

4th June, 1928.

Much worse. Perspiring freely. Nausea and vomiting more severe. Complained of weakness in the arms.

On examination there was definite lack of power in the arms, and the hand grip on both sides was very feeble.

Patient looked anxious and ill.

2 c.c.'s of blood from the patient was inoculated into the peritoneal cavity of a guinea pig.

5th June, 1928.

Drowsy. Prostration. Vomiting difficult to control.

Stomach contents contained altered blood. Guinea pig inoculated with 2 c.c.'s of blood intraperitoneally.

7th, 8th and 9th June, 1928.

Little change. Some polyuria. Becoming very weak. Some albumen and pus cells in the urine; no crystals or other abnormality.

10th June, 1928.

Jaundice very intense, patients colour a deep orange, anxious and excitable condition.

Some dilated small veins on the face almost amounting to extravisatio.

Inclined to be delirious. Some abdominal distension.

11th June, 1928.

During the night of the 10th, Violent delirium set in, and the patient was quietened only by Hyoscine Hydrobrom $\frac{1}{100}$ grn.

Unconsciousness gradually developed.

Finally deep coma with stertorous breathing.

He remained in this condition about 3 hours before death occurred.

An account of the Post Mortem findings is appended.

SUMMARY OF CLINICAL FACTS.

Total duration of illness—21 days.

Admitted, complaining of malaise. Icteric tinge on skin and conjunctivae. Appeared to be an ordinary catarrhal jaundice.

Jaundice deepened and vomiting commenced.

Later paresis and mental symptoms, and finally violent delirium, and coma, from which recovery did not occur.

During illness, blood examinations and other tests all proved negative. The Van den Bergh test gave a prompt indirect reaction.

A guinea pig was inoculated intraperitoneally with 2 c.c.'s of blood. No result after 5 days (time of writing).

Clinical diagnosis:—Acute Yellow Atrophy of Liver.

Death occurred at 2.35 p.m. on 11th June, 1928.

P.M. performed at 5.30 p.m. on 11th June, 1928.

Exterior Examination of the Body.

Rigor Mortis not marked.

(*a*) A fairly well nourished youth of apparently 20-22 years of age. No obvious emaciation.

(*b*) Skin showed deep jaundice everywhere.

No other exterior abnormality.

Thorax.

Lungs.—No abnormality noticed. No sign of old bronchitis.

No effusions.

Heart.—Not enlarged. A few petechiae noticed on the muscle walls. Interior of ventricles and arteries very yellow in colour. No valvular disease.

Pericardium.—Normal.

Abdomen.

(*a*) Peritoneum.—No excessive peritoneal fluid. Peritoneum normal.

(*b*) Stomach.—Dilated slightly.

Intestines.—Nothing abnormal noticed.

Pancreas.—Normal.

Liver.—Much smaller than normal, and shrunken. Weight 32 ozs. Surface studded with pulpy areas of yellow colour.

Capsule wrinkled in places.

On Section.—Bright yellow colour in large areas. A few red areas. Tissue pulpy (felt almost like lung tissue).

Gall bladder.—Almost pale in appearance. Normal weight.

Capsule stripped normally.

Bladder.—Somewhat distended, otherwise nothing of note.

Spleen.—Normal in size and appearance.

Brain and Membranes.—No abnormality noted.

MICROSCOPIC SECTIONS.

Lungs.—A few small haemorrhages—many alveoli blocked with mucoid material.

Kidneys.—Tubules show hyaline degeneration in places.

Spleen.—No gross lesion. Some congestion.

Liver.—In some sections hardly any liver cells seen. In these there is much fibrous tissue formation and an excessive number of "newly formed" bile ducts. The necrotic areas seen with the naked eye show the yellow colour when stained with Haemotoxylin and Eosin, and examined microscopically.

In another type of section showing liver cells, the latter are very much degenerated. In these cases the lobules generally appear well defined.

The intralobular vein is small and shrunken, and surrounded by debris (necrosed liver cells). At the periphery of the lobule the cells are more defined and show the typical radiating columns. In all cases the cells are themselves much degenerated, large and swollen. In many cases the nuclei show fragmentation and vary greatly in size.

The Portal Systems show marked multiplication of bile ducts.

Bile pigment is present in all sections.

Fatty dogeneration is not a marked feature anywhere.

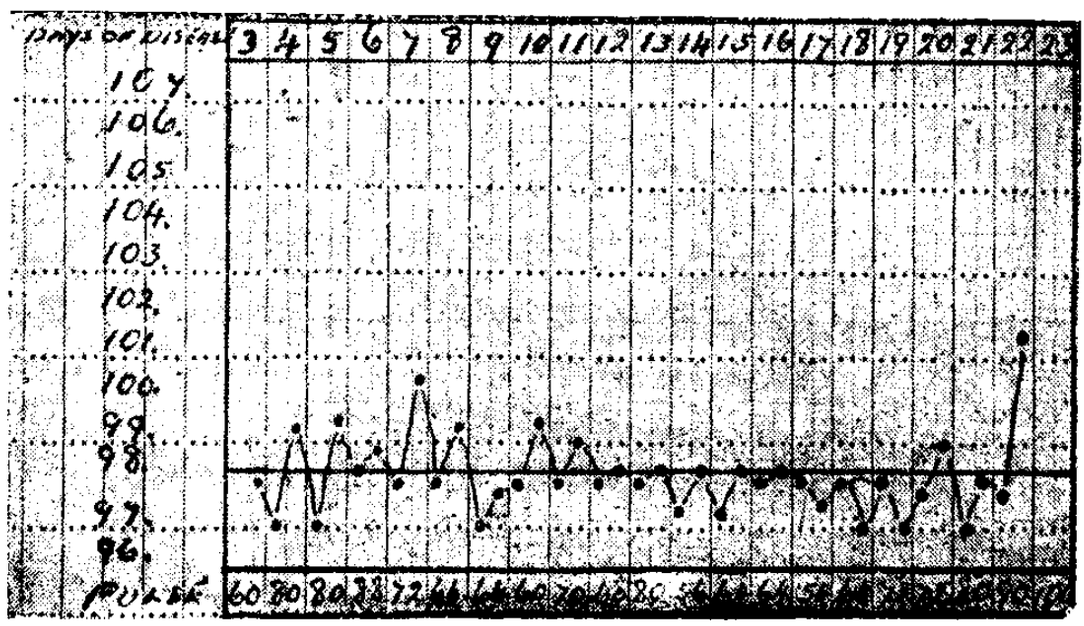
In the liver sections :—

Summarising :—The most common features seen were :—

Type I.—Few faintly staining liver cells. Nuclei, very faint and of different shape and size. A large number of small bile ducts dotted all over the section and in close connection with massive fibrous tissue formation (reactionary cirrhosis).

Type II.—Well defined liver lobules, with columns of swollen and degenerated liver cells radiating towards a large central space composed of necrotic debris and the central vein.

Type III.—A less common feature was a cirrhosis with islets of liver cells, somewhat simulating a chronic granulomatous condition.



HINTS ON THE EXAMINATION OF BLOOD STAINS.

by

E. P. Minett,

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A common question put to a medical witness during a criminal trial is:—"How old are these blood stains"? This question is by no means easily answered and a great deal of caution is necessary if the medical witness is to give evidence of any value to either the prosecution or the defence. There is very little on this subject in medico-legal literature. Sutherland quotes results by Pfaff, Dragendorff and Tamassia, but as their experiments were carried out with a 1 in 120 solution of arsenious acid they do not help much, since for the further and more conclusive tests, such as the precipitin test, it is necessary for the solution to be prepared with normal saline. As will be seen by reference to the attached table, stains of varying ages can be differentiated only on wide lines. Some writers have quoted results but as temperature, humidity, &c. vary enormously in different parts of the world experiments are not comparable unless carried out under identical conditions. I therefore carried out the experiments recorded in the table in an incubator at 37° C.

I employ the following routine process, as this gives a fair chance of answering leading questions such as (1) is it blood? (2) is it mammalain blood? (3) is it human blood? A rough idea can be obtained as to the age of the stain during the first stage of preparing the solution for examination, and by careful observation during this stage, but only within fairly wide limits. It is well to avoid being pinned down to hours or even days in your opinion as to the age of a given stain.

The following is a useful plan for examination of medico-legal "exhibits" as they are called by the police and legal profession.

First examine the cloth (or other material) with a powerful hand lens in a good light, this often enables you to give an opinion as to which side of the cloth the blood was shed on. Fibrin formation definitely seen on one side only is of very great value, as unless the blood is shed upon a very absorbent material, clot formation will have begun on the upper side before the blood is completely absorbed into the material. Make notes of any results seen at this stage. Number and cut out suitable stains placing them in petri dishes correspondingly numbered. These should be incubated at 37° C. careful notes being made of the rate of solution and the time taken up to the point at which no further solution takes place. This is indicated in the table by the word *stop*. I use the following solvents in the order given. First normal saline; if a solution is obtained in this solvent all the known tests for blood

can be carried out and by examining the centrifugalised deposit the morphology of the corpuscles themselves, if present can be made out. This enables the question as to mammalian blood or otherwise to be settled. Most important of all, the precipitin .test can be carried out.

If unsuccessful with normal saline, distilled water is added, this makes an instant change in the solubility of a *fresh* blood stain, but the change is not so marked in stains of varying ages. The solution so obtained can be examined by the chemical tests for blood, but corpuscles if detected are swollen up and distorted in shape. The presence or absence of neuclei however can frequently be made out. The precipitin test cannot be carried out unless careful specific gravity corrections are made, this is practically impossible if only small quantities of solution are available. The final solvent used if the two preceding are unsuccessful is to add 25% of glycerine to the contents of the petri dish. In my experience if the stain is not soluble in this solvent, there is very slight hope of ultimately getting a solution for testing purposes.

If the preliminary tests such as guaiacum, benzidene, Kastell Meyer, are all positive, and the spectroscopic tests for haemochromogen satisfactory, then I give it as my opinion that the solution contains blood. The haemin crystal test is very uncertain and although I carry out the test if enough material is available, it is not in my experience, of so much importance for diagnostic purposes as the spectrocopic examination. If corpuscles can be made out by direct examination under the 1/6" objective and by staining a portion of the dried deposit with Leishmann's stain, then an opinion can be given that the blood corpuscles observed were derived from "mammalian" blood—an important point in the evidence. In a recent case the defence put forward was that the blood in question was fish blood, this was disproved by both the microscopic and the precipitin test results.

The final test is the precipitin test, this can be carried out only if a saline solution can be obtained. The addition of distilled water makes the test extremely difficult and in glycerine solution in my experience the test is made impossible.

The details of the precipitin test are contained in most text books so there is no object in repeating them here, but the following notes may be of interest.

Factors influencing the reaction :—

Favourable.

(*a*) Stains that have been rapidly dried at room temperature and kept in a cool place.

(*b*) Recent stains as against old stains, but stains 50 years old have given positive results.

Unfavourable.

(*a*) Stains that have been heated, whereby the protein is coagulated or decomposed.

(*b*) Stains that have been in contact with some protein coagulant e.g. formalin, picric acid, alcohol, mercuric chloride, formic acid, &c.

Positive results can also be obtained with all body fluids and tissues with the exception of tears, crystalline lens, semen and milk. These substances either do not contain the protein of the serum, or (in the case of the crystalline lens) there is no blood circulation.

Albuminous urine, pericardial, pleural and peritoneal fluids, cerebro-spinal fluid, blister fluids and mentrual blood are stated by Roche Lynch to give positive results, as they all contain the same antigens as the blood of the particular species. Bones if pounded and extracted with ether before making the saline extract, are stated to give positive results.

References:—

Roche Lynch, The Analyst, January 1928.

Sutherland, Blood stains, their detection and determination of source, 1907.

TIME FOR, AND AMOUNT OF, SOLUTION OF BLOOD STAIN INCUBATED AT 37° C.

Material	Age of Stain	In Saline Solution.										After Adding Distilled Water.			
		At once.	Minutes 5	10	15	20	25	30	40	Hours. 1	2			Hours. 3	24
White cloth	Fresh	Faint start	...	Slightly	...	...	...	...	...	...	Stop †	6 minutes	—	...	...
,,	6 hours	Good start	...	...	...	...	...	Stop ‡	...	...	...	12 minutes	—	...	...
,,	12 hours	,,	...	...	Stop ‡	...	...	...	...	...	...	15 minutes	—	...	...
,,	18 hours	,,	...	...	Stop ‡	...	...	...	...	...	...	15 minutes	‡	—	...
,,	24 hours	,,	...	...	Stop ‡	...	...	...	...	...	...	15 minutes	‡	—	...
,,	2 days	Faint start	...	...	...	Stop ‡	...	...	...	...	...	15 minutes	‡	—	...
,,	3 days	,,	...	...	...	Stop ‡	...	...	...	...	...	15 minutes	‡	—	...
,,	4 days	,,	...	...	...	Stop ‡	...	...	...	...	...	15 minutes	‡	—	...
,,	5 days	,,	...	...	...	...	...	Stop ‡	...	...	...	15 minutes	‡	—	...
,,	7 days	,,	...	...	...	...	...	...	Stop ‡	...	...	15 minutes	‡	—	...
,,	8 days	,,	...	...	...	...	...	...	Stop †	...	...	15 minutes	†	‡	—
,,	10 days	,,	...	...	...	...	...	...	Stop †	...	...	15 minutes	†	‡	—
,,	11 days	,,	...	...	...	...	...	...	Stop †	...	...	15 minutes	†	‡	‡
,,	12 days	,,	...	...	...	...	...	...	...	Stop †	...	15 minutes	†	‡	‡
,,	13 days	,,	...	..	...	...	...	...	...	Stop †	...	15 minutes	†	‡	‡
,,	25 days	,,	...	...	...	...	...	...	...	Stop *	...	15 minutes	*	†	†
,,	32 days	Very faint start	...	...	...	...	...	...	...	Stop *	...	15 minutes	*	*	†
Chinese Paper	48 hours	Started	...	...	...	...	...	...	...	Stop †	...	15 minutes	†	‡	‡
,,	5 days	Faint start	...	...	...	...	...	...	...	...	Stop †	15 minutes	†	‡	‡
,,	21 days	nil	nil	Faint start	...	...	...	...	...	...	Stop †	15 minutes	†	‡	‡
Glazed Paper	24 hours	nil	nil	nil	Faint trace	...	...	...	...	...	Stop *	15 minutes	*	*	*
,,	4 days	nil	nil	nil	,,	...	...	...	...	...	Stop *	15 minutes	*	*	*
,,	20 days	nil	nil	nil	,,	...	...	...	...	...	Stop *	15 minutes	*	*	*

Blood Stain Scale: Fresh, +. ¼ gone, *. ½ gone, †. ¾ gone, ‡. All gone —. "Stop" indicates that further solution has ceased.

LUNACY MADE LUCID

by

Alexander Cannon

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Definition: Lunacy or Insanity is a condition of the mind in which a false conception, a defective power of will, or an uncontrollable violence of the emotions and instincts have separately or conjointly been produced by disease.

In court of law, no medical witness should define insanity, because no definition covers the whole of the ground.

The causes of insanity are many, the two main predisposing and exciting causes being moral or psychical, and physical.

Heredity tendency need not be of actual insanity, but of neurosis, epilepsy, hysteria, alcoholism, hypochondriasis, and nervousness. The Commissioners' Annual Report of the Board of Control for 1922 stated that heredity insanity was as high as 15.4% in males; and 22.4% in females in admissions to Lunatic Asylums. It is often impossible to find out the truth from relatives, who naturally hush up such a history, so these figures may be much smaller than actual fact. It is known that a father is most likely to pass his insanity on to his sons, and a mother to her daughters. Suicidal tendency is specially prone to propagate itself. Three generations usually see it extinguished, however, as Nature is kind, and either the stock dies out from diseases like tuberculosis, or reverts to normal.

Women are more affected than men, but of course there are more women in the World, and hence this may not actually be the case. It should be borne in mind that women run many special risks during pregnancy, parturition, and lactation, menstrual troubles, and climacteric disturbances. No age is exempt from insanity, but attacks are rare before puberty.

During adolescence (17 to 25 years of age), attacks of mild melancholia, hypomania, or alterating states are frequent; and epileptic insanity, delusional insanity, and dementia praecox are all mental disorders associated with adolescence.

Between the years of 25 and 55 (Adult life), mania, melancholia, general paralysis, and forms of dementia occur. Later melancholia predominates, especially in women at the menopause, when alcohol is frequently used as a "comforter." In all forms of insanity in females, amenorrhoea is common.

A potent cause of insanity is alcoholic excess. The great majority of mankind are better without any alcohol at all, especially

in the East. Remember that alcohol is a frequent cause of crime. The 1921 Board of Control Blue-Book shows the admission of patients to Asylums owing to intemperance as: males 12.6%; females 3.9%. Alcohol acts as a toxic agent, and is the most universally admitted heredity neurosis, passing down from father to son.

Hallucinations are *false* perceptions of the senses; illusions are *mistaken* perceptions of the senses: delusions are false beliefs.

A person may labour under hallucinations and yet not be insane. These are common in acute alcoholic insanity, and in melancholia.

Perceptions of sight, sound, and feeling, are mistaken for something entirely different, in illusions.

To decide whether the person is insane or not, one must be satisfied that the patient *believes* in his hallucinations or illusions; if he does, the patient is insane.

A person suffering from delusions is necessarily insane.

The *early symptoms* of insanity in general are often so slight and trivial in appearance, that even the friends do not notice them. The *onset is gradual.* There develop emotional alteration, altered habits, and may be insomnia. Insomnia is the most important of all the incipient symptoms of insanity: the greater the insomnia the more the mental deterioration. Loss of capacity for work is noticed by the victim, but he loathes to tell his friends, but will usually tell his medical advisor. If the early symptoms are recognised in time, and treated, improvement or even recovery may take place. It is of utmost importance to diagnose early general paralysis of the insane, and promptly certify the patient, for many reasons, including the expansive delusions of wealth and grandeur, which may end in poverty.

The *legal procedure* in general is one that incurs great responsibility, great patience, with a wide knowledge of the world, and of human nature. Misjudgment may lead to action in the High Court of Justice, against the certifying doctor for malpraxis, if a person is certified as insane, and eventually is proved to be sane; and on the other hand if a lunatic is not certified, it is very humiliating to the doctor, and may lead to an injured reputation. Always carry a note-book, and before seeing the patient, try and ascertain facts from the nearest relative or friend. Enter the patient's name in full, the address, and occupation; also the name in full, address, occupation and relationship, if any, of the informant, as these will be required for the certificate, should certification be found necessary. These details are entered in the space against "facts communicated by others." Particulars of previous habits, disposition, previous attacks, of a blow on the head, or fits, sleep, mutterings to imaginary persons, should be clearly written down, at the time of the interview. Next write down the family history especially

concerning insanity, drink, suicide, and epilepsy. *Remember that the person who accuses another person of being insane, may be the victim, and not the accused.* The patient is often suspicious of strangers. Never see the patient under any other circumstances or other character than as a medical man: if you do, sooner or later the patient will find out the deceit, and ever afterwards distrust all doctors. It is allowable and helpful to obtain access to the patient by letting him or her think that you have been called in to see some other member of the family, and at the same time taking the opportunity of interviewing the "accused." Complete trust in the doctor is essential for recovery. The tact of a man of the world will have to be used in order to get on good terms with the patient. If asked, it may even be wise to state that he is suspected of being mad, but that you are unbiased, and nothing will please you more than to be able to refute such an assertion. Notice the expression, gesture, gaze, smiles, frowns, head movements, mutterings, whisperings, plugged ears with cotton wool, etc. After getting on good terms make a physical examination, as this will open the door to further conversation possibly in the direction desired. The memory will be tested for both recent and remote events. Never interrupt a talkative individual, as the conversation is surely likely to soon drift to his fancied grievances, etc. Delusions need not be included in a certificate, but it is advisable to do so. Paranoiacs may only commit their delusions to paper, and never talk about them. Better educated persons will often conceal their delusions.

All proceedings in lunacy are conducted under:

Lunacy Act of 1890.

An Act to Amend the Lunacy Act .....1891.

An Act to Amend the Lunacy Acts .....1908.

Lunacy Act of 1911.

Mental Deficiency Act, of 1913.

Mental Treatment Act of 1923.

In England and Wales, which must be taken as the standard by which all Colonies are governed, the Lord Chancellor has supreme control of all matters relating to the insane. Masters in Lunacy conduct inquiries into the sanity of patients, where there are not such guardians of the patient appointed and known as the Committee of the person and of the estate. Patients found insane after such an inquiry are visited by the Lord Chancellor.

The Commissioners in Lunacy, now known as the Board of Control, exercise supervision over all those having charge of the insane: they are the guardians of all insane patients, and can apply to the Lord Chancellor for an inquiry into the administration of any insane person's property.

There are two classes of insane patients under control: the pauper, and the private patient. It is illegal to keep, for profit, an insane person not under certificate, in a private house.

The Act directs that, in the case of *pauper* patients, ...

(*a*) Every Medical Officer shall within three days, give notice to the relieving officer, or overseer, of any pauper in his district which he knows to be insane.

(*b*) Any relieving officer or overseer must (either by M.O.'s information or his own) within three days give notice thereof to a "justice having jurisdiction" where the pauper resides, who shall within three days require the relieving officer or overseer to bring the alleged lunatic before him for examination. This authority who examines the patient is a Justice of the Peace specially appointed to deal with lunatics: a County Court Judge, or a Stipendiary Magistrate can also act as a "justice having jurisdiction."

(*c*) Every constable (policeman), relieving officer, or overseer of a parish who has knowledge of a wandering lunatic, shall immediately apprehend and take the alleged lunatic before a justice.

(*d*) Every constable, relieving officer, or overseer who has knowledge of any person, not a pauper, not wandering at large, but deemed insane, and not under proper care and control, or cruelly treated or neglected, shall within three days give information on oath to a judicial authority under the Act. The justice may direct any two medical practitioners to visit and examine him, and certify as to his mental state, and he may by order direct the patient to be detained in any institution, to which he might be sent under the Act.

(*e*) A constable, relieving officer, or overseer may remove an alleged insane person to the workhouse of the union, for public safety or for his welfare, for a period not longer than three days.

Except in the case where the alleged lunatic has already been visited by two medical men, the justice shall call to his assistance one doctor, and direct him to examine the patient, and if insane, to certify him. The justice may make a *summary reception order,* which is useful in the case of a wandering lunatic, whose friends are not living in the same place. The justice has the power to decline making such an order. This is advisable in acute alcoholic delirium (delirium tremens).

In the case of a pauper, all that is required to place him under care and control in a Lunatic Asylum is:

1. ..... a justice's order.
2. ..... one medical certificate.
3. ..... a 'statement of particulars.'

An order can also be made by two or more Commissioners of the Board of control accompanied by one medical certificate.

For the detention of a *private* patient, two channels of procedure are open: the ordinary petition, including a 'statement of particulars,' and two medical certificates; *or* the urgency order.

The *ordinary petition*: four forms are required:

1. ..... petition and statement.
2. ..... a justice's order.
3 & 4 ..... two medical certificates.

The *petition and statement* (1) ..... must be filled up and signed by a near relative, or when this is impossible, by a friend. This paper, and the two medical certificates and the printed form for the justice's order, are now submitted to the judicial authority. The petitioner must have seen the patient within fourteen days of petitioning. The two medical men must examine the patient separately and within seven days of the presentation of the petition.

When all forms are completed, they must be delivered to the person who is to take charge of the patient, as they are his only authority for keeping the patient under his care.

An *urgency order* (2) ..... must be made, when possible, by the husband or wife, or relative, and be accompanied by one medical certificate. Each person must have seen the patient within two days of signing. The order holds tenable for seven days only. This is used only for urgent cases, whilst the *ordinary petition* is being prepared.

Patients possessing considerable property are termed *Chancery Patients*. Two medical affidavits are needed, with facts, indicating insanity, which have occurred within two years. The Masters in Lunacy, or a Judge of the High (Supreme) Court hold an inquiry. In the event of such a patient recovering, another inquiry known as a *supersedeas* will set aside the proceedings. If the estate is not a large one, a Receiver may be appointed by a Master in Lunacy. The medical witness will always keep a copy of his affidavit.

The Mental Deficiency Act of 1913 repeals the Idiots Act of 1886. It came into force on April the First, 1914, and does not extend to Scotland or Ireland. Within the meaning of the Act, *mental defectives* are:

1. Idiots,
2. Imbeciles.
3. Feeble-minded individuals,
4. Moral Imbeciles.

Definition of:

Idiots: persons so deeply defective in mind from birth, or from an early age as to be *unable to guard themselves against common physical dangers.*

Imbeciles: persons in whose case there exists from birth or from an early age, *mental defectiveness not amounting to idiocy,* yet so pronounced that they are *incapable of managing themselves or their affairs,* or in the case of children, being taught to do so.

Feeble-minded individuals: persons in whose cases there exists from birth, or from an early age, *mental defectiveness not amounting to imbecility,* yet so pronounced that they *require care, supervision, and control,* for their own protection or for the protection of others; or, in the case of children, that they, by reason of such defectiveness, appear to be permanently incapable of receiving proper benefit from the instruction in ordinary schools.

Moral imbeciles: persons who from an early age display some *permanent mental defect coupled with strong vicious or criminal propensities upon which punishment has had little or no deterrent effect.*

These four conditions can be dealt with as follows:

1. ..... by parent or guardian.
2. ..... by petition to a judicial authority from any relative or friend, or from an authorized officer of the local authority.
3. ..... by order of the Court.
4. ..... by order of the Home Secretary.

Certificates signed by two doctors, one being approved by the local authority, will enable the parent or guardian to place the child in an Asylum. For a juvenile, who is feeble-minded, an additional certificate must be obtained from a judicial authority. *Voluntary borders,* and out-patients are dealt with under the Mental Treatment Act of 1923, for a period not exceeding six months' attendence at the out-patients department of any such institution.

As regards the Colonies, neither the Scottish nor the Irish Laws are in force. The only points of difference are:

1. In the *Scottish Law:* Pauper and private patients have the same procedure. A petition to a Sheriff and an order by him, replace the English judicial authority. The medical Practitioner must see the patient on the day of certification. An urgency order only lasts three days, instead of seven. Patients can be treated anywhere outside of an Asylum if so recommended to the Commissioners in Lunacy. A lunatic can be detained in a private house for more than a year for profit, only when an order from the Sheriff or the Lunacy Board is obtained. Only one medical certificate is then required.

2. In the *Irish Law:* The medical certificates must be dated the day of the examination. Paying patients may be admitted to district asylums, without being made paupers. An agreement of payment is also required. Pauper patients are usually sent to Asylums on the order of two magistrates sitting together, and one medical certificate, accompanied by a "statement" filled up and signed by the medical examiner.

A knowledge of the Law and the Procedure as stated above, is all that is required for management of all cases of insanity.

We shall now consider the *twenty-one various types of insanity, seven* of which may be considered as general and the *foundation types,* upon which the others are worked out.

The seven foundation types are:

1... Mania.
2... Melancholia.
3... Stupor.
4... Delusional insanity. (paranoia).
5... General Paralysis of the Insane.
6... Dementia.
7... Idiocy, Imbecility, cretinism.

The elaborated types are:—

8... puerperal insanity.
9... epileptic insanity.
10... syphilitic insanity.
11... alcoholic insanity.
12... rheumatic insanity.
13... gouty insanity.
14... insanity of chronic lead poisoning.
15... climateric insanity.
16... manic-depressive psychosis.
17... dementia præcox.
18... moral insanity.
19... feigned insanity.
20... 'police court' insanity.
21... borderline states.

Mania and melancholia account for 75% of all insanities, and are spoken of as primary psychosis. Many of the manias and melancholias prove to be phases in the course of disease such as G.P.I., or dementia praecox, and a large number are those of manic-depressive psychosis.

There are *four forms of mania:*

1... Acute delirium.
2... Acute mania.
3... Subacute mania.
4... Chronic mania.

1. *Acute delirium* is sudden in onset, following shock or febrile disease. Restlessness and sleeplessness, hallucinations of sight, muscular tremors, raised temperature, furred tongue, constipation, and later bedsores and rapid emaciation, are the characteristic symptoms.

The prognosis is good, although relapses may occur, and the recurrent type may become chronic.

Asylum treatment is essential.

3. *Agitated melancholia* reveals itself by restlessness except when asleep, pacing the room wildly, sitting with face buried in his hands, rocking his body to and fro, moaning, sobbing, and bewailing his unhappy lot, tearing his hair, biting his nails to the quick, picking his skin until blood oozes; sometimes hallucinations, delusions of a most distressing character, lost soul, takes food very well, and not usually suicidal to any degree.

Differential diagnosis:

acute delirium.....sudden onset, high temperature, rapid pulse, flushed face, and varied delirium and excited type.

The prognosis appears more favourable every time one sees the patient. It may take years for complete recovery; and treatment can only be satisfactorily carried out in an Asylum.

4. *Chronic melancholia* is rarely met with in general practice, as its victims continually go to swell the floating population of our Asylums. It is a sequence of one of the more acute attacks. It is characterized by remissions, relapses, (even after two years), happiness and contentedness when at his best, and restlessness and misery during the relapses, and even perhaps suicidal. These relapses are usually heralded by premonitory symptoms, easily read by the skilled eye. All cases tend to ultimate weak-mindedness. Pyorrhoea alveolaris is a possible cause. Sometimes there is an alteration between glycosuria and melancholia, and it has been observed that diabetics tend to lose the sugar in their urine during a melancholic seizure, though it may return during the lucid intervals.

Stupor is of two types: Exhaustive; and Resistive. Both types occur in phases of manic-depressive insanity, and dementia præcox, respectively. The condition is usually only temporary. Such a patient will sit or stand silent and motionless for hours, taking no notice of anyone, or anything. Saliva dribbles from the mouth, urine and faeces pass unnoticed, and the circulation is defective.

The *Exhaustive stupor* occurs after a sharp attack of mania, caused by profound exhaustion. The muscles are flaccid, with practically no response to stimulus, heart action feeble, pulse slow, oedematous extremities, dirty tongue, offensive breath, and constipation. This form is also known as anergic stupor.

The *Resistive Stupor,* shows braced muscles, listless facial expression, fixed frown, etc., staring eyes and fixed, or closed, actual negativism, sudden impulsive acts, impulsive suicidal or homicidal attempts.

The mild forms need no treatment, but the graver forms require rest, change of air, altered occupation, and bromides. Many of these cases eventually drift into chronic mania.

4. *Chronic mania* is usually a sequel of the acute or subacute forms, but may supervene upon an attack of melancholia. There are delusions, memory either good or very bad, dementia, docility, industriousness, liability to outbreaks of maniacal violence, sometimes auditory hallucinations, brain degeneration progressing. The prognosis is bad.

Four forms of melancholia are recognised:

1... simple melancholia.

2... melancholia with delusions.

3... agitated melancholia.

4... chronic melancholia.

1. *Simple melancholia* amounts to depression of spirits, sense of unworthiness, gloomy thoughts and forebodings of impending evil, jaundiced view of life, home-sickness, no pleasure in life, hopeless and listless, sleeps badly, disturbing dreams, broken rest, promptings to suicide, against which he fights, symptoms most pronounced in the morning; refuses food, suffers from headache and constipation; sluggish circulation, cold hands and feet. Onset is gradual.

Differential diagnosis: none.

Every melancholic is a potential suicide, but nevertheless the prognosis is favourable, almost 80% of all such cases being curable.

Never treat a melancholic of the acute type in hospital, as they do much better outside, with a short rest from work, change of air, and surroundings, regular meals, and good food, and occasionally paraldehyde at night, in one drachm doses. Never leave the patient alone, relieve constipation, give a glass of stout at mid-day, spirit and water in addition to paraldehyde to assist sleep, turkish baths, and high frequency current which is very good in these cases.

2. *Melancholia with delusions*, is indicated by the gloom and despondency having become accentuated, and unmistakable delusions which occur. Hallucinations of hearing, delusions of suspicion, sight, smell, and taste may be evident, those of smell indicating irreparable brain disease. Delusion of illness, of relatives being in danger, of a lost soul, or committance of the unpardonable sin are evident, and masturbators are prone to connect the unpardonable sin with their vice.

Differential diagnosis:

delusional insanity of a melancholic type: .....delusions are more systematized, the patients being able to argue and give plausible reasons for their beliefs.

Differential diagnosis:

acute mania .....onset not sudden.

delirium tremens .....no raised temperature, or serious physical symptoms.

meningitis.....photophobia and vomiting.

The prognosis is bad, the patient dying in a few days in a typhoid condition.

Treat by forcible feeding, padded room, hot baths, watchfulness and careful continuous attention.

2. *Acute mania* is slow in onset. Restlessness, slight depression, insomnia and constipation, followed by becoming suddenly and violently insane, noisiness, sleeplessness, very excitable manner, changing delusions, momentarily signs of violence and aggressiveness, entire loss of moral inhibitory force, or almost so, indecent behaviour, and profane talk, illusions, mistaken identity of those about him, conjunctivae red, face flushed, sense of muscular fatigue completely wanting, tongue flabby, and furred, bowels confined, perspiration offensive, urine scanty, temperature may be subnormal, habits dirty, hair becoming stiff, and dry, are the manifestations.

Differential diagnosis:

acute delirium.....sudden onset and high temperature.

delirium tremens.....no raised temperature or serious symptoms.

general paralysis of the insane.....fine fibrillary tremors and defective articulation.

Tremors do occur in acute mania, but are coarser, and more jerky. The prognosis in single attacks is good. The intermittent form terminates in chronic mania or dementia.

An urgency order is needed, and even three trained attendents required. Sustain patient's strength and obtain sleep. Give warm baths with cold effusion to head, brisk purges, watch the heart condition (heart failure may occur), Sulphonal grs. 25 plus calomel grs. 3 daily.

3. *Subacute Mania* manifests itself by a little excitement, hilarity, restlessness, inability to sustain attention, absence of good judgment, of higher inhibitions, and exaggerated self-consciousness.

Differential diagnosis: from all other forms by its brilliant eccentricity and egotism and lack of attention.

Treat in a mental hospital (Asylum), maintaining good nutrition; he eats food slowly and retains food in mouth unswallowed, the feeding tube sometimes being necessary; baths, massage, electrical treatment, rest in bed, in open air, especially in exhaustive cases, are advantageous.

Delusional Insanity (paranoia) is a chronic disease of the degenerative type, characterized by fixed and systematized delusions. It may occur in imbeciles, or persons with apparently high grades of intelligence. The memory is good, heredity is an important factor, and the "stigmata of degeneracy" may be found. In the early stage he is hypochondriacal and too introspective, and delusions soon become fixed, and generally of a disagreeable kind, persecution by voices is manifest, he believes that people can read his thoughts, that newspapers refer to him, that detectives haunt him, and has hallucinations of hearing, smell, and taste, becoming sullen and resentful. The patient is a potential homicide, but is capable of great self control. Later, delusions of grandeur, eccentricity, and mental weakness become more marked, and finally slowly increase after many years into marked dementia.

Differential diagnosis:

G.P.I. .....delusions are not fixed here, and memory is always impaired, no reasoning power being shown.

The prognosis is bad, the disease usually ending in dementia, but recoveries have occured rarely.

Treatment in hospital is wisest, as *there can be no more dangerous person at large than a paranoic,* who is so capable of concealing his delusions that murder may be committed before the insanity is diagnosed.

General Paralysis of the Insane (G.P.I.) is a terrible and fatal malady, and occurs in the prime of life, its most usual victims being powerful, hearty men, who have lived hard lives and never ailed, men who 'burn the candle at both ends.' It is three times more common in men than in women, manifesting itself between the ages of thirty-five and fifty-five, in tremors and exalted notions. Sexual excess, long hours of work, or play, and insufficient sleep, alcoholism and syphilis are believed to be predisposing causes, but the one cause is syphilis. Schaudinn discovered his spirochaete pallida in 1905; Wassermann published his reaction in 1907; Ehrlich found the remedy in 1909. A positive Wassermann reaction is found in the cerebro-spinal fluid, or the blood, or both, in practically all cases. A considerable interval may elapse between infection and the appearance of the paralytic symptoms, often as long as ten to fifteen years. It is believed to occur in the secondary stage of syphilis. Krafft-Ebing found general paralytics to be immune to inoculation with the spirochæte pallida. Heredity is a factor in some cases.

There are three stages.....(1) alteration;

(2) alienation & progressive paralysis.

(3) dementia.

The first stage may be chiefly physical, with difficulty or hesitation in speech, and fibrillary tremors of the lips, tongue, and facial muscles, unequal pupils in size, and complete absence of convergence or light reflex (Argyl-Robertson Pupil), handwriting alters for the worse, and letters, especially the terminal letters may be dropped in writing, knee jerks being exaggerated in most cases, the gait becoming uncertain, attacks of " faintness," and congestive attacks all being present. Convulsions may occur and simulate uræmic ones. Undue elation, forgetfulness, neglect of occupation, restlessness, especially at night, drowsiness during the day, and failure to recognise mental responsibility is not unknown in these cases in the criminal courts.

The second stage of alienation and progressive paralysis then sets in with exaggeration of all the symptoms of the stage of alteration. The words "artillery," and "biblical criticism" cannot be negotiated satisfactorily; occasionally strabismus, nystagmus, ptosis, maniacal excitement, but the melancholic may occur: folds and furrows in the face, and the lines in the hand, may partially disappear, appetite is voracious; sexual desire increased, though the power of fulfilment is lacking. Sexual excess therefore should be remembered as symptom as well as a possible cause. Money is squandered, indecent exposures are common, and attempts to take liberties with females are frequent, and obstruction leads to violence; pilfering is common, convulsions occur but not so severe as in epilepsy; aphasia progresses, emotion is excessive, and remissions now take place. Corpulence may occur at this stage.

The third stage of dementia commences with loss of flesh, continued congestive attacks, imperfect mastication, and swallowing; brittle bones which are apt to fracture easily; confinement to bed, and bed sores, continual grinding of the teeth; noisiness, destructiveness, and dirty habits are common, followed by death from asthenia, hypostatic pneumonia, succession of congestive attacks, with raised temperature, cyanosis, and profuse sweating.

It should be borne in mind that cases of G.P.I. without any symptoms whatever do occasionally occur, or may supervene upon tabes dorsalis.

Glycosuria is more frequent in G.P.I., than in any other form of insanity.

Differential diagnosis:

acute mania.....no difficulty in speech, no tremors, no abnormal pupils.

The prognosis is invariably bad, and four years is about the longest time which elapses before death. The average duration is two years.

Treat the case is an Asylum or hospital, with cleanliness, good food, and watchful care. Remember that their pilfering propensities are only equalled by their voracious appetites. Congestive attacks are warded off by urotropine given in 10 grain doses three times a day, and I consider that mercurial inunction is still superior to salvarsan, and the reason why it is not used more is owing to the trouble it takes to rub the ointment into the skin daily, picking a spot free from hair, and never rubbing it into the same part too often. Wagner and Jauregg's method of inoculation with malaria parasites certainly, seems a success, but it has only been in use on the continent of Europe for twelve years, and in England for a much shorter period.

Dementia is a term restricted to cases of acquired mental enfeeblement, resulting from mental disease, injury, or decay of the brain, from which there can be no recovery, and hence no hope.

There are three types:

1... Chronic dementia.

2... Senile dementia.

3... Organic dementia.

The *chronic dementia* may supervene upon any acute form of insanity, may succeed epilepsy, apoplexy, intemperance, pneumonia, fevers, and child-birth. There is loss of memory for recent events, careless appearance and later neglect of calls to nature, tendency to excitement, and the health may be good. These sufferers easily fall victims to chest conditions in general.

The prognosis is bad, but if syphilitic in origin, iodides may act like a charm, especially in cases where gummata of the brain abound. Otherwise general symptomatic treatment is all that can be done, at present.

Senile dementia is rare before sixty-five years of age. That a man is as old as his arteries is an excellent aphorism. The only difference between chronic dementia and this form of disease, is that this is a primary disease, its origin lying in old and rather worn-out tissues. The onset is gradual, sometimes marked by a passing maniacal outbreak. Few reveal grand and large ideas, loss of memory, and proneness to indecent talk and actions. There is often an heredity predisposition.

Differential diagnosis:

If occurring before 60 years of age, it is difficult to diagnose it from G.P.I.

Organic dementia results from gross lesions of the brain, such as haemorrhage or tumour. The particular features are forgetfulness, childishness, irritability, weak emotional outbursts.

Idiocy has been defined earlier on. It may be congenital or be caused by infantile convulsions. There is entire absence of the intellectual and moral faculties; no ideas, and inability to reason. All movements are automatic, and walking and talking are not accomplished. It will be remembered that the Mental Deficiency Act of 1913 given previously in this article, gives full details by which a diagnosis can be made. In infantile cases the diagnosis is more difficult, but squint, or nystagmus, inability to support the head after six months, rythmical movements, absence of smiling after the age of six months, and lateness in walking or talking, will assist in a correct diagnosis.

Imbecility is a less degree of brain defect than idiocy, as laid down in the Act just referred to. It may be either congenital, or due to hindered brain development of some kind.

Feeble-minded persons may be capable of earning a living under favourable circumstances, but are incapable of competing on equal grounds with their normal fellows, or of managing themselves and their affairs with ordinary prudence, owing to mental defect existing from birth or from an early age.

Moral imbeciles are persons who from an early age display some mental defect, coupled with strong vicious or criminal propensities upon which punishment has little or no deterrent effect.

All imbeciles are dull at learning, but often shew great aptitude in some special branch of knowledge such as mathematics, or music. Affection and appreciation are present, but they are liable to sudden attacks of passionate temper. Some are addicted to theft, or prone to incendiarism or homicide. The sexual instinct is strong, and they are prone to masturbation, at the same time exhibiting exaggerated religious tendencies, and possessing a certain amount of shrewdness and humour. They are an expense and danger to the community, being breeders of illegitimate children, being not below the intelligence of a child of seven, unless an idiot, and in my opinion, should be exterminated kindly by Law, in justice to humanity. It is often difficult, for many reasons, to certify them.

Cretinism, is a form of idiocy or imbecility due to deficiency in the secretion (function) of the thyroid gland, and is endemic in certain hilly districts. It makes its appearance during the first year of life, and the growth is stunted, the features flat and expressionless, the body and limbs thick and short, the hair coarse, and the skin dry. The appearance is repulsive. Often fatty swellings appear over the clavicles, but the patients are quite harmless. Thyroid gland may improve the physical condition, and to some extent the mental development, and should be commenced with a two grain tablet of the extract twice a day, and continued for many, many years.

The *Insanity of Pregnancy*, is a special form of insanity, as are all the following. It occurs in the later months of pregnancy, but may

occur in the earlier months, when the symptoms are either melancholic, or more rarely maniacal. Delusions that her food is poisoned are common. Later the patient dislikes her husband, and the prognosis is not so favourable. Worry and grief are causes, and any impairment of physical health is a predisposing cause. Rest in bed, laxatives, quiet, trional, or paraldehyde will induce sleep. Suicidal tendencies may be manifest, in which case treatment in an Asylum is indicated.

Puerperal Insanity is usually heredity, and may set in a few days after labour, as a transitory delirious condition, which yields to purges and narcotics. Infanticide is possible, without any recollection by the mother of her unlawful act. Either melancholy or mania may be present in an acute form. Within a fortnight of delivery, mania is commonest. Sleeplessness, and refusal of food, erotic action, lewd talk, restlessness, headaches, white tongue, loaded bowels, accelerated pulse, albumin in urine, and dislike for both husband and child are evident.

When this form occurs more than a month after delivery it is usually melancholic in type; and sleeplessness, refusal of food, suicidal tendencies, hallucinations of sight, hearing, and smell, and abhorrence of husband and child are manifest.

The milk and lochia may remain normal, but more usually they are suppressed, and the lochia is offensive. Recovery is nearly always the case. If death occurs it is nearly always in the maniacal form. When the milk and lochia return, recovery is ushered in. Shame and remorse of an illegitimate pregnancy is not an uncommon cause.

Two nurses are required to treat such a case, and strict watchfulness on the part of the doctor is indicated, but if these are not possible, removal to an Asylum is advisable. A boric douche is required for the vagina, and hot baths and alcohol for sleep at night.

The *Insanity of Lactation* may occur at any time *after* three months from delivery, due to exhaustion. Anaemia, depression, sleeplessness, hallucinations of smell, sight, and hearing, occur. Recovery is usual. Give in addition to the usual treatment, iron and cod liver oil, and recommend change to sea air.

Epileptic Insanity is *the most dangerous of all insanities*, so far as the public are concerned. The fits range from mild *petit mal* to severe seizures, and may occur singly or in frequent numbers. *Between the attacks* peevishness, irritability, lack of self control, slight dementia, and even mania, melancholia, dementia, and rarely paranoia or delusional insanity may be present. Hallucinations of hearing and delusions of persecution, suicidal impulses rarely, masturbation, bestial and acquired unnatural tendencies, exalted religious fervour, combined with extreme irritability and spitefulness occur. The tendency is towards increasing weak-mindedness.

During the attacks mania, melancholy, *or* excitement may precede a fit. *Masked epilepsy may take the place of a fit,* or may succeed the fits. Epileptic furor is the term given to the excitement. The usually mild and docile person is converted into a brutal and bloodthirsty savage. There is however some warning, in the form of an "aura" to the patient, and the expression which can be read by the trained attendant.

Epileptic mania is of forensic importance as no epileptic should be considered responsible for his actions. A history of epileptic fits should be a strong point in any criminal's favour. The "aura" which precedes the *fit* is usually accompanied by a premonitory cry, pallor, dilated pupils, strong convulsions, which are so characteristic and severe as to not be mistaken for any other form of insanity. There is the fawning, cringing manner, changing on slight provocation at an instant to violent pugnacity, and there is also the fondness of religious observances. The eyes show a strained and intense expression.

The prognosis is bad, and hopeless with rare exceptions. The disease ends in chronic dementia, and the rapidity with which this latter occurs, depends upon the frequency (and not on the force) of the attacks, *petit mal* being as injurious to the brain as is the *grand mal.* A frequent termination of this form of insanity is a rapid succession of fits developing into the condition known as the *status epilepticus.* Temperature rises, the skin is cold and clammy, the face cyanotic, breathing stertorous, and ends in fatal coma.

Epileptics must be treated in an Asylum, and if seen at home, can be given full doses of bromides, and possibly some chloral, until the patients can be removed. Nitrogenous food should be minimised, and no stimulants given. In the *Masked Epilepsy* which takes the place of the fits, there is no excitement, but automatic acts occur, without memory of them afterwards almost akin to somnambulism, and some cases of kleptomania. Watch for the facial expression so characteristically pale and vacant immediately prior to this condition becoming active. "Luminal" in 2 grain doses, I have found very useful, and giving in some cases phenomenal results.

Syphilitic Insanity is both hereditary and acquired, and is the bedrock foundation of G.P.I. Depression and hypochondriacal phenomena appear, melancholia developing, and here syphiliphobia is the moral cause. Only late in the disease does this form of insanity appear, due to coarse disease of the brain or its membranes; to gummata, arterial disease with or without haemorrhage. The symptoms consist of gradually progressing dementia, and some form of paralysis, ptosis, and strabismus; impaired muscular power, "epileptic" fits, which are less severe in type than true epilepsy. Accessions of nocturnal headaches are a valuable diagnostic symptom, as are also pain in the bones at night. Sight and hearing may be impaired.

Anti-syphilitic treatment consists at this stage of iodides and mercury, the iodides being given by mouth, and the mercury rubbed into the skin in the form of blue ointment. The danger of arterial degeneration is great, and treatment so far for this has been futile. Soon, or later, removal to an Asylum is imperative.

Syphiliphobia is an extremely distressing mental condition, in a person suffering from syphilis, who is so miserable and self abased over his trouble, that he begins to fear he is a source of contagion to all those around him, his hands and even his breath he thinks to be poisonous. Suicide may occur. The victims are often innocent, ignorant youths of neurotic inheritance. Then follows remorse, dread of venereal infection, sleeplessness, and hypochondriasis; one doctor after another is consulted, quack after quack. These cases need extremely careful and kindly handling. The patient's confidence must be gained at all costs, everything explained, including the improbability if not even the impossibility of having acquired such a disease, which explanation requires repetition. Treatment should be in the form of general tonics, such as cod-liver oil emulsion, and persistant hopeful reasoning with the patient, lest he drift into real insanity, from which there would be no return.

Alcoholic insanity is of two main groups:

1... delirium tremens;

2... true alcoholic insanity.

There is a third resultant form from either, or both of these forms, known as alcoholic dementia, which is really ordinary dementia.

Delirium tremens, also known as acute alcoholic delirium, is a perversion of the ego, the first stage being ushered in by restlessness, sleeplessness, and tremulous irritability, and then follows the second stage characterized by incessant talk, disagreeable hallucinations of sight such as ants, babies, bettles, rats, snakes and tigers, hallucinations of hearing, taste, and sensation, inability to concentrate attention, mistaken identity of those around him; impressions of impending journey, with attempts at dressing which are never completed; packing which is never fulfilled; convulsions, lack of appetite, furred tongue, profuse perspiration, nausea, and may be vomiting. The disease is one of asthenia, cardiac failure, or at any rate irregularity being common. Uncomplicated cases return to normal in about seven days, but two trained attendants are required if the patient is not removed temporarily to an Asylum. In the first stage a little bromide and chloral as a draught is all that is required, but in the second stage sleep and purgation must be aimed at, morphia being given if all other narcotics fail. Rest is the great need, careful nursing, and plenty of good food. In dilirium tremens a little alcohol is helpful, but in the true alcoholic insanity it is detrimental.

predisposing causes. Hereditary predisposition can often be traced. The delusions are of an alarming character, believing their career is ruined, their soul is lost; and suicide may be contemplated. Hallucinations of smell occur where ovarian complications exist. There is a great revival of sexual desire, and frantic masturbation is common. These patients are often not certifiably insane as the evidence is so uncertain.

The prognosis is favourable in early treated cases, and recovery when it takes place is usually permanent. Secret drinking bars the door to recovery.

Treat in an Asylum, and give mixed gland preparations, especially ovarian extract *intramuscularly* (: by the mouth it is useless). The cases which do not recover go from bad to worse,—the excitement, being abusive, noisy, and dangerous, and ends sooner or later in fatuous dementia.

It should be remembered that at the menopause, many other forms of insanity clear up, never to return.

Men also come into this special form of insanity between the ages of 50 and 60 years, when the prostatic and testicular secretions fail.

Manic-Depressive Insanity is diagnosed by alternating attacks of mania, and melancholia, with normal intervals. Heredity has a place of some importance. These people may be dirty, artful, mischievous, and immoral. The lucid intervals may be absent. The tendency of the disease is to progress towards dementia, complete cures being very rare.

Differential diagnosis:

acute mania ..... no melancholia.

melancholia ..... no acute mania.

Asylum treatment is essential.

Moral Insanity, is *the most complicated of all insanities.* The vexed question of legal responsibility of the insane is raised. A good point to go by is that, if madness exists it can be demonstrated by other mental symptoms, and must not be judged by acts of wickedness alone. A person may have reached the stage of altered intelligence, but not that of delusions. Recovery may not be to full intelligence again, but only partial. Imbecility and moral insanity are closely allied. Heredity is a predisposing cause. Moral insanity occurs at any age. *It may follow a blow on the head*, or epilepsy. They are suspicious of marital fidelity, false motives, sleep is disturbed, headache is dull in character, digestion is disordered, palpitation of the heart is present; lying and boasting are common, and they may be described as *more bad than mad.* Periodical dipsomania may be a symptom. There is a marked impulse to do

either depressed and over-self-conscious, or may be maniacal. In the former it leads to disagreeable self-conceit. Emotion is excessive, he is hyper-religious, shallow, silly, indifferent to life's realities, has no affection, and the mania, and melancholy may alternate leading surely and steadily to increasing dementia. Later destructive tendencies appear, and violence becomes rare, slovenliness, and dirty habits may become marked. *Katatonic dementia præcox* shows marked cataleptic rigidity of particular sets of muscles.

Dementics should never be at large. The prognosis is bad. Treatment seems useless. Moral control may have some effect. Plenty of outdoor exercise is needed, and avoidance of study in any form. Death is usually from intercurrent disease, and usually tuberculosis.

Differential diagnosis:

Neurasthenia, and hypochondriacal psychosis, both show addiction to masturbation, which is only temporary, clearing up with good habits. The attacks of mania, or melancholia (manic-depressive insanity), or chronic delusional insanity (paranoia) may first appear at adolescence.

Rheumatic Insanity is connected with a uric acid diathesis. Associated with this form of insanity are mania, melancholia, acute dementia; and chorea may frequently accompany these conditions. When the attacks of rheumatism occur the insanity disappears into the background, and vica versa.

Gouty insanity also has a uric acid diathesis and is nearly always maniacal in form, and here the attacks alternate with those of arthritis. Persons who have suffered many years from gout after sudden disappearance of this symptom, in their declining years develop dementia. Then the prognosis is bad, but colchicum, salicylates, and "atophan" sometimes work wonders.

The *Insanity of Chronic Lead Poisoning* is caused by excessive and long continued absorption of lead into the system, producing a saturnine encephalopathy, in which acute mania is often observed, after insomnia and incurable headache. Hallucinations of sight are present. G.P.I. may occur during lead poisoning in rare cases. It is not true G.P.I. in my opinion, but spurious in nature, as the exalted ideas, restlessness, tremors, etc., are rapidly cleared up under treatment. Lead poisoning has been known to produce epilepsy; in these cases the blue line on the gums assists a correct diagnosis. Extensor paralysis of the forearm may occur, as may also optic neuritis, with a frequency which is unenviable. All cases must be reported to the Chief Inspector of Factories, at the Home Office, London, S.W., in England; and to the Director of Medical and Sanitary Services, in the various Colonies. The best treatment is by hot air, and high-frequency electric current.

Climacteric Insanity is associated in women with the onset of the menopause; and anxiety and worry, and especially secret drinking are

The *true alcoholic insanity* is of much longer duration than dilirium tremens, and also much more serious. Moral deterioration, and reduced will-power are manifest, as well as cowardice and untruthfulness, and tendency to wander at large. Soon he becomes suspicious and dissatisfied, making false accusations against his wife of unchastity, followed by hallucinations and illusions. In spite of this the patient may be at work although he is dangerous and not to be trusted, and may become an homicide, killing, his wife or the supposed paramour,—or he may become suicidal.

Differential diagnosis:

G.P.I. .....no hallucinations of hearing and touch, no suspicion of poisoned food.

Asylum is the main word in treatment, where many get quite well, in time, but relapses do occur, with a sad ending.

Dipsomania is a mental state which causes periodic spasms of heavy drinking of alcoholic liquors: the person drinks only when the impulse seizes him, whereas a drunkard will take drink whenever he can get it, having a continual (and not only periodic) impulse. Before the age of thirty this condition is rare. Neurotic inheritance is usual, ushered in by headache, restlessness, depression, and sleeplessness, followed by the irresistible craving when he will drink anything containing alcohol, no matter what it tastes, or looks like. An attack lasts for days or weeks. Over anxiety is a common predisposing cause. Confinement in an inebriates' home is the only treatment likely to prove beneficial. The drinking bouts are possibly homosexual, and of the nature of an escape from such distressing tendencies, which the individual is strongly depressing. Psychoanalysis has been found helpful.

Post-operative Psychosis has an insane heredity. Anxiety prior to operation is followed in about five days after operation with this manifestation, mainly said to be due to the anaesthetic rather than to shock. The mind is confused with delusions, hallucinations, marked excitability and restlessness. Certification is usually necessary.

Dementia præcox includes a group of conditions allied to, and often overlapping one another, known as adolescent dementia, acute primary dementia, hebephrenia, katatonia, pubescent insanity. It is a disease of adolescence,—a great strain being brought to bear upon the brain and body at puberty,—and the mental balance is upset. It is essentially backed by an heredity predisposition, the insanity tending to make its appearance earlier in each generation. This is one of Providence's kind methods of exterminating the unfit. The history may be of no help, if anything a rather brilliant record at school being a fact: they have a tendency to be solitary and moody. Exciting causes are overstudy, child birth, shock, acute febrile diseases. The patient is

violence to both themselves and to others, with resulting suicide and homicide. Moral insanity includes litigious insanity (desire to have law-suits); and a tendency to write libellous and obscene letters is phenomenal. Later, they take to gambling, horse-racing, and love the company of low down prostitutes.

The prognosis is bad, but recovery may occur under private care. The so-called *legal test* consists in ascertaining whether or not the accused is *capable of knowing right from wrong*: persons labouring under this form of insanity do *know right from wrong, but have irresistible promptings to do wrong.* The *law* is therefore *defective on this point.* It is not possible to know the state of a man's mind at the time of the crime, even if one saw him at that particular instant— : insanity implies an absence of that perfect working of the intellect and feelings upon which knowledge necessarily depends, lunatics' knowledge being child-like at the most, as is recognised in Asylums, by the punishments given. A valuable point is the presence of the stigmata of degeneration.

Feigned Insanity is more frequent than is supposed, and is common among criminals. They overact their parts, and hence reveal their faking capacity.

If watched for a few hours it will be observed that the pseudo-maniacs fall into calm deep sleep of exhaustion, which *never occurs* in true insanity. Auditory hallucinations are puzzling as they can neither be proved nor disproved. Only a close watch, will reveal some defect in their acting which is not consistent with one suffering from hallucinations of hearing. When they think they are not being observed, they look contented, comfortable, and do not live up to their desired reputation of lunatic.

'Police Court' Insanity includes the majority of lunatics who wander at large, and are dealt with by a judical authority. Early G.P.I.'s; early chronic delusional insane persons; early melancholics; epileptics; imbeciles; cases of moral insanity; puerperal insanity: all are the usual crowd who make their appearance in this way. The nature of the charges are,—violent homicidal assaults, attempted suicide, incendiarism, indecent exposure, infanticide, and drunkenness. In such cases, the evidence of the family doctor carries more weight than that of the most skilled expert.

Epileptics are charged with homicidal assaults, of which they have no recollection, attacking some inoffensive passer-by, believing him or her to be the persecutor. They are also responsible for theft of the type known as kleptomania, during the state of masked epilepsy. It should be noted that if the defense pleads kleptomania, the magistrate will send the case for trial at the Supreme Court (Assizes). G.P.I.'s may also suffer from kleptomania, as may also semi-imbeciles.

G.P.I.'s may be charged with indecent exposure: any history of acquired extravagant habits, megalomania, and muscular inco-ordination may save the victim from sentence.

Senile dementics are charged with indecent assaults: a man of hitherto blameless character, whose memory has of late failed and whose habits of life and temper have altered, a strong cerebral cause should be found present.

Imbeciles and the morally insane are charged with incendiarism. Those suffering from *puerperal insanity* appear for the offence of infanticide, and all such cases will be sent for trial at the Assizes (Supreme Court). A skilled physician should examine the prisoner whether on her trial or after she has been actually sentenced.

Melancholics, and sometimes *drunkards* are charged with attempted suicide. They are a perpetual nuisance and anxiety to all their friends. *Chronic delusional insane* persons have also been brought up on this charge.

Dipsomanics are often brought up on the charge of drunkenness, and the defense is well advised to suggest removal to an inebriates home as an alternative to conviction, which procedure is usually favoured by the judicial authority.

Borderline states are psycho-neuroses and neuroses, the symptoms ranging from trivial to marked alterations in the mental attitude. There is always a neurotic history, and they are of a degenerative type and may beget lunatics. Fortunately they are not dangerous, and are merely described by the public as eccentric, often being very brilliant in certain directions, and being very unbalanced. The *psycho-neuroses* are of two forms, 1... hysteria, and 2... Obsessional neuroses.

Hysteria may simulate any bodily disease. The patient is cheerful in company, and miserable when by herself. Hysterical manifestations are the morbid expression of subconscious wishes and desires in conflict with the routine of everyday life. Psycho-analysis is helpful.

Obsessional neurosis may be in the form of (1) indecision, (2) fear; (3) morbid impulses.

Obsessions of indecision cause the patient to doubt the rightness of his actions, even in a trivial capacity.

Obsessions of fear which are not so common are claustrophobia: fear of a closed space. Cremnophobia: fear of falling over a precipice. Haematophobia: the fear of seeing blood. Agarophobia: fear of an open space.

Morbid impulses vary from the silliest of actions, to the most serious of crimes. Dipsomania and sexual perversion are often classed under this heading.

The treatment of the psycho-neuroses is by *rest*, change of surroundings, electric currents of high frequency, and iron tonics.

The neuroses are of two types (1) neurasthenia, and (2) anxiety states.

The former does not constitute insanity, but certification may be eventually found necessary. It is a condition of exhaustion and weakness of the nervous system, and is more common in men than in women, and most common in youths. It may be congenital or acquired. There is usually a history of alcoholism, insanity, syphilis, or tuberculosis. He cannot keeps his supplies of mental and nervous energy up to the demand upon them. Emotional shock, prolonged illness, muscular fatigue, sexual drain, and severe influenza may all be predisposing factors.

The symptoms are anaemia, slight loss of weight, moist skin, cold hands and feet, small pulse, tremors, hyperæsthetic spinal centres, increased knee-jerks, shoulder and loin pains, and aching of the back of the neck. The patient is depressed, soon sheds tears, cannot think, the head feels heavy; the eyes, sexual organs, and spine, produce indefinite symptoms. The exertion is fatiguing, sleep is moderate, and there is a desire for continual companionship.

Treat by *rest*, food, tonics, massage, and electricity.

The second state of *Anxiety* is a more marked condition than neurasthenia, just referred to. Dizziness, diarrhoea, nausea, vomiting, palpitation, flushings, and sweating are common. Lack of concentration, sleep, nasty dreams, apprehensive feeling, fear of impending disaster, and of failing powers of reason are conspicuous.

This condition is a repressed emotional reaction which has not been successful in finding a normal outlet of release.

We are told that the sins of the fathers shall be visited unto the third and even the fourth generation: this is proved in fact, and we now know that insanity tends to destroy itself, usually dying out in the third generation either by disease, or recovery.

Thus ends the story of lunacy in brief. Much more could be written with advantage, but I have attempted to curtail this study into a size compatible with that of an article in a medical Journal, without omitting any important points.

Remember that *prevention* is better than cure. All forms of insanity are curable. They all have a beginning. That beginning lies in the thought, which is father to the deed. "As a man thinks, so is he" is a truth which can never die. The mind reacts on the body; the body reacts on the mind. A diseased mind leads to a diseased body: a diseased body likewise favours a diseased mind. The one reacts upon the other. And so the vicious circle is commenced. It follows,

that if the body is to be kept healthy, the mind must first be healthy: likewise in order to keep the mind healthy, the body must be trained to keep free from disease. Herein lies the secret of preventing these disorders of the mind, which even in the early stages are curable, but later drift into that almost unknown realm of lunacy, a study of which will eventually give us the key to intellect, which is located in the brain, the recognised master of the World we live in, and which money cannot buy.

Editorial.

On the 15th March, 1929, Emil von Behring, the founder of Serotherapy, will celebrate his 75th birthday. In view of the fact that there does not exist yet a biography of this great scientist, we venture to give a short survey of his work. Although Emil von Behring died in his 63rd year, his work is still fresh in the minds of many researchers.

One is quite justified in saying that Medicine is the most noble of sciences, because it aims straight at the relief of humanity from pains, sorrow and distress. When it succeeds to attain that aim, it is justified to universal thankfulness.

That humanity disposes to-day of a reliable weapon against Diphtheria and that this disease lost its former terror, we owe to this scientist "Emil von BEHRING."

Son of a large family—his father was a teacher in Hannsdorf near Deutsch-Eylau, Western Prussia,—he learned the hardship of having to earn his own living. With 12 children his father saw no way to afford a high-school education for him, who in early childhood had showed a great liking for medince.

His intelligence, however, won him the favour of his teachers and they procured for him a scholarship at the high-schools.

When twenty years old, he entered the Military Medical Academy at Berlin, at the age of 26, he graduated.

And he then joined the German Army as a military surgeon. He had a strong inclination for scientific research and a surprising ability for observation.

In 1882, he appeared with a completely new and fundamental perception on the action of bactericidal mediums and he devoted the work of the following years to this particular study.

He gave up the military career, to become a scientist, carried through his experiments under trying economic conditions and lastly published in the winter of 1890 his epochal discovery of the blood-serum-therapy. This discovery culminated in the statement that blood-serum of animals recovered from their disease, and had the power to cure another animal affected by the same sickness.

His thesis on Diphtheria proved to be a sensational success, which led to final triumph, when he succeeded in saving the lives of many children suffering from Diptheria in the following year in the Clinic of von Bergmann, Berlin. With the problem solved, he began vigor-

ously to clear away the obstacles and misconceptions everywhere, in order to prepare the way to an universal application of his therapy, to the benefit of mankind.

The proofs of his researches were convincing and throughout the world the favourable results obtained from Diphtheria-Curative-Serum confirmed the truth of Behring's theories.

The rate of Diphtheria casualties fell wherever physicians applied Diphtheria Curative Serum, humanity was freed from a most cruel scurge, that hitherto had deccimated its children.

The next problem was to produce Curative Serum on a large scale to provide for the requirements of the whole world.

Within a short time, most doctors throughout the world successfully used Behring's Curative Serum against Diphtheria.

Here it should be mentioned also, that in 1890, Behring in collaboration with Kitasato prepared the Antitetanus-Curative Serum, the value of which equalled that of the Antidiphtheria Serum.

Besides these problems, Behring devoted his life time to the study of tuberculosis.

In Marburg-Lahn, he founded in 1904 his proper exemplary research institutes and laboratories, for the production of Serum.

Numerous honours were bestowed upon him. The "Institut de France" and the "French Academie de Medicine" already in 1890 presented with him a honorarium of 50,000 and 25,000 frs., the French Government followed with the appointment as officer of the Legion of Honour. England distinguished him by the honorary membership of the "Royal Institute of Public Health," the latter bestowing upon him the "Harben medal." The King of Italy decorated him with the commandercross of the order of the Italian Crown. Besides other important Italian scientific corporations, the "Reale Societa Italiana" made him an honorary member. In the U. S. of America he become honorary member of the "American Academy of Arts and Science" and the "New York Academy of Medicine." Austria-Hungaria, Russia, Turkey, Roumania, Sweden, Belgium and other nations made him honorary member of their most distinguished scientific Societies. The Universities of Athen and Mexico conferred upon him the degree of "doctcor honoris causa." The Sultan of Turkey presented him with the order of Medjidiji 1st class and Roumania with that of Meritul Sanitar 1st class.

When in 1901 for the first time the "Nobelprize" was distributed, the choice fell on E. von Behring as the most prominent re-searcher on medicine.

In 1893, he was promoted to the rank of Professor, in 1895 he became "Geheimer Medizinalrat." In the same year the "Senkenbergische Naturorschende Gesellschaft" in Frankfurt/Main, presented him the "Thiedemann Medal" with an honorarium, and the Faculty of Medicine in Wurzburg followed, with the "Bineker Medal."

The Prussian Academy of Sciences and many important corporation made him correspondent or honorary member.

The city of Marburg-Lahn, in which he had lived so long, granted him the honorary freedom. Sovereigns and princes of the German Empire bestowed on him orders and distinctions. The German emperor raised him in acknowledgment of his scientific merits to a hereditary peerage. In 1903 von Behring was nominated "Wirklicher Geheimer Rat" with the predicat "Excellency."

Too early for the humanity, he died on the 31st March, 1917. His remains were buried in a mausoleum near Marburg-Lahn surrounded by a peaceful landscape and close to his creation, the Behringwerke.

There he rests, but his work lives and grows. "Not to heal; to prevent," deemed him always the most noble duty of a physician. For his part he solved that problem. By his "Diphtheria prophylactic" he left us an even stronger weapon, than the Curative of Diphtheria.

This last and most genial idea of Emil von Behring to prevent the outbreak of diphtheria by vaccination stands just at present in the limelight of medical and public interest.

Thus, the 75th birthday of a great man, links the memory of the past with the events of to-day.

Review of Books.

" Fever, Heat Regulation, Climate and the Thyroidadrenal Apparatus."

By W. Cramer, PH.D., D.SC., M.R.C.S., Longmans, Green & Co., Ltd., London, 1928, pp. 153.

The author offers this book as a by-product of cancer research but to the reviewer it marks a gain for scientific medicine. Together with recent publications of similar nature, it shows how much medical progress depends upon bio-chemical investigation. Only through the application of bio-chemical methods has conclusion been reached to render unnecessary the " crudely vitalistic " and useless conception of a thermostat-like heat centre which had dominated physiological and pathological thought for a long time.

Good evidence is presented to show :—

1. That the thyroid and adrenal glands form a humoral apparatus for the heat regulation of the body.

2. That the functional activity of these glands is influenced jointly, (a) by pathological agents such as toxins, and (b) by climatic conditions.

3. That the rise of metabolism in a " bracing " climate is but one of the manifestations of their increased activity.

This book should be of interest to a wide circle of readers as it contains up-to-date observations on the thyroidadrenal apparatus which supply " the physiological basis for the interesting relationship between climate and civilization."

S. Y. W.

Acknowledgments.

We have much pleasure in acknowledging the receipt with thanks of the following contemporaries:—

The Post-Graduate Medical Journal, London.

The Hospital Gazette, London.

The Charing Cross Hospital Gadette, London.

The St. George's Hospital Gazette, London.

The St. Mary's Hospital Gazette, London.

The London Hospital Gazette, London.

The King's College Hospital Gazette, London.

The University College Hospital Magazine, London.

The Prescriber, Edinburgh.

Health and Empire, London.

The Birmingham Medical Review, Birmingham.

Publications from the League of Nations, Health Organization, Geneva.

Monthly Epidemiological Report.

Bulletins et Memoires de la Societe des Chirurgiens de Paris.

Bulletin de la Societe des Sciences Medicales et Biologiques de Montpellier.

The University of Toronto Medical Journal.

Bulletin of the School of Medicine, University of Maryland, Baltimore, MD.

Anales de la Universidad Central, Quito, S.A.

The Malayan Medical Journal, Singapore.

Japanese Journal of Medical Sciences (National Research Council of Japan), Tokyo.

Kyoto Ikadaigaku Zasshi, Kyoto.

Okayama Igakkai Zasshi, Die Universitat Okayama, Japan.

The Taiwan Igakkai Zasshi, Government Medical College Formosa.

Chinesische Zeitschrift fur die Gesamte Medizin, Monkden.

Index Universalis, Moukden.

Dr. Huang's Mediccal Journal, Shanghai.

Health, Shanghai.

Opium, Shanghai.

The Tsinan Medical Review, Tsinanfu.

The Moukden Medical College Journal, Moukden.

The Australian Journal of Experimental Biology and Medical Science, Adelaide.

The Medical Journal of Australia, Sydney.

Acta Psychiatrica et Neurologica (Karolinska Institutets Bibliotck), Stockholm.

The Tohoku Journal of Experimental Medicine, Sendai, Japan.

University of Durham College of Medicine Gazette, Newcastle-on-Tyne.

The Bristol Medico-Chirurgical Journal, Bristol.

Das System der Hygiene, Universitat Bratislava.

The Journal of Bone and Joint Surgery, Boston.

Porto Rico Review of Public Health and Tropical Medicine, San Juan.

Boletin de la Universidad Nacional de la Plata, Argentina, S.A.

Archives of Medical Hydrology, London.

Fukuoka-Ikwadaigaku-Zashi, Kukuoka, Japan.

Middlesex Hospital Gazette, London.

Endokrinologie, Leipzig.

Transactions of the Japanese Pathological Society, Tokyo.

Bulletin of the New York Academy of Medicine.

Mededeelingen Van Den Dienst Der Volksgezonheid in Nederlanded-Indie.

Polyclinica Dairen.

Revista del Instituto Medico Sucre, Bolivia.

Bulletin of the Medical Department of the University of Georgia, Augusta, GA., U.S.A.

Cornell University Medical Bulletin, New York.

Actas Y Trabajos, Buenos Aires, Argentina.

Deutsche Medizinische Wochenschrift, Berlin.

Die Medizinische Welt, Berlin.

Contributions to the Study of Tuberculosis, Natioal Jewish Denver.

Acta Medicinalia, Imperial University, Keijo.

Revue Medicale Roumania, Bucharest.

Arquivos de Clinica Medica, Porto.

Mitteilungen über Allgemeine Pathologie und Pathologische Anatomie, Sedani.

The Japanese Journal of Experimental Medicine, Government Institute of Infectious Diseases, Tokyo.

Zytologische Studien, Kanazawa.

The National Medical Journal of China, Shanghai.

Acta Medica Scandinavica.

Notes and Comments.

OUR MEDICAL JOURNAL:

We are pleased to inform our many readers that we have been very fortunate in being able to receive papers for publication from well known authorities, such as Sir Berkeley Moynihan, Bt., Professor W. H. Maxwell Telling, Mr. R. Lindsay Rea. With the current issue, we publish an article on "Affections of the Eye in General Practice" by the well-known Harley Street eye specialist, Mr. Lindsay Rea. This paper has been written in seventeen sections, and we are now publishing the first three, with others to follow in later issues.

OUR MEMBERS:

Dr. K. C. Yeo:—We are pleased to learn that Dr. Yeo will soon be with us again, as he has been appointed Assistant Medical Officer of Health in Hong Kong. Dr. Yeo had a distingushed career in this University, and after graduation, left for England for post-graduate studies in tropical medicine and public health. Dr. Yeo passed with distinction in the examinations for the diplomas of Tropical Medicine and Hygiene and the diploma of Public Health. We congratulate Dr. Yeo on his appointment.

Dr. Eva Ho Tung:—We understand Dr. Eva Ho Tung has been successful in passing the examination for the Membership of the Royal College of Physicians, Ireland, (M.R.C.P.I.). This is the first time a graduate of this University has secured this qualification. Dr. Eva Ho Tung is now at Vienna, taking further post graduate studies in Obstetrics and Gynaecology.

OUR DEGREE EXAMINATIONS:

M.B., B.S., Examination:—The results of the first, second and third medical examinations held in December 1928 are published below. It is interesting to note that in the final examination, only 29 per cent. of the total number of candidates passed in part one (Surgery and Obstetrics and Gynaecology), and 38 per cent. passed in part two (Medicine and Pathology). Two candidates succeeded in passing both parts at one sitting, and three were successful in one part only.

1st Degree Examination. Part One (Physics).

Chan Sek Fong
Chau Woon Nin
Lau Man Hin
Lee Pitt Siew
Lim Gim Kheang
Lo Chong Fie
Pang Iu Ki
Pickersgill, W.
Rodrigues, A. M.
Sung Sheung Hei
Tay Kung Swan
Thio Ban Hin
Wong Shing Hang

1st Degree Examination. Part Two (Inorganic Chemistry).

Chan Sek Fong
Chau Woon Nin
Cheng Wing Kwai
Guterres, J. J.
Lau Man Hin
Lee Pitt Siew
Lim Gim Kheang
Lo Chong Fie
Pang Iu Ki
Pickersgill, W.
Man Singh
Rodrigues, A. M.
Sung Sheung Hei
Thio Ban Hin
Wei Cheuk
Wong Shing Hang

1st Degree Examination. Part Three (Biology).

Alvaros, R. E.
Chan Sek Fong
Chau Woon Nin
Daneberg, R. U.
Kuo Shao Hong
Lau Man Hin
Lee Pitt Siew
Leong, R. E. G.
Lim Gim Kheang
Pang Iu Ki
Miss Tso Lai Kei
Wei Cheuk
Wong Shing Hang

2nd Degree Examination. Part One (Organic and Physical Chemistry).

Chau Kwok Wa
Cheung Kung Leung
Chung Hon Kwan
Kuo Shao Chou
Kuo Shao Hong
Lee Ho Tin
Liu Yan Tak
Loke Kam Thong
Mak Kai Cham
Tan Hee Choo
Wong Wa Kwan

2nd Degree Examination. Part Two (Elementary Anatomy and Physiology).

Chau Kwok Wa
Cheung Kung Leung
Kuo Shao Chou
Kuo Shao Hong
Lee Ho Tin
Liu Yan Tak
Loke Kam Thong
Mak Kai Cham
Tan Hee Choo
Teoh Thean Ming
Miss Lois Todd
Wong Wa Kwan

2nd M.B. Examination. Part One Old Regs. (Anatomy and Physiology).

Chan Shing Chue
Miss Cheng Hung Yue
Fernando, F. S.
Ho Suk Yee
Khoo Fun Yong
Khoo Keng Wah
Lam Shiu Chun
Law Nai Koey
Lien Tsoong Kya
Lim Nget Siew
Ling Ke Dien
Ng Tin Fong
Scully, G. S.
Tsai Ai Le
Tseng Wah Kit
Wong Hok Nin
Yeoh Guan Eng
Yip Yuet Fong
Miss Hilda M. Y. Yuen

2nd M.B. Part Two Old Regs. (Elementary Pathology and Pharmacology).

Miss Cheng Sui Yue
da Roza, C. E.
Miss Leung Chum Ha
Lim Ek Quee
Mok Hing Fai
Miss Pau Choi Chue
Miss Tong Lai Yee

3rd M.B. Part One. (Surgery, and Obstetrics & Gynaecology).

Chun Boon Teck
Karanjia, N. P.
Sunder Raj, C. A.
Teh Yok Chin
Vephula, C.
Wong Yan Kwong
Yang Lin

3rd M.B. Part Two. (Medicine and Pathology).

Au King
Cheah Khay Chuan
Gourdin, A.
Karanjia, N. P.
Sunder Raj, C. A.
Wong Boon Hin
Wu Ta Piao
Yang Pao Chang

The following are recommended for the M.B., B.S. degree :—

Chua Boon Teck
Gourdin, A.
Karanjia, N. P.
Sunder Raj, C. A.
Vephula, C.
Wong Yan Kwong
Wu Ta Piao
Yang Lin

INTENSIVE POSTGRADUATE COURSE OF NEUROLOGY AND PSYCHIATRY IN VIENNA, SUMMER, 1929.

The following notice has been received from Vienna:—

Although postgraduate medical study is very well organised in Vienna, it was often our experience, that the individual studying neurology and psychiatry lost much time by waiting until a class was complete or that he had to take private lessons which are, of course, much more expensive. On the other hand it is very easy to organize intensive studies for a group of men who come to Vienna at a previously fixed term. Therefore special systematic classes for Postgraduate Study in Neurology and Psychiatry are held in English at Prof. Wagner von Jauregg's Neuropsychiatric Clinic, at the head of which is now Prof. Pötzl, and at the Neurological Institute of Prof. Marburg, Vienna University, Austria, under the auspices of the American Medical Association of Vienna. We decided to repeat it in summer 1929 (May 21.—June 29.)

In these 6 weeks (34 working days, 6 hours daily) the whole sphere of neurology and psychiatry and the adjacent branches (otiatry, ophthalmology, X-rays) will be covered in 204 hours and there remains time enough to go in for one or another special class. Hofr. Prof. Wagner, the former chief of the Neuropsychiatric clinic, his successor Prof. Pötzy and Prof. Marburg will be kind enough to participate in the programme. The names of the other teachers appear below.

The fee is $150.—(about £30 sh. 15) for each person, subscription at the American Medical Association of Vienna included. Applications with a certified bank check at the amount of $40.—enclosed should be sent to Docent Dr. E. Spiegel, Vienna, I., Falkestrasse 3 and are accepted in order of priority. Each applicant gets a card which gives the right to enter Austria without paying the Austrian visa. The class will be held for a minimum of 8 and a maximum of 15 men. If the minimum is not reached, the money will be returned. A certificate can be secured.

Further informations can be obtained by Docent Dr. E. Spiegel, Vienna, I., Falkestrasse 3.

Summary of the Lectures.

Hofr. Prof. Wagner. Special lecture	1
Prof. Pötzl. Special lecture	1
Prof. Marburg. Pathology of nerv. diseases	12
Prof. Pappenheim. Clinic of nerv. diseases	15

Doc. Gerstmann. Clinic of nerv. disease	15
Doc. Kogerer. Functional nerv. diseases	8
Ass. Dr .Dattner. Neurosyphilis	8
Prof. Stransky. Psychiatry	15
Prof. Schilder and Ass. Dr. Hartmann. Psychoanalysis	15
Ass. Dr. Kauders. Therapy of nerv. diseases, including Hypnosis	8
Doc. Spiegel. Vegetative Nerv. System	12
Prof. Hafferl. Anatomy of periphere nerves	6
Hofr. Prof. Sträussler. Histopathology esp. of cortical diseases	8
Doc. Spiegel. Anatomy of the central nerv. syst.	25
„ „ Physiopathology of the central nerv. syst.	15
Prof. Alexander. Neurology of the ear	8
Doc. Fuchs. Neurology of the eye	7
Ass. Dr. Kestenbaum. Ophthalmoscopy	5
Ass. Dr. Sommer. Nystagmus	5
Prof. Schüller and Doc. Sgalitzer. X-rays	8
Prof. Hirsch. Hypophysis	1
Ass. Dr. Adolf. Liquor tests, colloidchemistry of spinal fluid	4
Ass. Dr. Stein. Speech and voice disturbances	2

INTENSIVE STUDIES IN OBSTETRICS AND GYNECOLOGY.

Intensive studies in Obstetrics and Gynecology will be offered from August 24th to September 14th, 1929, at the Peking Union Medical College.

Special attention will be given to macroscopic and microscopic pathology. Ward rounds will be held, dealing with the diagnosis of cases, which will subsequently be submitted to operation before the class, and a final ward round will be given to discuss the after history of these cases. There will be special demonstrations dealing with the diagnosis and treatment of sterility, the management of normal and abnormal labours, and female urology. The use of radium in the treatment of gynecological disease will be discussed and shown to the class.

Seminars will be held at which the class will be expected to discuss chosen subjects under the guidance of members of the Department. The class will also be invited to bring up cases and subjects for discussion.

An effort will be made to show to all the members of the class the conduct of normal labour, and they will be called to any case of

abnormal labour occurring during the course. Rubin's test will be shown to the class.

Enrollment will be limited to twenty-five, and all doctors are eligible for admission. The tuition fee is $35.00. Applications should be sent to the Registrar of the Peking Union Medical College or to the Head of the Department of Obstetrics and Gynecology. For information in regard to fellowships address the Registrar of the Peking Union Medical College.

APPOINTMENTS.

GOVERNMENT CIVIL HOSPITAL.

January to June, 1929.

House Obstetrician .....Dr. Sun, E. W. J.

House Physician .....Dr. Hsiu Shih Tse.

House Surgeon .....Dr. Laing, D.

Clinical Assistant to the Obstetrical and Gynaecological Unit
Dr. Lam Shiu Kwong

Clinical Assistant to the Medical Unit .....Dr. Wu Ta Piao.

Clinical Assistant to the Surgical Unit .....Dr. N. P. Karanjia.

Clinical Assistant to the Outpatients' Department
Dr. C. F. X. da Roza.