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INTERSTITIAL KERATITIS.

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The disease known as Interstitial Keratitis is one of great importance not alone to the ophthalmologist but to the general practitioner as well. The recognition of this disease in the majority of cases is comparatively easy, and the appropriate treatment is exceedingly satisfactory.

If one were to take up the various text books on ophthalmology, the opinions there would be found to be far from unanimous in their methods of treating such a condition. The writer some years ago undertook a special study of this disease (see Preliminary Report on the Treatment of Interstitial Keratitis, 1925). Jonathan Hutchinson in 1858 began a series of papers on the subject of inherited syphilis in its relation to diseases of the eye. The number of cases investigated by him was 98, and from his study he was able to show the superior efficacy of specific treatment by mercury and iodides.

Many workers have appeared in this field. Nettleship, Sinclair, Bishop Harman, Langendorff and others. It was with pleasure I read of Langendorff's work at the Rudolf Virchow Hospital which led him to the conclusion that specific treatment is undoubtedly beneficial although its action is not dramatic. He said, "The most reliable test of the severity of a disease of the eye is to note the degree of vision left after the culmination of the disease, and judged by this test, the value of consistent specific treatment stands out plainly."

My observations have led me to the same conclusion regarding the end results of specific treatment. I have endeavoured to give these in terms of the vision finally obtained, and in this respect, I am differing from the majority of workers on this subject. The eye is an optical organ and its function is that of vision. Surely then, the most important consideration is the degree of vision left in an eye that has been attacked by any form of disease. Judged by this test, the best treatment is the one which gives the highest vision at the termination of the disease.

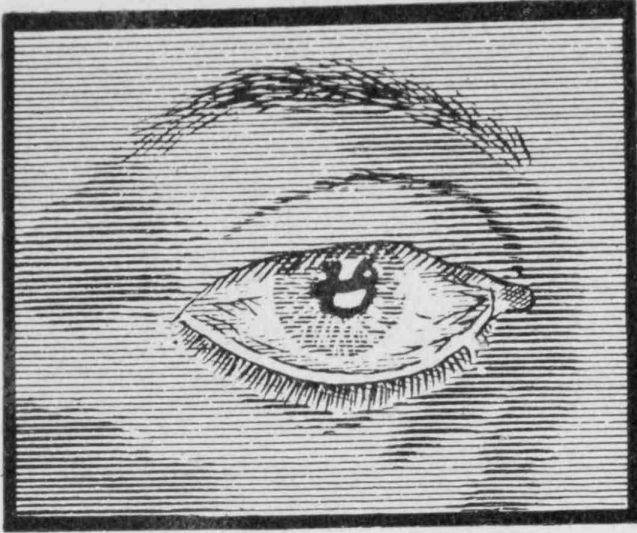
I collected a series of 91 cases which extended over a period of four years. I found the proportion of males to females was 1:1.87 while Hutchinson obtained the figures 1:1.7. My youngest patient was five years of age, and the oldest forty nine, but only two cases were over twenty-six years of age. The great majority occurred between six and twelve years of age.

The doctor should make himself familiar with the signs of congenital syphilis. For example, the permanent incisor teeth show notching, or instead of notching, may appear peg shaped with spaces between the teeth. The bridge is usually acutely depressed, and I did not notice deafness in any one when the Interstitial Keratitis was first seen. Remember, however, deafness is common in those who have not had prompt and thorough treatment.

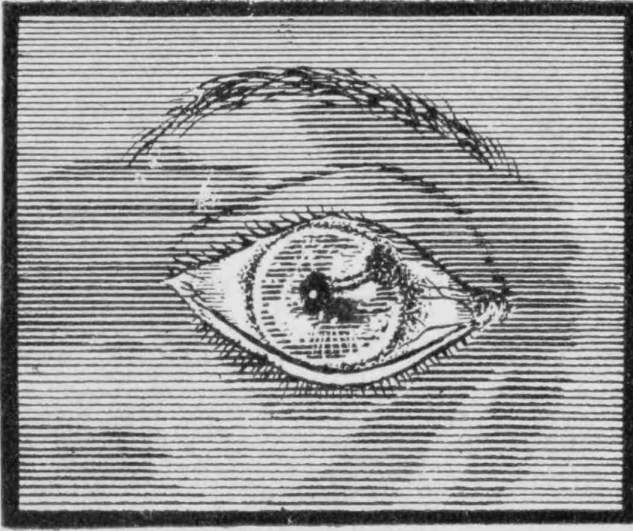
I may mention here that I have never seen the slightest improvement in the hearing of any congenital syphilitic from any form of treatment once the deafness was established, and this agrees with those authorities on diseases of the ear who have stated that treatment avails little or nothing in cases where deafness is due to congenital syphilis.

The pathological state of the labyrinth makes it quite clear why this is so. Hutchinson and Jackson said 10 per cent. of congenital syphilitics acquired labyrinthine deafness, and it may supervene just as the attack of Interstitial Keratitis is passing off. How important then becomes the prompt and thorough treatment of Interstitial Keratitis. The deafness alone would indicate that the treatment must be constitutional as the disease is constitutional although only the eyes may appear to suffer from the ravages of congenital syphilis.

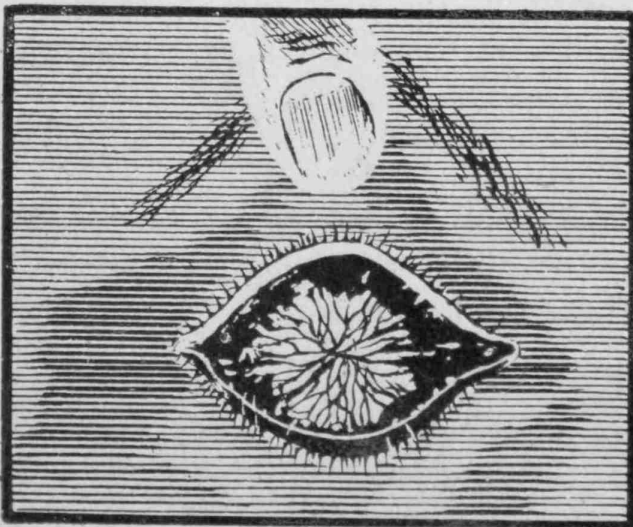
One important fact is brought to light by questioning the mother about the births in her family. Several times I have been told that previous to the birth of the child, now the patient, a miscarriage had taken place. All the children born before the miscarriage were perfectly healthy, while those that came after suffered in a greater or lesser degree from some form of congenital syphilis. Obviously the miscarriage gave an indication of the time when the mother became infected.



A
Mild onset without
pericorneal injection.
Faint corneal opaci-
ties present.



B
"Salmon Patch,"
with pericorneal in-
jection.



C
Fulminating. Eye
greatly injected. Iris
nor pupil seen. Cor-
nea deeply vascular-
ised.

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It is also while questioning the mother that one realizes to some extent the awful wastage of human life caused by women contracting syphilis. Recently one woman told me she had had four miscarriages one every year for the past four years. The child she brought to me was suffering from the onset of Interstitial Keratitis and had other signs of congenital syphilis about the body.

Interstitial Keratitis is not the last manifestation of congenital syphilis. I have seen a gumma in an eye long after the onset of the Interstitial Keratitis. I have seen gummatous ulcers on a girl's leg when the infected eyes were quite healed. I have seen at the West End Hospital for Nervous Diseases a young man aged 23 years who had suffered when a child from Interstitial Keratitis and was now showing symptoms of general paralysis of the insane.

It is worth while examining the knees of these young people. They are often attacked and show the typical bilateral sero-synovitis, termed Clutton's joints by d'Arcy Power.

The investigation into the etiology was as follows. Sixty-four new cases seen by me for the first time all showed a positive Wassermann reaction of the blood serum. Eight cases were old, the disease having run its course more than ten years previously. In all of these which had not specific treatment, the Wassermann reaction was negative, but in five of these where I was able to have an examination of the cerebro-spinal fluid done, a luetic curve was obtained by means of Lange's colloid gold test, proving definitely they were syphilitic. Therefore one must not infer from a negative Wassermann reaction of the blood that a condition is not syphilitic. It was due to this misunderstanding that many cases of Interstitial Keratitis were supposed to be tuberculous. In my series, 100 per cent. were syphilitic.

It is wise for practitioners to remember in congenital syphilis when the Wassermann reaction is positive, treatment does not change it to negative, and in old cases of Interstitial Keratitis, when a fresh manifestation of syphilis makes itself evident, the Wassermann reaction of the blood serum may or may not be found positive. Remember in acquired syphilis, the Wassermann reaction can indicate the result of treatment, but in congenital cases, it is the clinical manifestations which must be observed as the measure of thorough treatment.

The onset of Interstitial Keratitis varies greatly. There may be merely fine opacities in the cornea with very little vascular manifestation around the limbus. With the corneal microscope, minute spots not visible to the naked eye, are seen scattered throughout the cornea. In two or three weeks' time the eye becomes much more acutely affected, so that the redness of the pericorneal zone deepens while photophobia becomes more marked. Many cases show a red patch at the edge

of the cornea accompanied by photophobia. If it is looked at through a magnifying glass, this salmon patch is found to be composed of numerous vessels both superficial and deep. Actual ulceration is exceedingly rare.

As the opacities of the cornea increase, minute blood vessels may be seen passing in from the limbus. They are both superficial and deep, and although these vessels may disappear, when the attack has passed off, they can be seen with the microscope years later as fine dark lines.

There is one type of onset of the disease where the cornea becomes entirely opaque. The pupil cannot be seen at all. These are what I have termed fulminating cases.

In the microscopic section of a cornea suffering from Interstitial Keratitis, the following is seen. The epithelium on the surface is swollen and shows minute vesicles or bullae. The body of the cornea is infiltrated with large masses of leucocytes. Large blood vessels accompanied by nerves are seen invading the cornea proper. Descemet's membrane is wrinkled or folded on itself, while the endothelium shows pittings. There is a certain amount of iritis. This should always be borne in mind as it is absolutely necessary to prevent adhesions or posterior synechiae being formed. This can only be done by the use of atropine from the very outset of the disease.

Although a child may be attending Hospital, the family doctor is often questioned by the mother, as to the cause of the disease, and its duration, also what the outlook may be. Wherever possible, I ascertain the Wassermann reaction of the parents' blood, and treat them accordingly.

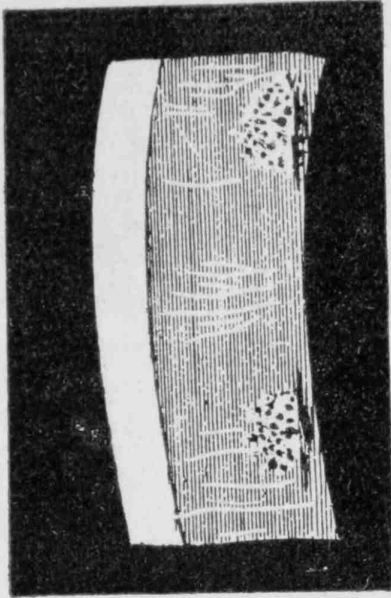
The course of the disease varies somewhat, but on an average, from the time of the onset of the keratitis to its termination, is from six to eight months, and occasionally (3 per cent.), there is a recurrence.

The parent of the child should be warned that the disease is liable to attack both eyes. This is the rule in congenital syphilis, but is not the case in acquired syphilis.

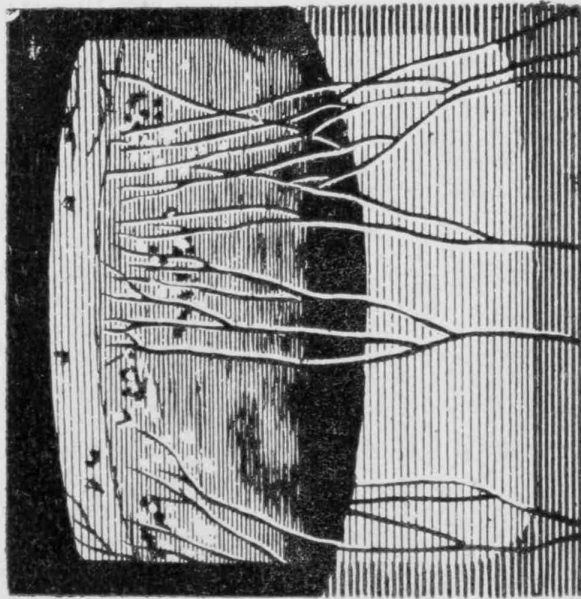
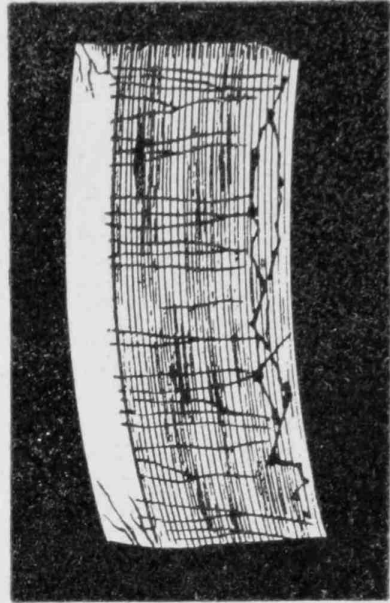
The prospect is good if treatment is begun early and vigorously. One case I remember, in which a recurrence took place, the entire treatment lasted over two years. The patient now has 6/6 vision in each eye.

As to treatment, from what I have already said, it is clear that it must follow definite lines. Firstly, atropine ointment 1 per cent. must be applied thrice daily to prevent adhesions forming in the pupillary margin of the iris. If the symptoms are mild and with little

A



B



C

(A) The cornea as seen by the corneal microscope and slit lamp in a case with very mild onset. Note the grey opacities deep in the substantia propria. The white streaks are the nerves of the cornea.

(B) In the Salmon Patch type of onset the vessels are both superficial and deep, while on Descemet's membrane are seen black dots connected with each other by fine folds of this membrane. These dots may sometimes be mistaken, when examining by the loup, for "K.P." Epithelium has a steamy appearance.

(C) Note deep and superficial vessels. Those which are in the substantia propria can be seen running in from the limbus accompanied by nerves. Grey opacities are seen everywhere, while the epithelium is steamy and in some places bullous.

This shows the appearance both by direct and reflected light.

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photophobia, it is a decided advantage to add Hydrarg. Ox. Flav. 2 per cent., but if the attack is severe, then it is better to use atropine alone. Observation with a slit lamp and corneal microscope shows that in these cases, with severe photophobia, the superficial structures are heavily involved. The epithelium is oedematous or even bullous. There are numerous conjunctival vessels present, and in such a condition, Hydrarg. Ox Flav. can only act as an irritant.

I have said the treatment should be constitutional, and as one proof of this, may I say that not one of the 64 new cases which have been treated from the outset, has developed deafness. In untreated Interstitial Keratitis, deafness is common. Again, choroiditis is singularly absent in those cases which have been treated constitutionally from the outset, whereas it is the rule in untreated cases.

The treatment therefore is as follows. In addition to the treatment by atropine some form of arsenical injection given intravenously each week is employed. I have come to the conclusion that Novarsenobillion (N. A. B.) is undoubtedly the best. If the child is young and the veins are difficult to find, then sulf-arsenol can be given intramuscularly. The first injection of N. A. B. should be .12 gms. This is increased to .3 gms. in two to three weeks' time. If the child is over 12 years of age, the dose can be increased to .45 gms., but for 10 to 12 years of age the amount which seems to act most effectively is from .25 to .3 gms.

It is well to remember that in children as in adults, two smaller doses given with a week's interval are infinitely better than one dose of twice the amount given singly. Ten to Twelve injections should be given with a week's interval between. This is followed by giving Hydrarg. c. Creta, one to three grs. daily. Treatment should be as thorough as possible. Even if the Keratitis be of a mild character, eight, ten, or twelve injections should be given followed by mercury. Iodides should be included if the patients are of adolescent or older age, and treatment should continue for one year at least.

If the Keratitis should prove obdurate, or should a recurrence take place, then a series of injections of N. A. B. should be repeated, and one should be prepared to continue treatment for another year.

When the eye becomes quite white, atropine should be stopped, but the use of Ung. Hydrarg. Ox. Flav. 2 per cent. should be continued nightly so as to obtain the minimum amount of scarring of the cornea. As a tonic Syrup Ferri Iod. is useful also for children.

A glance at the three tables at the end of my little book (The Treatment of Interstitial Keratitis) should convince the most sceptical of the value of the treatment I have outlined.

THE NERVOUS AND PSYCHICAL ELEMENT IN DISEASE.*

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Hong Kong.

In looking over the development of medical science during the past fifty or sixty years, we find that great changes have taken place in the points of view from which diseases were looked at with regard to their nature, classification and treatment. Thus four stages or periods can easily be distinguished.

In the seventies of the last century under the influence of Virchow, the new conceptions resulting out of the research work in pathological anatomy and histology had placed clinical medicine on a thoroughly scientific foundation; soon afterwards a turn to physiological experimental methods followed, which again, inaugurated by the work of Pasteur and Koch was substituted by a period which may be called the bacteriological era. Since the beginning of the present century researches on the functional disturbances of the endocrine glands, and studies on metabolism as well as on constitutional and hereditary problems have again revolutionised clinical pathology.

In recent years a new current has made its appearance. In all periods which I have just mentioned, too much stress had been laid on the pathology of a single organ or on the disturbed function of a system. Growing specialisation deprives the medical man more and more of his ability to value the symptoms in the right way, and although a man might have great medical knowledge and might be a fine medical thinker, he nevertheless often lacks the proper intuition and misses the right diagnosis. Owing to the many laboratory findings and examinations with complicated apparatus the patient himself has been neglected as a feeling and reflecting human being, as an individual of its own. The value of the part which the nervous system and especially the *psyche* of the patient plays in disease has been greatly underestimated.

Thus the present new attitude against disease which takes also the *psyche* of the patient into consideration comes as a reaction to the one sided physical or somatic conception of disease. The patients themselves feel nowadays that the average physician cares very little for their psychical needs; besides modern social life has loosened the formerly intimate contact between physician and patient and has created a stronger wish for better psychical understanding and treatment. If the practitioner disappoints his patient in his expectations, the latter

* Delivered before the Hong Kong University Medical Society on 21st September, 1927.

will often take refuge in a quack doctor who certainly will not miss his chance and who knows how to deal with the psychical side of his client.

Among the physicians of ancient Greece, who had a surprisingly fine understanding for human nature, already Hippocrates held the view that the *psyche* could heal the body. In the philosophical works of Aristoteles we can find that all the vegetative functions of the body, as for instance growth and nutrition were believed to emanate from or at least to be influenced by the *psyche*. It is difficult, if not impossible, to give an exact definition of what really is understood by the Greek term *psyche*; each philosopher has his own definition. The English translation "soul" has a somewhat religious interpretation, and does not fully express the wider meaning of *psyche*, therefore the Greek term is used at least in the scientific language and more frequently in its adjective form psychical.

The nature of the *psyche* manifests itself in various reactions and forms, which in their manifold and differentiated combinations and shadings are expressed by conceptions such as intelligence, mind, character, conscience, will power, temperament, desires, sentiments, and emotions. Desires, very often latent in the subconscious, appear through the whole of animal life, energies and forces counteract each other; and by their constant antagonistic play new stimulations are created which are the source of our vitality. Sentiments create sentiments of a different, often opposed nature, for instance an erotic feeling is accompanied by the feeling of shame. Some of our psychical properties and actions can be controlled by others, but only to a certain extent and often less than we commonly think. Emotions can be controlled by intellect and will power within certain limits. Very often "You think the force is yours and you are forced" to quote Geethe's "*Du glaubst zu schieben and Du wirst geschben.*" Free will is more or less an illusion or autosuggestion. There is always a reason or motive in the background of our subconscious mind, *a psychical causality*. It can further be said that in all phenomena of life, in physical as well as in psychical life we can recognise some purpose, a certain tendency: nature is working for a certain aim either instinctively or by conscious direction. There is no blind causality.

It is an important role which the human *psyche* plays in life, and it deserves well our attention and study all the more, as up till now the "soul problem" which means nothing else than the exploration of the *psyche*, the study of "*psycho biology*," has been an object which never has stood in great favour, especially in medical circles: its discussion one usually rather prefers to avoid. *And yet a human being consists of the combination of body and soul or psyche, and neither can*

be separated from the other, as only together they form the biological entity. But the stimulating principle of the organism is the *psyche*.

Therefore the physician who considers and treats a diseased organ only and not the patient as an individual including his psychical component will often fail in recognising the true pathological condition. Further, if he has no knowledge of psychotherapeutical methods he will miss a good many of the available therapeutical possibilities.

Certainly at all times there were physicians who emphasised the importance of psychical treatment and the family doctor of the old type made use of it more or less unconsciously without pretending to follow a special method. Psychotherapy as a science has developed in a methodic way only since Freud of Vienna some 30 years ago by his psychoanalytic studies has stimulated further research on these lines. No doubt Freud has overemphasised the sexual component in its importance of building up the so called complexes as the etiological factors of psychical conditions or even organic diseases. Later on other than sexual complexes e.g. the insufficiency or inferiority complex, have been made responsible for creating pathological conditions.

I will not go into further details of psychoanalytic methods in this paper; we may accept them or we may not. At least we have to acknowledge that the psychotherapeutic movement has the merit of having provoked a general tendency in modern medicine to search more than formerly for psychical etiological factors, and further of having acquainted us with many facts which well illustrate the pathogenesis of not only psychoneurotic, but other diseases.

Psychotherapy has already gained a strong position in medicine, especially on the Continent of Europe, whereas in England it does not enjoy the same popularity and even fell into disrepute again. The reason for this is partly due to the action of laymen without scientific medical knowledge who have taken up the subject and, as for instance in America, have started to practise as psychoanalysts, discrediting the method by classifying it with mystical and unscientific subjects like Spiritulism, Occultism and Christian Science, which latter is no science at all, for it lacks adequate scientific knowledge and foundation, its conclusions being false because they are drawn from incorrect and misinterpreted observations.

Psychotherapy as a scientific branch of medicine can only be accepted if the method is based on scientific principles and not on personal impressions. It further must be accessible to the physiological experiment, and proved by clinical methods.

The mutual relations between the neuro-psychical and the physical part of our Self are demonstrated by many physiological phenomena and if we realise their effects in normal healthy life we shall understand their importance in disease.

The foundation for a series of experiments which demonstrate the appearance of organic symptoms as reactions to nervous and also purely psychical stimuli was laid by Pavlov with his well known fine experiments on dogs. Pavlov showed that the secretion of the stomach glands, an apparently well defined organic process, could be influenced even to the degree of complete arrest by the action of nervous stimuli, psychical emotion and mental associations. We can observe these phenomena on ourselves. Not only the sight, but even the thought of a favourite dish will produce increased salivation and it has been found that the chemical composition and amount of the secretion correspond to the chemical character of the food which has been the object of the imagination and mental concentration. It also has been experimentally proved on animals that the flow of bile and pancreatic juice can be produced as purely psychical reactions. Exact experiments have further established the fact that pulse rate and blood pressure as well as the secretion of sweat glands quickly react on nervous and psychical stimulation.

In using the term nervous it must be understood that nervous is often used especially in clinical medicine in the sense of it being psychical. When speaking of a nervous person, nervousness, or a nervous break down, we actually refer to the psychical condition of the patient and if we speak of neurasthenia—literally nerve weakness—it is understood that it is not our nerves, e.g. the peripheral nerves are affected, but the higher centres, where the reaction has taken place.

Again in the case of glancing at a favourite dish it is not a specific quality of stimulation of the optic nerve, but the associations arising from the stimulus in the *psyche*, which lead to the physical reaction. On the other hand we have to keep in mind that stimulation of a nerve, especially if of a prolonged nature, is able to produce visible effects in the nervous system. If for example intensive light is thrown for some time into one eye of a frog, anatomical changes can be demonstrated not only in the perceptive nerve cells of the affected retina, but also in the optical centre in the brain.

In a similar way real molecular changes are found in the spinal motor ganglion cells of a dog which was compelled to use the legs constantly for some hours. When the animal was allowed to rest for sometime after the experiment, the appearance of the cells was found to be normal again.

From these experiments we learn that long persistent stimulation of our sense organs as well as muscular fatigue from excessive physical exercise will break up substantial material in the central nerve cells, and thus produce microscopical changes which however, in case the stimulation, is of no long duration, and only of a transitory character.

In a similar way we may assume that the "nerve apparatus" of the higher centres becomes affected by purely psychical stimuli.

The phenomenon of "Aufbrauch,"* of using up material in the nerve cells, which has its physiological expression in impaired function and the feeling of fatigue is a fundamental point in the conception of nervousness. The feeling of fatigue is a warning; if we follow it in time the threatening condition of exhaustion will be prevented.

Psychical or affective stimuli in their projection as somatic reactions are essential features of our life but are rather underestimated in their importance especially in disease. The popular saying, "to turn yellow and green with anger," refers to the jaundice which may follow an unpleasant emotion. The effect on the bowels of an uncertain expectation, excitement, or fear, causing a quick motion, is also generally known. The Bible gives us a drastic example with the words, "A man stricken by fear, his bowels turned to water."

Constantly in daily life such affective factors or emotions work on our mind and body in an endless play of reactions and counter-reactions. Pleasant affections produce an agreeable feeling, and they make us happy and joyful. The brightness of our mind facilitates and increases the power of our intellectual and physical productivity, and we feel more courageous and enterprising. The reflectory reactions on the body are manifested by the contented expression of the flushed face: the eyes are brilliant, and the movements quicker and vivid.

Unpleasant emotions on the other hand like sorrow, fear or anger produce disagreeable feelings, a sensation of anxiety, a sinking feeling in the abdomen and constriction of the chest, often accompanied by sudden weakness and inability to move. The face becomes pale, the heart throbs, the body trembles, the forehead becomes wet with perspiration. The receipt of an unpleasant letter may cause us headache and we may lose our appetite. Thus we see that *every psychical affect, every emotion has its physical concomitant* and will express itself in some way with a physical reaction from the part of the heart, bloodvessels, digestive organs and glands. Hysteria is the classical example of a product of these psycho-physical reactions.

The reverse action, the influence of an organic condition upon our mind can also be often observed and is not less interesting as for example the relation between thyroid gland and imbecility or myxœdema. By feeding an athyroid or hypothyroid imbecile with thyroid substance of the sheep we are able to improve and under certain circumstances even restore completely the individuals intelligence. We have here a physiological experiment which clearly proves the intimate relation between somatic and mental component.

* There is no adequate English translation for this term, which has been adopted now into English medical literature.

We have seen that most of the psychical reactions take place in the vegetative organs, which consist of the vascular, digestive, generative and the glandular apparatus. Its nerve supply is derived from the sympathetic or vegetative nervous system, the functions and pathology of which have only in recent years been studied more carefully and especially so with regard to its relations to the "hormones" and the products of the ductless glands. Two groups of nerves are differentiated: the *sympathicus* and the *parasympathicus* or vagus nerve. Generally speaking the action of these two systems are opposed to each other. According to the preponderance of one or the other system we speak of an increased sympathico or vago tonus. The tonus of an individual type may persist during life and thus produce characteristic features in a person, or it may change, increase or decrease during certain periods of healthy or pathic life. Thus in the puerperium the vago-tonus increases especially in the beginning. This tonus is responsible for the so-called morning sickness. In the lower part of the intestine however the vago-tonus is decreased, manifested by an atony of the bowel with the clinical symptom of constipation. The latter symptom, so annoying in pregnancy, is therefore not produced by mechanical means, since it occurs already early in pregnancy, when the uterus is still not large enough to produce efficient pressure. In individuals with a hypertonic sympathetic system this condition can be tested by injection of adrenalin whereupon glycosuria will follow.

The psychical properties and forces in their more or less outbalanced mixture and their relations to each other represent the *psychical constitution* which is as variable as the physical constitution. In the same way as we distinguish between certain physical constitutional types as the sthenic, asthenic, lymphatic, adipose type, we should learn to classify our patients also according to their psychical constitution. A good physician would certainly regulate his therapeutic measurements according to the physical condition of his patient, how much more he should accommodate them to the psychical condition, for in each individual the *psyche* reacts in disease differently on an outside stimulus. Thus it will add a good deal to the efficiency of our treatment, if we are acquainted with the various psychical types and the way they react. Each psychical activity is, as we have seen, accompanied by a physical reaction and we may shortly call this phenomenon the *psycho-physical reaction*, which characterises certain types. As these reactions essentially take place through the channels of the vegetative nervous system and further stand in intimate relation to the inner secretion of the endocrine glands, we will find that the psychical types in many points correspond to those groups, which have been established according to the characteristic symptoms and signs of an increased vago, or sympathico tonus, and the conditions of hyper, or hypo secretion of certain endocrine glands.

Two main types can thus be distinctly differentiated: *The vegetative, basedowoidal*—popularly known as nervous and shortly called B type, of which Basedow, or Grave's disease (exophthalmic goitre) is the typical pathological form. The characteristic features are:—great liability to sentimental, highly pitched affects; quick change of emotions which are largely dependent on outside impressions, and are accompanied and underlined by expressive movements. Mood and physical efficiency go up and down with the psychological level. The vivid imagination leads to various kinds of illusions and false sense perceptions. The physical signs more or less correspond to the vago tonus type: brightly shining eyes, readily blushing face, quickly excitable heart, sweating and tremor of hands.

This biological type is commonly met with in artists, especially among musicians. It is more frequent among the dark haired Europeans, and rarer in the Anglo-Saxon than in the Roman race.

Quite different and in some way directly opposed to the B type is the so-called *tetanoid* or "T" type, which readily responds to physical stimuli—hence its name, which in my opinion would better be changed into "motoric" type. Individuals belonging to this type are fond of physical activities and exercises, the reactions on outside stimuli are guided by intellect and are controlled intentionally by will power. Presence of mind is prevailing. All actions and vital functions are performed with a certain powerful energy and are less influenced and affected by sentiments and emotions. The gait is straightforward and free from the staggering and mincing steps and the expressive accompanying movements of the B type. The mimic expressions of the T type lack the quick emotional reflex reactions, the eye has not the spirited brilliancy of the B type.

Other types are the passive, dull type, tolerant towards the suffering of pain and usually associated with hypophysial disturbances and further the shy and apathic, eunuchoid type. There are of course many grades and shades and combinations of these various groups and a single individual rarely displays all the features, characteristic for his type, but nevertheless the acquaintance with these various biotypes of psycho-physical reactions is in many cases of great help and usefulness when dealing with patients. To give a rough example:—the symptoms of pain related to a physician by a French actress have to be valued and consequently therapeutically dealt with quite differently from similar complaints stated by—say—a Scotch sea captain.

We further have to keep in mind that there also exist temporary changes of an episodal character in every one's psychological life and especially in the *psyche* of the female organism in connection with the biological processes of evolution.

It is on account of the periodically increased activities of her generative organs that a woman has to go through more psychical crises than a man. A woman is more subject to great emotions which influence her reactions in daily life and not the least also in disease. Therefore *psychical complexes play a more important role in the history of our women than in our men patients*. A well known gynæcologist has stated that in over one half of his patients with minor gynæcological troubles the latter could be traced to some psychogenic origin. This statement may seem rather exaggerated, but at least it calls for attention and it may be well to consider here a few points which are essential for the better understanding of the psycho-pathology of the women.

The *two complexes*, to use the psychoanalytic term, with which the female organism is struggling during the greater part of life, the *one of pleasure and the one of fear*, produce quite different organic reactions, which further are modified by the change in the hormonal status, as for instance during menstruation and gestation.

In the genital sphere the complex of pleasure is accompanied by reflectory synergic movements, effected by way of the parasympathicus, in the form of relaxation of the unstriped muscular elements of the genital organs with concurrent sensory reactions and shifting of the main blood mass from the inner organs to the skin and external genitals.

The organic reflex of fear is an opposed reaction to the psycho-physical mechanism of pleasure. It expresses itself in an attitude of defence with inhibition of the function of the glandular, and contraction of the muscular apparatus; the latter may even be stimulated to a clonus. The blood will fluctuate from the surface of the body to the inner organs.

These psycho-physical mechanisms are well known in normal life, but we are not so well acquainted with their symptomatology as pathological reactions.

In turning now to the discussion of *special forms of psychopathology*, clinical pictures with symptoms of an organic disease produced only by psychical influences, I will start with these mechanisms and phenomena, which frequently are seen by the gynæcologist in his practice.

As an example in which the pleasure complex may produce a pathological condition I will mention the *priapismus mulierum*, the *nymphomania* of women, showing the following signs: the *introitus vagina* stands open, the urethral orifice is bulging forward, the *corpora cavernosa* and *bulbi vestibuli* are congested and as the most significant symptom, there is hypersecretion of a glutinous, whitish fluid from Bartolin's glands. As a matter of course this symptom complex seldom gives rise to complaints, for which medical advice is sought.

The complex of fear and similar emotions on the other hand produces pathological conditions which quite frequently are met with in medical practice. Examples of this symptom complex concerning the *pars copulationis* are: vaginismus, frigidity and some forms of pruritus vulvæ, the latter occasionally as a result of a former unpleasant sensory impression, an "engramm," which afterwards acts as an hidden complex.

With regard to the *pars gestationis* clinical illustrations of this kind are the *apoplexia placentæ*, its premature detachment with following abortion or premature delivery, then *apoplexia mucosa* or menorrhagia in the *intermenstrum*, further painful menstruation or dysmenorrhœa. It seems striking that an apparently similar psychical stimulation may lead to reactions of quite opposite effects, thus an acute mental shock, the news of a sudden unexpected death, sudden fright or even the expectation of an operation may either lead to the premature appearance or also to the arrest of the menstrual flow. Lactation may be influenced in the same way.

To explain this apparently paradox reaction we have to remember that stimuli which are conveyed along the paths of the vegetative nervous system may either cause dilatation or constriction of the blood vessels. The intensity of the stimulus probably is responsible for the ultimate effect according to the experience that *small stimuli cause dilatation, and strong stimuli result in a vagus or constrictor effect.*

It is further not quite irrelevant at which stage of the ovulation the stimulation takes place.

The menstruation can to a certain extent be further influenced by will power, by suggestion and autosuggestion. Having the strong will constantly in mind that the menses will not appear, they can be delayed. In hypnosis even more striking results can be obtained.

Leucorrhœa, one of the commonest complaints of gynæcological patients has also very often a psychogenic origin. It is not so much the discharge itself as the idea of it, the meaning which the woman attributes to this symptom, which troubles her. In some cases the symptom appears as a reaction of quite a special tendency, as a defence against an undesired cohabitation.

In the same way as leucorrhœa, the *symptom of pain*, especially the pain during menstruation, the *dysmenorrhœa*, can often be traced to some psychical shock or at least can be connected with some sort of psychical infection.

This short review may demonstrate that *to have gynæcological symptoms does not always mean to have a gynæcological disease and to require gynæcological treatment.* The more and more increasing tendency of specialising involves the danger especially in gynæcological

practice of a one sided therapy of organs. But this experience applies not less to every other branch of medicine.

The *pediatrist* has also to be on the look out for psychical factors in the history of his little patients. Already in the baby the act of feeding and the mechanisms of the digestive organs are to a great extent liable to psychical influences. Tight clothing, uncomfortable position or other annoying irritative agents are sufficient to upset a babies mood and digestion. Of course an intelligent and careful mother knows all about this without having studied psychology and psychoanalysis, but there are still enough cases in which the etiology is not so evident and one easily forgets the possible existence of a psychical element in the back ground. The spastic stenosis of the pylorus often displays grave symptoms which, if the neurotic nature, often causing this condition, is not recognised, may mislead to an unjustified and unnecessary operation. Affective convulsions with vaso-motor changes in the skin also frequently terrify young mothers, although these symptoms are quite harmless.

Typical examples of disturbances on a psycho neurotic basis in later childhood are the *enuresis nocturna*, the children with habitual bad sleep, habitual bad appetite and constipation.

The important role which psychical factors play in *dermatology* is usually not sufficiently realised. The skin as an indicator of mimic expressions is the organ on which the *psyche* projects the slightest stimulation visible to our eyes. Pallor, flushing, changes of the skin with regard to its tension, smoothness, glossiness, colour and appearance of follicles are symptoms which together with the mimic expressions of pain, joy, happiness or sorrow will often give a valuable clue with regard to the patients condition, when other symptoms fail. It has been proved by experiments beyond doubt that a blister on the skin, that is to say *histological changes can be produced by a purely psychical irritation and also in hypnosis*. This experiment is of fundamental importance for it explains the nature of psychogenic dermatoses. Various erythematous and oedematous conditions like the *edème bleue* in hysteria, many cases of urticaria, petechial hæmorrhages and pruritus, also warty growths, as it is generally known, appear and disappear under psychical influences. Changes in pigmentation and the falling out of hair are also not infrequently experienced as an immediate consequence of a mental shock. The stigmata of the miracles, blood effusions in the face or hands belong to this category.

In *internal medicine* diseases of psychogenic origin are usually more easily recognised as such, but still a good many purely functional disorders, as one used to say, are delivered to the surgeon for operation. Cases of nervous dyspepsia, diagnosed as ulcer of the stomach, of cardiac spasm, taken for malignant disease; referred pains in the

coeliac region, diagnosed as appendicitis; and spastic conditions of the gall bladder or bile ducts as they not seldom appear after great anger or excitement, giving rise to no less severe attacks of pain than gall stones and as such they usually are diagnosed. Of diabetes we know from experiments that the blood sugar curve promptly reacts to psychical affects, "the diabetes of a banker goes up and down with the exchange!"

The *asthma bronchiale* can also be influenced to a great extent by psychical factors. Great excitement or worry will quickly bring forth an attack.

Spasm are the expressions of psychical excitation; atonic conditions and the signs of ptosis, especially in the gastro-intestinal tract are the physical correlations of psychical depression.

Cardiac troubles, arhythmia of pulse, increased palpitation and similar symptoms are the commonest of psychogenic reactions.

So much for the examples out of the realm of the medical clinic. There are many purely psychogenic disorders, which are mistaken for organic ailments: others like diabetes and asthma show a distinct dependence upon the psychical condition.

I will refrain here from discussing the large army of typical, undisguised neuroses, neurasthenias and psychasthenias, in which the psychogenic origin is evident. These cases differ only in intensity, variety and variability of symptoms from the types I have spoken of and which we may call monosymptomatic psycho-neuroses.

We have seen now how *varied and manifold the influences are which the psyche exerts on our physical condition in health as well as in disease.* The importance of these influences will not appear exaggerated, when we realise that many patients could be treated much safer and cured much quicker without the "polypraxia" of modern medical and surgical therapy, if only the real character of the disease had been recognised and treatment effected accordingly. If it is further realised that still many patients, inspite of the advances in surgical diagnosis are operated upon without the proper indication, the opinion and attitude of many surgeons towards psychical influences and their powerful effects will be revised.

The story of the woman with pains in the abdomen who wanders from one surgeon to another and after five or six unsuccessful operations lands at the neurologist, because there was scarcely any organ left in the abdomen which could safely further be tackled with the knife, is no fiction but a typical example of hysteria of which similar cases still can be experienced very often.

There are of course cases in which the decision of the nature of the disease is difficult to be made. Certainly *in the first line*

stands a thorough physical examination. Only if with all our clinical and laboratory methods we have not been able to find any organic disease we should be allowed to make the diagnosis of a *psycho pathia* and more so if we find not only one but a series of psychical symptoms.

I need not say that a one-sided neurologist, who behind every complaint suspects a hidden psychical complex and hereby overlooks a serious organic growth which needs operation, is just as bad as a surgeon who operates where there is no disease to be operated upon.

An exact diagnosis is in every branch of medicine the condition sine qua non, and the only guide for an efficient therapy.

There is another factor to be mentioned which illustrates the necessity for increased attention to psychical conditions. *Psycho neurotic symptoms have become much more frequent all over the world.* Modern life with its haste and rush, telephones, motor cars and aeroplanes, where speed means everything, involves much more strain on our nervous system than life did some 50 years ago. The competition has become enormous, not the least by the entry of women into positions which formerly were occupied by men only. Women are no longer content with the life their sisters had led in more or less the same traditional way for many centuries. They are longing for a freer life, for new outlets to their sentiments of satisfying their unfulfilled desires. But there are limitations to this emancipation, which has its origin in the movement of unmarried women, limitations which the physical nature and the physiological destination have erected and which can not be trespassed without harmful consequences to the individual as well as to the whole race. It is not a question of inferiority of women. Man and woman have many entirely different physiological and psychical properties of their own and in many respects are even contrasts, therefore the claim from the part of the women for equality in every respect is absurd: in their perverted ambition they entirely lack physiological understanding.

The male and female organism must develop on different lines and every tendency to level the natural contrasts will be revenged by nature and will lower the efficiency of the species. *The tendency of the women of to-day towards masculinisation regardless of the demands of nature is a step towards diminishing the natural contrasts* and has already produced many unwholesome consequences, detrimental to their moral and physical health. The whole talk of the so-called birth control, an hypocritical and entirely misleading name, is in my opinion one of the worst fruits of emancipation. Women nowadays also compete with men in habits like drinking and smoking, the bad effects of which already show themselves—at least to the doctor—in an alarming way. The whole attitude towards life has altered and the moral standard has become lower in many ways especially since

the great war. Life is not taken so seriously as in former times and *men and women more easily give way to temptations of various kinds. This involves the development of discrepancies and conflicts of inner life, psychical complexes, which are responsible for the great unrest, the unbalanced mind and the psycho neurotical constellation of the present day.*

The attentive observer will further detect a growing feminisation of the man which is less visible from the external appearance but marked in his mental and psychical attitude; flat, sentimental talk supercedes the deeds of intellect and manly power. The traumatic and compensation neuroses and other kind of tendency neuroses, in which the individual hopes to gain an advantage of some sort by "*the flight into disease*" all these types are other examples of modern diseases created by the social conditions of the present time.

China is rapidly developing in the direction of western life and with this development goes hand in hand an increased strain on the nervous system of the individual. The Chinese race is not a "nervous" race, but there are already symptoms which indicate the beginning of a new era. I paid special attention to this object in Peking, and found *a surprisingly large number of neurotic students of both sexes in the various educational institutions* and similar observations have been made also with regard to the classes of business men.

No doubt nervous disorders are on the increase in China and it is the duty of the medical men in this country to become well acquainted with these facts in order to assist in the task of fighting all elements which by overstimulating the nervous system tend to lower the vital resistance and efficiency of the race.



OBSERVATION OF ULTRA-VIOLET LIGHT IN HONG KONG.

S. Y. Wong.

(From the Biochemical Laboratory: University of Hong Kong.)

Of the variable factors on which meteorological condition depends, temperature, pressure, and humidity are usually recorded with exactitude as a matter of routine by the observatory; but sunlight is seldom registered in quantitative terms. While such data may be sufficient for weather information, they are manifestly incomplete for health investigation. The important bearing of sunlight on health is now generally realized. Since sunlight contains rays of different wave-lengths, it is plain that only those of them, which are physiologically active, need engage our attention. For the statistical analysis of the effect of meteorological changes on health returns, not only sunlight but its ultra-violet radiation should be extensively observed. This follows directly from the fact that the germicidal power of the former is due entirely to the presence of the latter; and that the latter has a profound effect on the systems of the body. Moreover it has been shown that there is a close connection between ultra-violet light and the anti-rachitic vitamin.

As a rule, the shorter the wave-length of a ray, the greater is its absorption by a chemical system and the more active is its photo-chemical action therein. Among the rays of sunlight, only the ultra-violet are absorbed to a considerable extent by the colourless living cells. According to Luckiesh and Pacini (3), the absorptive power of the cells depends upon the concentration of phenylalanine and tyrosine in their constituent proteins. The bodies of bacteria are comparatively richer in these amino-acids and have therefore a greater absorptive power than the cells of the human body. Moreover the vital seat of a bacterium much smaller in size than a tissue cell must necessarily lie nearer to the surface and is consequently more exposed to the photo-action of the actinic rays. This probably explains the beneficial effect of heliotherapy on certain infections.

Burge and his co-workers (2) have shown that hormones, pro-enzymes and enzymes are destroyed by exposure to ultra-violet radiation, the rate of destruction being proportional to the amount of energy supplied. Although the various factors contributory to "heat-stroke" have not yet been fully understood, there seems very little doubt that in the Tropics, the debilitating effect of excessive heat is greatly aggravated by the actinic rays of the sun's spectrum during the longer Summer days of the year. The long continuation of high temperature day and night in the hot season tends to render the vital activity of

the body more susceptible to the photo-modification by ultra-violet light. At any rate, it is noteworthy that most "heat-stroke" cases occur in the afternoon of the day.

Among the products of the photo-chemical action of ultra-violet rays, most interesting perhaps is the anti-rachitic substance produced from cholesterol as discovered by Steenbock and his co-workers (4). This brings these rays into direct connection with the anti-rachitic vitamin. Although very little is known regarding the chemical change by which this vitamin forms from cholesterol, it has become perfectly clear that the ultra-violet rays are responsible entirely for the curative action of sunlight on rickets. Under the influence of these rays, not only the reserved vitamin is mobilised, but an additional supply of it may be produced from the cholesterol stored in the body.

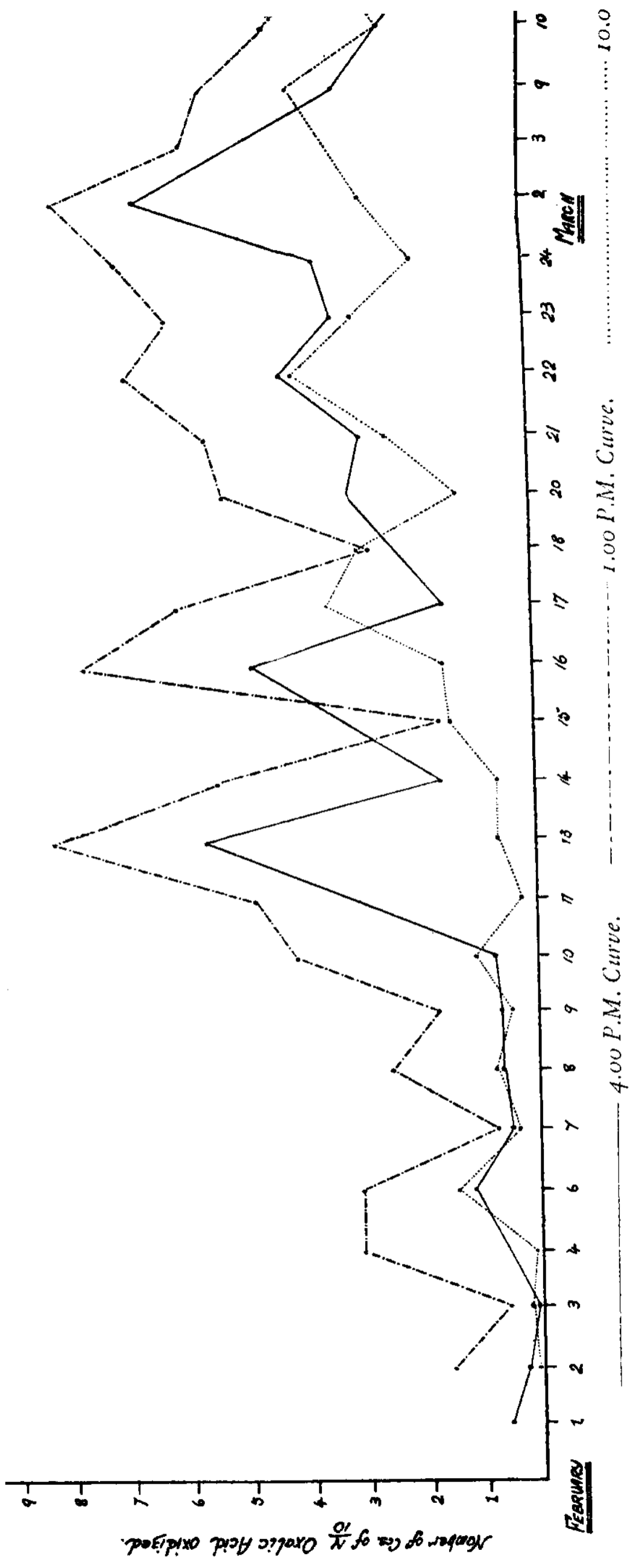
What we have thus far considered represents but a few salient facts concerning the manifold activity of ultra-violet light whose exact relation to health has yet to be worked out. It should be remembered that the quantity of this light in the solar radiation varies from time to time according to the atmospheric condition prevailed. In order to correlate this with the seasonal returns of health, observation at suitable intervals must be made and extended to a sufficient length of time. In the sequel, some preliminary result of our observation in Hong Kong during the Spring of this year will be presented. As comparative data for the same period of different years have yet to be obtained, we cannot at the present do more than to indicate that low ultra-violet radiation as well as unsettled weather may be responsible in some measure for those ailments usually prevalent in the Spring.

In our determination, we have adopted the method of Anderson and Robinson (1), according to an outline given us by Larsen of Queen's Hospital, Honolulu. Duplicate of 10 cc. portions of a solution containing N/10 oxalic acid and N/100 uranyl-sulphate were simultaneously exposed in Petri dishes of 96 mm. inside diameter to direct sunlight for 30 minutes at 10 a.m., 1 p.m., and 4 p.m. respectively as suggested by Larsen. The oxalic acid left undecomposed was titrated with N/10 potassium permanganate.

Detailed results of our observation are listed in the following table. As the figures are sufficiently clear by themselves, further explanation seems unnecessary. It should be noted that the curves given are merely for the purpose of comparison.

REFERENCES.

- (1). Anderson & Robinson: *Jour. Am. Chem. Soc.*, 47, 718.
- (2). Burge, Fischer & Neil: *Am. Jour. Physiol.*, 40, 427.
- (3). Luckiesh & Pacini: "*Light & Health*," Baltimore, 1926.
- (4). Steenbock & Black: *Jour. Biol. Chem.*, 64, 263.



DATE		Number Ccs. N Oxalic Acid Oxidized.			Temperature °C.			Humidity %			Climatic Condition.		
		10.00 a.m.	1.00 p.m.	4.00 p.m.	10.00 a.m.	1.00 p.m.	4.00 p.m.	10.00 a.m.	1.00 p.m.	4.00 p.m.	10.00 a.m.	1.00 p.m.	4.00 p.m.

FEBRUARY:—

Wed. ...1st	—	—	0.6	—	—	12.5	—	—	71.3	—	—	O; D.
Thurs....2nd	0.1	1.6	0.3	13.0	12.0	13.5	82.1	76.2	77.4	HO; D.	O; D.	H;O D.
Fri. ...3rd	0.2	0.6	0.1	13.0	14.5	13.5	76.8	72.3	72.1	HO; D.	HO; D.	HO; D.
Sat. ...4th	0.1	3.1	—	14.0	15.5	—	83.2	78.6	—	HO; D.	O; D.	—
Mon. ...6th	1.5	3.1	1.2	19.0	21.0	20.5	80.5	77.3	81.6	O; D.	O; M.B.	HO; O.
Tues. ...7th	0.4	0.8	0.5	17.0	16.0	15.5	70.1	68.8	67.8	HO; D.	O; D.	HO; D.
Wed. ...8th	0.8	2.6	0.7	15.0	16.0	16.0	67.7	69.0	69.0	O; D.	O; D.	HO; D.
Thurs....9th	0.5	1.8	0.7	15.0	15.5	15.5	78.0	73.3	72.4	O; D.	O; D.	O; D.
Fri. ...10th	1.1	4.2	0.8	16.5	18.0	18.0	79.8	70.8	80.0	O; D.	C; MB; OS.	HO; D.
Sat. ...11th	0.3	4.9	—	17.5	18.5	—	90.0	53.4	—	HO; D.	C; B.	—
Mon. ...13th	0.7	8.3	5.7	13.0	15.0	16.0	70.5	51.4	68.8	O. D.	B; CS.	C; FS.
Tues. ...14th	0.7	5.5	1.7	14.0	16.5	16.0	67.2	70.0	69.1	HO; D.	C; FS.	O. MB.
Wed. ...15th	1.5	1.7	—	15.0	15.5	—	67.7	73.3	—	O; D.	O; D.	—
Thurs....16th	1.6	7.7	4.9	16.5	16.5	16.0	76.7	55.2	68.6	O; MB.	B; CS.	C; OS.
Fri. ...17th	3.6	6.1	1.6	15.0	15.0	16.0	67.7	58.3	63.7	O; MB.	B; FS.	O; MB.
Sat. ...18th	3.0	2.8	—	14.0	15.5	—	67.2	68.0	—	O; MB.	C; MB.	—
Mon. ...20th	1.3	5.3	3.2	13.0	14.0	15.0	65.2	67.2	67.7	HO; D.	C; FS.	C; OS.
Tues. ...21th	2.5	5.6	2.9	15.0	16.0	16.0	67.7	69.6	68.6	O; MB.	B; FS.	O. B.
Wed. ...22th	4.1	6.9	4.3	16.5	19.0	18.5	60.8	54.2	62.3	C. MB.	C; FS.	B; OS.
Thurs....23th	3.0	6.2	3.4	18.0	19.5	19.0	66.2	59.1	61.7	C. MB.	C; FS.	B; OS.
Fri. ...24th	2.0	7.0	3.7	18.0	19.0	18.5	61.7	58.5	61.2	O. D.	B; CS.	C; FS.

MARCH:—

Fri. ...2nd	2.8	8.1	6.7	19.5	21.0	22.0	64.8	56.7	65.4	C; MB.	B; CS.	B. CS.
Sat. ...3rd	—	5.9	—	—	19.0	—	—	62.8	—	—	B; FS.	—
Fri. ...9th	4.1	5.6	3.3	14.0	16.5	18.0	67.8	59.2	61.7	C; MB; OS.	C; FS.	C; OS.
Sat. ...10th	2.5	4.5	—	15.0	17.0	—	67.7	70.1	—	C; MB.	C; FS.	—
Mon. ...12th	—	3.8	—	—	18.0	—	—	70.7	—	—	C; OS.	—
Wed. ...14th	3.9	4.3	1.0	16.0	17.0	16.0	68.8	70.1	74.0	C; MB.	C; OS.	HO; D.
Thurs....15th	2.6	1.8	1.4	17.0	16.5	17.0	65.3	69.3	70.1	C; D.	O; D.	HO; D.
Fri. ...16th	1.3	3.8	1.0	17.0	18.0	17.0	70.1	61.7	75.0	O; D.	C; OS.	HO; D.
Sat. ...17th	2.4	3.8	—	18.0	18.0	—	75.3	66.2	—	C; D.	C; OS.	—
Mon. ...19th	6.0	6.1	4.5	19.0	20.5	19.5	58.5	64.3	63.3	B; CS.	B; FS.	C; FS.
Tues. ...20th	2.9	4.4	2.3	19.5	20.0	20.5	61.7	63.1	68.7	C; OS.	C; FS.	O; MB.
Wed. ...21th	2.1	3.3	2.1	20.0	21.0	22.0	74.2	66.0	66.6	O; MB.	C; OS.	O; MB.
Thurs....22th	2.7	5.2	4.1	20.0	20.0	20.5	63.8	55.7	57.2	O; MB.	B; FS.	C; FS.
Fri. ...23th	4.8	5.9	3.3	20.0	20.5	20.5	67.8	64.1	72.5	B; FS.	B; CS.	C. OS.
Tues. ...27th	4.9	7.7	2.4	19.5	20.5	19.0	59.7	52.0	62.8	B; CS.	B; CS.	O; MB.
Wed. ...28th	3.6	2.6	—	20.5	20.5	—	70.5	72.4	—	C; FS.	O; MB.	—
Thurs....29th	2.6	3.0	—	19.0	20.0	—	71.7	68.7	—	O; MB.	O; MB.	—

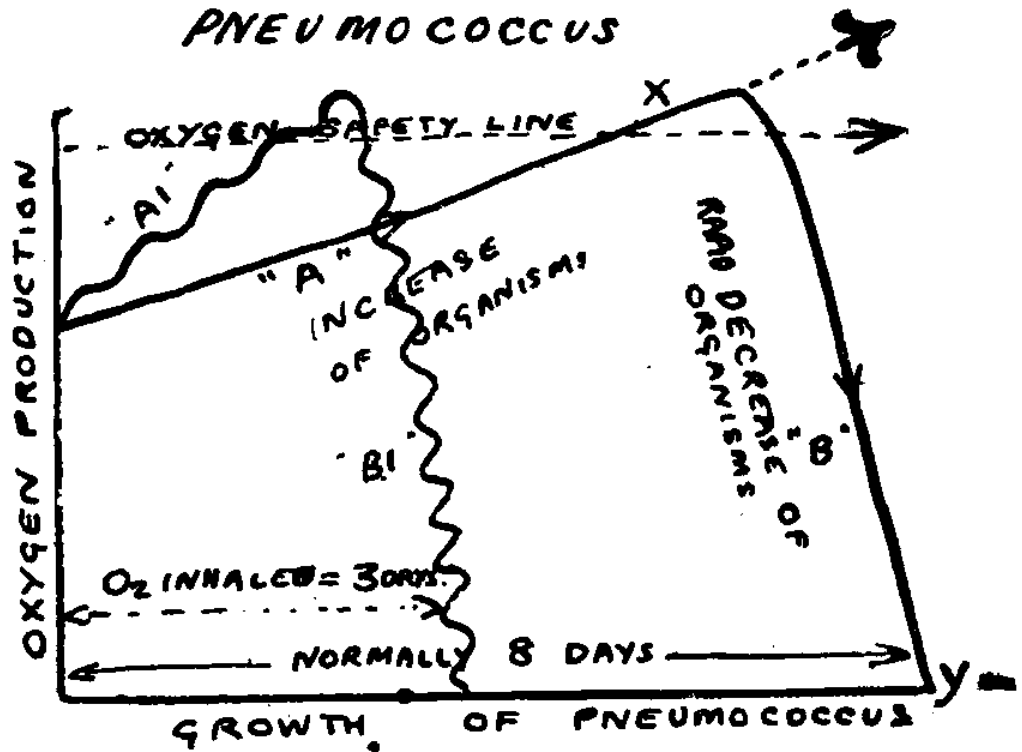
APRIL:—

Thurs....5th	3.8	7.1	3.4	18.5	20.0	20.5	62.2	55.7	63.3	C; FS.	B; CS.	C; OS.
Tues. ...10th	8.3	8.7	8.0	24.0	27.0	26.5	67.1	52.0	69.5	B; CS.	B; CS.	B; CS.
Wed. ...11th	2.9	7.0	3.5	22.0	23.0	22.5	66.0	59.1	66.2	C; MB.	B; CS.	C; OS.
Thurs....12th	2.2	4.0	—	23.0	25.0	—	82.8	75.4	—	O; MB.	C; OS.	—
Fri. ...13th	7.2	8.6	5.6	24.0	25.5	25.0	67.1	56.8	71.6	B; CS.	B; CS.	B; FS.
Sat. ...14th	7.8	8.2	—	24.4	25.5	—	65.7	64.8	—	B; CS.	B; CS.	—
Mon. ...16th	—	5.3	5.2	—	24.0	23.5	—	70.7	69.7	—	B; FS.	B; FS.

*** Climatic Condition.**

HO = Heavy Overcast.	D = Dull.	OS = Occasional Sunshine.
O = Overcast.	MB = Medium Bright.	FS = Frequent Sunshine.
C = Cloudy.	B = Bright.	CS = Continual Sunshine.

DIAGRAM TO ILLUSTRATE
THE ACTION OF EXCESS
OF OXYGEN ON THE
PNEUMOCOCCUS



The dotted line continuing "A" line to thick arrow is the excess killing point.

"A" line represents favoured increased growth of organisms under their own Oxygen production.

"B" line represents the dying period of the organism, owing to it's own overproduction of Oxygen beyond point X, the maximum strength of favourable Oxygen production for the growth of the pneumococcus. Y represents death point the Wavy line shews action of inhaled warm Oxygen bringing about a crisis in about 3 days.

LOBAR PNEUMONIA.*

WITH SPECIAL REFERENCE TO THE
CAUSATION OF ITS CRISIS AND TREATMENT BY OXYGEN.

Alexander Cannon.

Government Medical Department & University of Hong Kong.

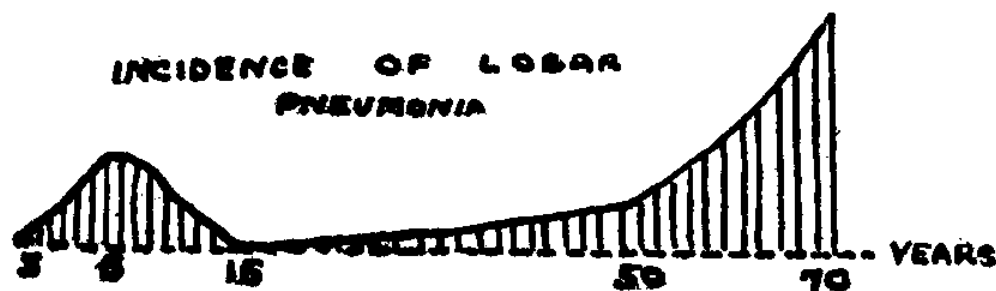
Lobar pneumonia may be defined as an acute specific disease usually caused by the pneumococcus of Fraenkel, and characterised by toxæmia, consolidation of one or more lobes of one or both lungs, and a pyrexia which usually ends in crisis on the eighth day.

LANDMARKS IN THE HISTORY:

- In 1882 Friedlander discovered the pneumobacillus, which is said to cause a number of cases of lobar pneumonia.
- 1885 Fraenkel discovered the pneumococcus in the lungs of pneumonia patients.
- 1886 Weichselbaum corroborated Fraenkel's work.
- 1899 Schöttmuller discovered the pneumococcus mucosus, and the streptococcus mucosus; both of which he stated, could cause lobar pneumonia, and were frequently found in the lungs of pneumonia patients.
- 1915 Wardrop Griffith connected the bacillus Influenza of Pfeiffer with pneumonia epidemics.
- 1918 Bassett-Smith showed a relationship between pneumonia and the bacillus typhosis, and the bacillus diphtheria in persons who had lived abroad, and were suffering from pneumonia.
- 1922 M'Leod shewed that oxygen and alkalinity caused the death of the pneumococcus, etc.

ETIOLOGY:

- 1 The Registrar General of Great Britain and Ireland, records the fact that 8 per cent. of all deaths are due to lobar pneumonia.
- 2 From 3 to 15 years of age, is the most frequent time, at which the disease occurs, the zenith being at 6 years of age as: (shewn in sketch No. 1).



Sketch No. 1.

* Delivered before the British Medical Association in Hong Kong. November 2nd, 1927.

It then again very gradually increases up to 50 years of age, after which it suddenly rises, as shewn in the diagram above.

- 3 Three times as many males as females are affected, probably due to the former adopting the abdominal type of breathing to a greater extent, and the latter adopting chest breathing largely.
- 4 The disease is universal and international.
- 5 Winter and spring are the seasons in which this disease usually occurs.
- 6 Exposure predisposes a person to an attack.
- 7 One attack does not convey immunity, but on the other hand increases the liability.
- 8 Alcohol lowers resistance, and hence not only predisposes to attacks but makes such attacks more dangerous.
- 9 Any debilitating condition or disease will predispose to pneumonia.
- 10 Trauma is a frequent cause: e.g. after being whipped across the back of the chest, or being struck on the chest.

THE CAUSAL AGENT: (bacteriology)

- 1 The pneumococcus of Fraenkel is responsible for 85 per cent. of cases.
- 2 Friedlander's pneumobacillus produces 6 per cent. of cases.
- 3 Pfeiffer's Influenza Bacillus produces 5 per cent. of cases (except in epidemics, when its incidence is greatly increased).
- 4 Eberth's Typhoid Bacillus causes 3 per cent. of cases.
- 5 Klebbs Lloffer Bacillus of Diphtheria is responsible for 1 per cent. of cases.

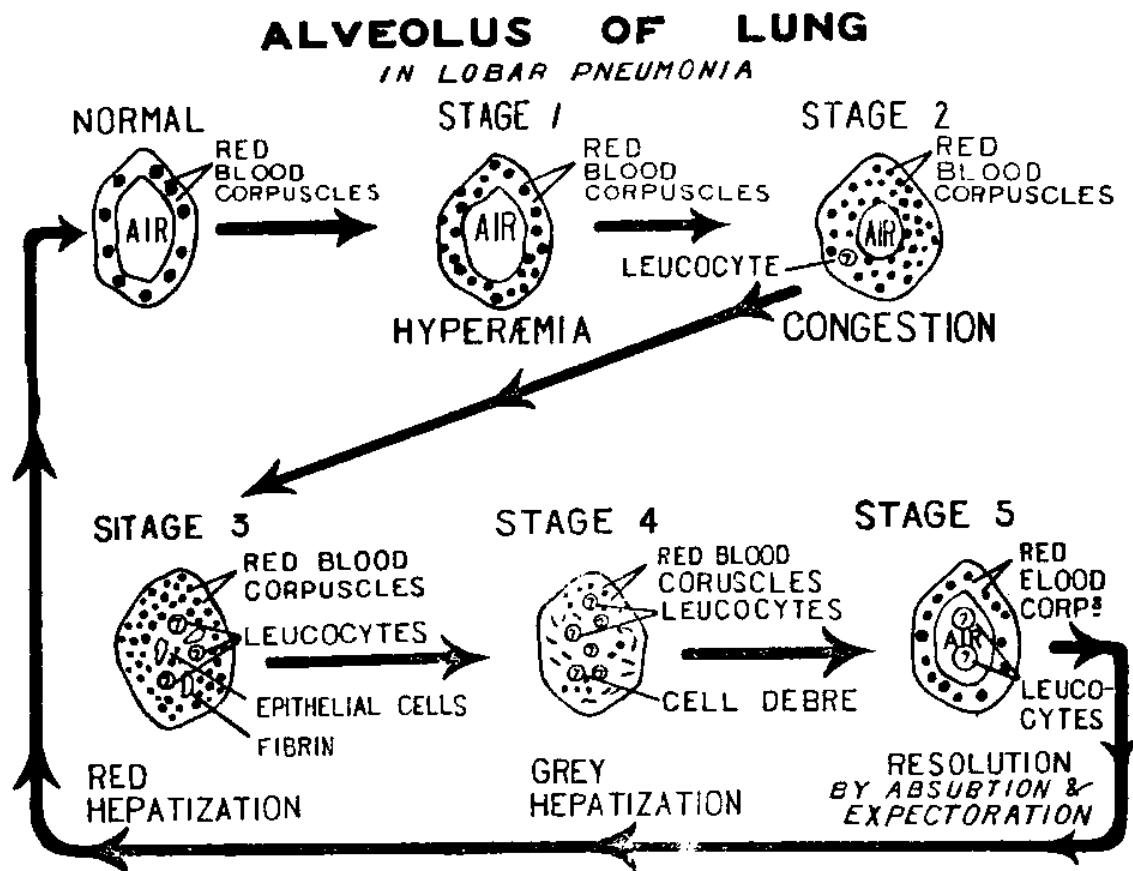
TISSUE CHANGES IN THE LUNGS: (morbid anatomy)

The signs of acute inflammation in the lung, are so modified by the nature of this tissue as to be characteristic.

FIVE STAGES are recognised:

- 1 *HYPERAEMIA*, i.e. increased flow of blood in the capillaries.
- 2 *CONGESTION*: here, the flow of blood has so increased, that it is dammed up in the capillaries, owing to the difficulty of getting away.
- 3 *RED HEPATIZATION* (like red liver): the capillary walls have degenerated, and enter the air alveoli, and so the air is replaced by blood corpuscles, epithelial cells and fibrin.
- 4 *GREY HEPATIZATION* (like grey liver): the tissue reaction of the lung is shewing its power of rejuvenation and now the capillaries, capillary walls, and alveoli contain leucocytes, which eat up the fibrin, and degenerating red cells, and hence a little fluid replaces the sticky, adherent, and almost solid contents of the alveoli, and is expectorated, and so resolution comes about.
- 5 *RESOLUTION* sets in and the alveoli again begin to contain air, and the act of respiration is once more regained by this lobe which now looks once more like normal lung tissue.

These stages may be roughly shewn diagrammatically as: (shewn in sketch No. 2).



N.B.—In stage 3, numerous R. B. Corps., Epithelial Cells, Fibrin and Leucocytes fill the alveolus: in stage 4 only debris of R.B.C.B., but Leucocytes †††: in stage 5 air begins to appear in alveolus once more.

There is nearly always some degree of pleurisy, during the stage of red hepatization.

The lesion usually affects a lobe of one lung, and this is invariably the lower lobe of the right lung in adults, whilst, when an apical lobe is affected, it is always found in children.

When the bronchial glands are swollen, this can be shewn clinically by Eustace Smith's Sign, which consists in asking the patient to *WHISPER* 1, 2, 3, repeatedly, whilst the stethoscope is passed down the spine (vertebral column). Normally the whispers become inaudible at the first dorsal vertebra, but in enlarged bronchial glands, the whisper may be audible even as low as the lumbar vertebra, the distance depending on the relative size of the glands.

INCUBATION PERIOD: 10 to 100 hours ($\frac{1}{2}$ to 4 days approx.)

CARDINAL SYMPTOMS:

The disease commences:—

- 1 Suddenly, with a
- 2 Rigor, followed by
- 3 Feverishness.

Then appears:—

- 4 Pain in the affected side (usually the right side), which may be very severe.
- 5 Breathing is rapid, and there is
- 6 Shortness of breath, and a
- 7 short dry cough, together with
- 8 headache in 50 per cent. of cases.

IMPORTANT PHYSICAL SIGNS:

- 1 High temperature, about 104° F.
- 2 Pulse rate is increased in relation to the temperature: the higher the temperature, the quicker the pulse.
- 3 Respiration ratio to pulse rate: 1: 2.

On Inspection:

- 4 Impaired movements of the chest on the affected side, and relatively increased movements on the healthy side.
- 5 The muscles of extraordinary respiration come into play.
- 6 A flush, especially marked over each cheek bone is constant (malar flush).
- 7 There is often a marked skin eruption usually on the upper lip (herpes labialis).
- 8 The sputum is blood stained and fibrinous ("rusty").

On Palpation:

- 9 A hot dry skin is evident (feels like a heated dull metal surface).
- 10 Palpation of the chest reveals a lack of expansion on the affected side. Vocal fremitus is usually increased.

On Percussion:

- 11 During hyperaemia and congestion: slightly altered, or high-pitched note, comparison with the normal side is dull.
- 12 During red & grey hepatization: dull note.
- 13 During resolution: note returns to normal.

On Auscultation:

- 14 During hyperaemia and congestion: (a) breath sounds are less audible than on the normal side.
(remember that normally, breathing is more audible on the right side than on the left side of the chest, during health.)
(b) fine crepitant râles are audible, which occur towards the end of respiration.
(due to separation of the "sticky" alveolar diseased walls)
- 15 During red & grey hepatization: (a) the breathing is *Bronchial* in character during *RED* hepatization, and *Tubular* (high pitched bronchial) during *GREY* hepatization.
(b) Complete absence of adventitious sounds is a constant feature.
(c) Vocal resonance is greatly increased.
- 16 During resolution: The tubular breathing is gradually replaced by vesicular—tubular, and fine crepitations (spoken of as "redux crepitation").

It should be borne in mind that the unaffected lobes shew abnormal signs, e.g. there is increased movement, together with loud and puerile breathing, and hence the lesion is occasionally diagnosed on the wrong side during the early stages of the disease.

The *heart sounds* are usually loud and clear, the pulmonary second sound being accentuated, whilst there are often mitral and pulmonary murmurs during the fever, and especially in young people.

The *warning signs of danger* are the disappearance of the accentuated pulmonary second sound, together with dilatation of the right side of the heart, and possibly the development of a foetal rhythm.

The *blood* shews a marked *Leucocytosis*, usually 20,000 per c. mm., with increase in polynuclear cells.

The *urine* usually contains a trace of albumin, and chemical examination shews a marked decrease in chlorides.

There are many and irregular types described in text-books, which make very interesting reading, but are not too practical.

Bearing the above facts in mind, the inquiring mind will ask at least two questions:

- 1 Why does a *crisis* occur at all?
- 2 What is the cause of this crisis on the seventh or eighth day?

The explanation is only to be found on the bacteriological, and chemical side of Medicine. At the close of this article, I append all the bacteriological references which give more or less direct bearing on this inquiry, dealing with the pneumococcus and allied organisms, from various aspects, especially with regard to alkalinity in the pH factor. I can, however, find neither reference to, nor record of, any practical use to which these experiments have been put, and therefore I feel justified in bringing to your notice facts of a clinical nature involved in a bacterial and chemical factor, for your further inquiry, discussion, and confirmation, or criticism.

A special study of the pneumococcus activities is essential to our inquiry.

History has revealed in Medicine of late years that the possible cause of the *crisis* was immunity, but if immunity was the cause, the temperature fall would be gradual as the immunity increased, and hence the chart would shew a curve dropping over a number of days. The drop, in temperature, is however, *sudden*, often occurring within a few hours, and hence it must be due to some other cause than the alleged immunity.

It will be observed that the pneumococcus grows very easily in blood agar, and that in this medium it produces a *green* coloration which is characteristic of the pneumococcus of Fraenkel, as no other known organism can produce this *particular green* coloration on blood agar. Further, it is known that after a time, the pneumococcus ceases to grow in the same medium, and it was thought that this was due to the blood agar being "used up," and that a fresh supply was required. However, it was found that this was not the case, and therefore there must be some other cause. Chemical experiments have revealed interesting facts which seem to solve this long unsolved problem. *Hydrogen Peroxide* will be found to produce this characteristic green colouration, which is not imitated by any other drug in the Pharmacœpia. It was then thought that possibly the pneumococcus produced hydrogen peroxide, and later this was experimentally proved to be the case. M'Leod discovered that the production of hydrogen peroxide was an essential factor. Numerous experiments have shewn that the organism produces the gas *oxygen* which acts favourably on its growth for a time, so

much so, that unless the patient's resistance is maintained, anyone may fall a fatal victim to this acute disease. However, the pneumococcus has not all the intelligence which one might ascribe to it, because eventually it defeats its own end by *overproducing* the chemical which in a certain quantity was helpful to its growth, but beyond which boundary it becomes a "deadly poison" to this organism. Hence the *crisis* usually occurs on or about the eighth day, due not to immunity, but to *excess of oxygen* produced in the form of hydrogen peroxide, which above a certain strength, immediately, or almost immediately, kills off the offending organism, hence nature in this way provides its own cure, if only the body resistance can be maintained during this period of trial. This is how the crisis occurs.

The crisis may be likened to a sudden slump in the stock exchange. A man wants to make money, and is successful, but he is not contented with making sufficient, but goes on grabbing for more. He commences to feel safe, having plenty and to spare, and speculates more and more of his money as time goes on. All goes very well for a time *but* the day comes, when he awakens to find his wealth departed. The stock exchange tells him a very different tale, and hence through greed he has lost all the wealth he had: his wealth literally is dead. This is a picture story of the life of the pneumococcus in the human lung. Another vexed question of "much would have more."

The usual bacteriological methods were used for the collecting of the gas produced, and in every case without exception the gas was found to be oxygen. This explains the efficacy of the "oxygen" applications such as the preparation known as "antiphlogistin"* which has undoubtedly saved many lives. I have tried oxygen administered by the mouth, and have brought about a crisis in from one to three days, according to the amount of *warmed* oxygen used, and the condition of the patient.

In the past, the use of oxygen has been the cause of more deaths in pneumonia than one cares to think of; not because of its composition, but because of its abuse, being used *cold*, and so chilling the lungs, and hence making matters much worse. Often oxygen has been administered only as a last resource, when the patient was far beyond the reach of physical aid. If oxygen is heated by passing it through coiled Littré's tubes immersed in water kept at a temperature of about 120° F., the gas if passed through the tube at a slow rate, so that the patient does not complain of its "choking" him, it will be found that the temperature of the gas actually passing through the tubes will be heated to somewhere in the region of the body temperature 98.4° F., and that the administration gives the patient great relief, and that depending upon the amount administered, (bearing in mind that the "bottled" oxygen is very expensive), the temperature will suddenly

* "Antiphlogistin"—Chemically pure glycerine 45 per cent., Iodine 0.01 per cent., Boric Acid 0.1 per cent., Salicylic Acid 0.02 per cent., Essence of Menthol 0.002 per cent., Essence of Gaultheria 0.002 per cent., Essence of Eucalyptus 0.002 per cent., Mineral Clay 54.864 per cent. infiltrated with oxygen under pressure.

be reduced. There is one thing to watch, and that is sudden collapse, when the crisis occurs: this has fortunately not given me any difficulty, as the administration of *pituitrin* 1 c.c. (being a 20 per cent. extract of the infundibular or posterior part of the pituitary gland), daily, has safeguarded this risk. This does not appear to interfere in any way with the routine treatment of the "heart maintenance" with *digitalis*, which must be administered from the very onset of the disease, in every case, except where this latter drug is contraindicated (note that *strophanthus* can be given and followed by *digitalis*, but the reverse is fatal, as *digitalis* to be followed by *strophanthus* will in 90 per cent. of cases ensure certain death). The absence of *digitalis* has lost many a case of lobar pneumonia, owing to heart failure.

The use of oxygen has been carried a stage further in the form of artificial "oxygen" pneumothorax (it would be more correct to call it "oxygenothorax"), the oxygen being again administered *warm* and at intervals of from six to twenty-four hours, according to the ideas which each physician has personally "at the back of his own mind."

Wardrop Griffith and Gordon have done pioneer work in this direction.

That pneumonia can be cured in this way very rapidly, can be proved by every clinician himself, as regards the administration of oxygen per os, and that the pneumococcus produces oxygen which in excess kills itself, can be proved by every bacteriologist.

This discovery hence opens up a new era in the effective treatment of pneumonia, with a confidence which before we had not, because previously we had treated pneumonia on more or less what we term, for want of a better word, "empirical lines," only dealing with symptoms as they arise, and foreshadowing heart failure, by the routine treatment of *digitalis*, and giving mixtures containing *Vin. Ipecac.* and later *Ammon Carb.*, although these latter even are occasionally detrimental to the progress of the case. However *Ipecacuhana* has by no means ended its day, as recent experiments which I have carried out shew that *emetine* (the active principle of *ipecacuhana*) in ampoules of 1 c.c. ($\frac{3}{4}$ grain), given intramuscularly, daily, reduces the temperature in pneumonia slowly, and appears to abort this disease to some extent. My experiments with *emetine*, are not as yet completed, although so far the results have been phenomenal in many other diseases also, and I mention this, as I do not wish to convey the impression that oxygen, valuable as it is, is the only factor of importance, nor that it replaces all other treatments, although this even may appear to be the case, but I am convinced that if oxygen is used as soon as a diagnosis of pneumonia is made, this disease will soon be dealt with as an almost trifling complaint, and death from it would in all probability be a thing of the past.

For those who are in places where oxygen is not accessible, such as Inland China, and other similar places, I would urge the doctors in these districts to see for themselves the wonders wrought by the hand of Emetine, Pituitrin, and Digitalis, in this order of importance, either separately, or collectively, spacing the drugs at reasonable distance of time in administration, so that each has its full chance of producing its reputed therapeutical effect. By giving the single drug hypodermically, the action of the drug is more certain, and its time of action also calculated.

Oxygen can also be used alone, and the results which I now place before you for your consideration, definitely shew that it is capable of dealing with pneumonia. This does not prevent one from using adjuvants if he wishes to do so.

FACTS OBSERVED.

The disease is far more common in males than in females. In the Prison Service, I have still to see my first female pneumonia patient, although there have been a number of male prisoners suffering from this malady.

Contrary to many text-book opinions, pneumonia appears to be more common (and not less common) in the tropics. The Chinese race seem very prone to this disease, and next in frequency come the Indian community here, then Japanese, and in a comparative minority, the European races.

As regards the epidemics spoken of, this is very real in the Far East. My statistics shew noticeable epidemics, when house after house was infected, and then would come a spell when for months not a single case of pneumonia would occur, in any shape or form. The epidemics were most prevalent in May, June, and September in Canton. Those exposed to weather conditions, such as police, and coolies, shewed a marked preponderance of cases. Most cases had a previous history of similar attacks having occurred one, two, or three years previously, which is a point of great interest. Following the moist heat (the humidity often then being 94 per cent. or more), so characteristic of South China, most attacks occurred, whereas in England, France and Germany, etc., most cases occur during the late winter and early spring. With two exceptions, the patients, to my own private knowledge could take their share of alcohol, and often in excess. Eleven cases followed attacks simulating influenza, and four cases followed a "beating" by pickets, the traumatic variety being in a minority, but nevertheless shewing that trauma has a rightful place in etiology.

Patients who took care of themselves physically, and did not expose themselves to any risk of chill, and abstained from alcoholic drinks, never seemed to suffer from any disease whatsoever.

Only 65 per cent. of the cases commenced with a rigor: 25 per cent. had a noticeable malar flush, often simulating typhoid fever, the latter disease being obviated by the usual bacteriological methods,

and clinical findings: 10 per cent. commenced with a cough, most marked at bed-time: headache was a marked feature in 29 per cent., and was relieved by "antiphlogistin" applications outwardly, and by the inhalation of warmed oxygen internally. Pain in the right side was complained of by 27 per cent., and pain in the left side by one patient only. In 84 per cent. of cases the respirations were on first visitation, ranging between 40 and 47 per minute: in 16 per cent. of cases 27 to 34 per minute. Within six hours of commencing treatment in over 50 per cent. of cases the respirations had come down to somewhere in the region of 27. Within two days of treatment the respirations were varying between 16 and 20, and remained so, as long as I had an opportunity of observing the cases.

With three exceptions, the initial temperature recorded, when the first observation was made, was between 103° and 104° F. In these other three cases the temperature did not rise above 99° F. although the physical signs, and symptoms were definitely those of lobar pneumonia: this patient had also marked pleural effusion on the left side, which might have suggested a predisposing cause. This patient was for thirty-six hours in a precarious condition.

In all cases in which oxygen was administered the same day for intervals of five minutes every one quarter of the hour passing the gas through a Littré's tube, the temperature was down to normal within three days.

The following case taken at random from over one hundred records of cases, is typical in a broad sense, of everyone treated in a similar way:

J H E (CMC) M aged 27 years

when first seen: temperature 104° F.
 respirations 38 per minute
 pulse 88 per minute.
 malar flush well marked.
 frontal headache
 pain in the right side of the chest, which was said to be much increased by attempted deep breathing, wanted to cough, but dare not, owing to the acute pain.
 urine very dark, and a trace of albumin found, faeces well formed and offensive
 patient complained of a little thirst, but when water was given, didn't feel inclined to drink it.

Antiphlogistin applied thickly to the chest, back and front, and to the sides. *Oxygen* administered through heated tubes as described heretofore. *No other treatment.*

six hours later: temperature 102° F.
 respirations 25 per minute
 pulse 80 per minute
 headache almost gone
 pain in the chest much relieved
 able to cough, but no sputum (dry)
 urine not so dark, but contained albumin
 faeces not passed
 patient had not had any further rigors: rigors had occurred before I was called in, in consultation.

Although breathing was still not so free and easy, nevertheless the patient had a *good sleep*.

next day at 10 a.m. :

temperature 102° F.
 respirations 24 per minute
 pulse 77 per minute
 no pain in the chest
 no headache
 sputum free and thick, but only suggestive of "Rusty"
 urine contained no albumin
 faces passed and well formed, and normal in colour.
 The typical signs and symptoms of lobar pneumonia were disappearing.
 fine crepitations were heard faintly at the base.

third day at 4 p.m. :

temperature 98° F.
 respirations 16 per minute
 pulse 68 per minute
 sputum diminishing
 urine very dark, but containing no albumin
 normal motion.

This case made an uneventful recovery, the disease being apparently cured inside of three days, the patient getting up on the fifth day, and out on the sixth day. When last seen, the patient was in good health.

The crisis appeared in most of the cases to take place during the night, when the patient was asleep.

One feature of these cases was that not one of them, to my knowledge, ever felt weak, or complained of any disability whatsoever, whereas when the ordinary treatment is given, the patients usually are debilitated, and feel the need for a change of air, and a desire to "get more air" into their lungs, as it were a crying out of the tissues for oxygen, which had been absent, of which they were urgently feeling the need, even at that late stage of recovery, when the pneumococcus must have ceased to exist and shew its deadly activities, it having been slain by the weapon of oxygen.

Phelon, Guthrie, and M'Leod, state in their article on experiments on the action of alkalinity of media on the gonococcus, meningococcus, and pneumococcus, that their conclusions are as follows :

1. Cultures of pneumococcus, meningococcus, and gonococcus, all tend to die off when cultivated in an atmosphere of oxygen in broth containing fresh defibrinated blood.

2. In view of the fact that in pneumococcal cultures the blood becomes discoloured while the reaction remains unchanged, it is probable that the production of hydrogen peroxide causes death of the pneumococcus, notwithstanding the presence of abundance of catalase.

3. The development of an alkaline reaction pH 8.6 to 9, plays an important part in the death of the meningococcus, pneumococcus, and probably also that of the gonococcus. Such observations are facilitated by using cultures of meningococcus in serum broth.

4. The production of NH₃ and of alkaline carbonates owing to oxidation of sodium salts of the fatty acids, are chiefly or entirely responsible for this change in reaction.

5. There is a second factor, the nature of which is obscure, operating in oxygenating cultures of the meningococcus, pneumococcus, and gonococcus, which tends to produce death of these bacteria, but it is independent of the alkaline reaction.

This summary of their work undoubtedly impresses one, and it may be a similar reaction which takes place in the human body, but whether this is so or not, there is one thing that is certain, and that is that excess of *oxygen kills the pneumococcus*, when given in sufficient quantity.

In conclusion, observing these facts, I strongly advocate the use of oxygen, in whatever form one wishes, so long as one is certain that in the particular form used, it will be sure to reach the lungs in sufficient quantity, and act directly upon them, in order to assist nature in stamping out this great evil. As a matter of history, and interest, it will come forcefully home to us, that the application of "strong iodine" (which I take to mean *Lin. Iodi*), which our forefathers used in days gone by, when the skin is able to cope with this powerful application, used in *pleurisy*, was surely a process of counter-irritation by *oxidation*, whereby the power of the oxygen on the formation of a *pleurisy* has made its name. Surely the ozone of the sea-air, that "cures" many early cases of tuberculosis so successfully, (which otherwise would perish), is a further proof that *oxygen is the element*, either combined or "loose," which is the key to the door of lung disease therapy, which has for many years been like a treasure hidden beneath our feet.

In my opinion, *oxygen* can be made to cure all these lung conditions, including tuberculosis, pneumonia, pleurisy, and certainly relieve, if not in time cure, the puzzler named "asthma," which has been thought to be caused by almost everything under the sun, in different ages, according to the "signs of the times."

Much as it may seem that asthma is definitely caused by protein sensitiveness, it may well be found as the days go by, that after all, it is merely a matter of learning the correct technique in the intake of oxygen. *OXYGEN DOES MORE THAN MERELY INCREASE METABOLISM: IT KILLS DISEASE.* Excess of oxygen can be fatal to the human being, in a relative proportion, just as it is fatal to the pneumococcus. On the contrary, just as a certain amount will cause the organism to thrive, so will the regulated amount of oxygen given to the human body, likewise make it also thrive. It might indeed be truly said, that by oxygen we die, and by oxygen we live.

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 ULCUS MOLLE.

Frederick Bunjé.

 Hong Kong.

History: Chancroid or soft sore was known to the Ancients, but nothing of value regarding the subject is traceable in manuscripts. When syphilis was introduced into Europe, differentiation between the hard and soft sore was not realised, and there was great confusion on the subject. In 1853 however, Bassereau, who had been a student of Ricord, distinguished between the two conditions. Unfortunately some years later, Clerc inoculated a person suffering from a hard chancre with secretion from the sore and produced a soft chancre. Four or five years later Rollett demonstrated that Bassereau's statement was not wrong, and that the two sores were distinct entities. Clerc did not realise that there may be a syphilitic infection present at the same time as the chancroid. A mistake that many inexperienced practitioners are apt to make to-day. It was in 1889 that Ducrey demonstrated the specific organism, a bacillus now named after him.

Chief Features: The incubation period of the soft is from 2 to 5 days, although commonly it is as short as 24 hours, and recently I had a case in which the first signs did not appear until the tenth day after exposure to infection.

The sore starts as a tiny abrasion which is rapidly converted into a true and definite ulcer. The situation is most commonly to one or other side of the fraenum or in the sulcus adjacent to the corona glandis, or on the glans itself. The sores are frequently multiple, but here in Hong Kong I have noticed that the majority of patients show a tendency to have a single lesion. Although the genitalia most frequently become infected, any part of the body may become infected. I have seen one case in which the lesion occurred on the finger, with lymphangitis and infection of the epitrochlear gland.

An important factor is that the sore is inoculable, and auto-infection quite commonly takes place. The latter leads to infection of the thighs through some abrasion on the latter, from direct contact with the sore, or via the discharge. The essential features of a soft sore are as follows:—

1. The ulcer is a true ulcer with definitely circumscribed edges. The latter being slightly undermined.

2. In shape the ulcer is irregular, owing to the fact that the spread is not equal in all diameters. If the ulcer becomes chronic, this factor is most marked leading to the *ulcus molle serpiginosum*.

3. Surrounding the edges is a red inflammatory line, and it is worth noting here that this is a line and not a red zone like the areola of the syphilitic sore.

4. The base of the ulcer is yellowish in colour and soft. The depth of the ulcer varies in different parts. On careful cleansing it will be noticed that the base is covered by a membrane.

5. The discharge from the sore is thin and purulent, and forms fairly rapidly.

6. Most soft sores are prone to bleed on handling.

7. Induration is absent, except in old healing sores, and in this case the induration is not anything in degree comparable to that of the syphilitic sore.

8. Pain accompanying the ulcer is a fairly constant feature, although I have seen a few cases in which it was entirely absent.

9. There is nearly always a lymphangitis running along the penis to the inguinal glands on one or both sides, and it is worthy of note that the left inguinal glands only may be involved with the sore on the right side of the penis, and vice versa.

Other types are described by J. E. R. McDonagh apart from the common and usual type described above.

Ulcus Molle Elevatum: This is raised above the surface, and is a true ulcer. The edges however are more than usually undermined. It nearly always occurs singly, and has pseudo-induration giving it a liability to being wrongly diagnosed as syphilitic.

Ulcus Molle Miliare; More commonly found in women, and affecting the labia majora and perineum. The lesions are multiple, and form raised papules with a central ulceration. This type is rare in men, and if occurring in the sex is found on the prepuce. The lesions are numerous and give rise to much discharge and pain.

Complications: These may be grouped as occurring in the ulcer itself, and without the ulcer.

In the ulcer itself: The ulcer may become phagedenic, and have serious results. I have seen a few cases where the whole glans penis has become destroyed. The spread is often rapid, and in the majority of cases follows the old method of cauterization with fuming nitric acid or with phenol. The victim being particularly sensitive to the latter drug. The other common cause for phagedena is a tight fore-skin allowing the sore to be hidden when situated on the glans or on the under surface of the prepuce. It invariably ulcerates through the fore-skin in this case, and often destroys a greater portion of it.

Another type of complication is conversion of the ulcer into an *ulcus molle serpiginosum*. It is the most chronic form. As it spreads with its snake like manner, it becomes more and more ragged, and often presents tongue-like ucerative processes, spreading with greatest predeliction down the genito-crural fold, sometimes reaching as far as the anus. Cases have been recorded in which the spread has reached the knee. The edges in this type of ulcer are ragged, and look as if something had gnawed away the tissue. The edges are often extensively undermined. I had a case where one could lift up an area of quite half an inch of unattacked skin, the under surface of which lay loose on the ulcer floor. The base is always fleshy and uneven, and pours out a profuse discharge. This form of ulcer may last for months or years.

Complications without the ulcer: Inguinal adenitis accompanied by varying degrees of pain is another complication. The inflamed glands in a percentage of cases give way to suppuration with the so-called bubo formation. This is uncommon in my experience, and it is interesting to note that the simpler and smaller the soft sore, the more likely is bubo formation. The predisposing factor for bubo formation is the failure to give good drainage to the sore, hence correct treatment and care will eliminate this complication. When buboes form they nearly always break down leading to inguinal ulceration of great chronicity.

A final and common complication is haemorrhage (rarely serious) from ulceration of the fraenal artery. This happens when an ulcer forms on one side or other of the fraenum. The ulceration spreads laterally and eats into the fraenal artery with resultant bleeding. I have had four cases in which the ulceration burrowed deep to the fraenum passing under it to the other side, leaving the fraenum forming an intact bridge. These are the only occasions in my opinion, when active surgical treatment is justifiable by snipping the fraenum through, to prevent later ulceration with haemorrhage, and to allow for thorough treatment.

Diagnosis: This owing to its importance is best tabulated for easy reference and emphasis.

1. The organism is difficult to find unless one takes fluid for a smear from the deeper tissues beneath the base. Furthermore secondary infection due to staphylococci and diphtheroid bacilli obscures the finding of the specific Ducrey's bacillus. The latter is short and thick and is Gram negative. The organism takes up the stain more readily at both ends leaving the centre lightly stained by contrast.

2. The incubation period of the soft sore is much less than that of the syphilitic sore. An average of 3 days compared to 3 weeks. In order not to be misled one must make a very careful enquiry not

only of the date of the last sexual contact, but into as many previous ones to the last that the patient can remember. Always bear in mind that the lesion may be the result of a previous sexual indulgence and not the last.

3. The soft sore has an irregular outline against the regular one of the syphilitic chancre. Frequently one edge of the ulcer is more actively spreading than the other, and looks more inflamed. A condition contrary to syphilis.

4. The soft sore is frequently multiple, but remember syphilitic sores can be multiple also on occasion.

5. If there is induration with the soft sort, it is slight, being always much less than that of syphilis. Furthermore it extends but a very little beyond the ulcer, contrary to the condition existing in syphilis.

6. There is nearly always a fair amount of pain in the soft sore, whereas the Hunterian chancre is painless.

7. Anto-inoculation with new ulcer formation, especially on the thighs, is in favour of soft sore.

8. The adenitis accompanying soft sore leads to considerable enlargement of the glands associated with pain, a condition different to that of syphilis. In the latter disease the glands never break down and suppurate.

9. The red inflammatory area surrounding the soft sore is merely a ring, not a distinct zone as in syphilitic sore.

10. Phagedenic and serpiginous ulceration when it occurs is typical of soft sore.

A review of the above points would lead one to think that diagnosis between soft and hard sores would be of comparative ease. Unfortunately I have on numerous occasions had cases, seen previously by other practitioners in which no definite diagnosis has been made. Cases sometimes present difficulties, but incorrect treatment is inexcusable. If one cannot make up ones mind about the sore, never treat it as syphilis unless the latter disease can definitely be found present. There are some who take up the attitude that it is safer to consider every venereal sore syphilitic, and institute treatment for that disease at once. It means condemning a man to infinite expense, and a long course of treatment. The correct thing to do is to treat the sore as a soft one, at the same time performing frequent "dark-ground searches" for the spirochete. If there is no success in finding the last named organism, take the patients blood when the time comes for a Wassermann, and keep on the look out for the signs of syphilis in the sore itself and generally. I try and keep a patient under observation, even if I definitely diagnose a soft sore, long enough anyway to recognise the signs of an added infection of syphilis in the original sore.

It has been said to me that a few injections of N.A.B. can do no harm even if the condition is a soft sore. I entirely disagree with this statement, as firstly the soft sore is not benefitted in the least, and secondly if there is any question of syphilis, the arsenic may prevent any signs of specific disease appearing, and gives both doctor and patient a false sense of security.

Treatment: It is often said by practitioners that the treatment of soft sore is most unsatisfactory, but as with all venereal affections, patience on the part of doctor and patient is essential. Perhaps I may appear dogmatic in the following lines, but most text-books give numerous alternative treatments, leaving the reader in a state of indecision, and in a case which does not respond readily to one method another is tried, resulting in no progress, and loss of confidence on the part of the patient for his medical attendant. I am accordingly going to state a definite line of treatment which I have found satisfactory, and even in protracted cases, leading to cure.

A preliminary warning is necessary in so far as the use of cauterising agents such as carbolic acid, fuming nitric acid, and the actual cautery must be banned absolutely. Time after time I have seen the use of these methods resulting in phagedena and great chronicity with a maximum destruction of tissue.

If a tight foreskin exists with the sore hidden thereby, a broad V excision of the prepuce should be done under local anaesthesia, with the centre in line with the mid-point of the dorsum of the glans.

As regards treatment of the sore itself, a copper sulphate lotion of from 5 to 10 per cent. applied three times a day for a period of five minutes on each occasion is the best. Advise the use of a watch for timing as patients are inclined to hurry, and underestimate the correct period. I instruct my patients to use a fountain pen filler to drop the lotion on to the sore, allowing it to remain in contact for a minute at a time, using a new supply five times to complete the period. After this the sore must be dabbed dry with cotton wool, and to ensure absolute dryness a few drops of 90 per cent. alcohol is dripped on to the sore and allowed to evaporate. This is essential for the next application, a powder recommended by J. E. R. McDonagh.

Bismuth Tribromphenolatis ...	30	„
Bismuth Subgallatis	30	grains
Mag. Carb. Levis	30	„
Pulveris Amyli	ad	1 ounce

It is here that careful instruction in the use of the powder is necessary. It must be blown on to the sore in a fine film by means of a powder blower. If it is just poured on to the chancre, it cakes with the secretion and keeps back the discharge, leading to the forma-

tion of buboes. Before I prescribed the powder blower for my patients and gave specific instructions as to the thickness of the layer of powder necessary, I had several cases of the aforementioned complication. Since using the correct technique this has not happened again. Iodoform is in my opinion of slightly greater value than the above powder but its odour precludes its use.

A hot sitz bath, night and morning helps considerably in conjunction with the the above treatment.

At the same time treatment via the blood stream is indicated. This consists in administering intra-venous injections of tartar emetic, which has nearly a specific action in soft sore. I use the penta-valent form of this drug. It is put up in ampoules and goes under the name of Stibosan. This preparation has the advantage of giving the minimum of toxic symptoms. I give the following doses at the intervals indicated:—

1st day	0.1	gram.
2nd day	0.2	„
3rd day	0.3	„
6th day	0.3	„

the maximum dose being continued at two day intervals, unless reaction takes place when the dosage is decreased or the interval prolonged.

If the sore remains at a stand-still, soaking in Wright's hypertonic saline (4 per cent. sodium chloride with 1 per cent. sodium citrate) for long periods, and in the intervals a dressing of the same applied on lint with jaconet covering is invaluable. This promotes free drainage, and helps to prevent the formation of buboes when threatening to form. Intramuscular injections of the patients own blood taken from a vein inducing protein shock, I have found valuable when the sore seems to be at a stand still.

If the sore becomes phagedenic, immediate continuous warm baths of Eusol or Dakin's solution will help the condition from spreading.

When inguinal adenitis starts with pain and swelling, an injection of Contramine followed by another five days later, will in most cases prevent bubo formation. To the swollen glands an evaporating lotion of

Plumbi Subacetatis	10	grs.
Liq. Ammon. Fort.	6	min.
Spt. Vin. Rect.	1	drachm.
Soln. Alumini Acetatis	ad	1 ounce.

must be applied. It gives great relief and often causes early resolution.

The buboes stange to say often appear some weeks or months after the sore has healed, once established however, they should never

be incised. The following procedure is the safest and gives best results. The skin is sterilised with iodine and a needle attached to a 10 c.c. syringe is inserted into the abscess cavity, taking a direction parallel with the groin. It is essential to make the puncture through healthy skin and not through inflamed cutis, otherwise there will be a subsequent leakage and breaking down. The contents of the abscess is aspirated, and 1 in 20 tincture of iodine, electrargol, or 20 per cent. neo-silvol injected into the cavity. This is again aspirated and 1 to 2 c.c. of whatever drug is being used is re-injected. The needle is removed, the puncture sealed with collodion, a pad superimposed, and the patient kept in bed. When the buboe empties, probably the next day, a repetition of the operation is done, and at further intervals until cure takes place.

Of late I have noticed that all soft sores have a great tendency to heal rapidly when exposed to sun light, and the open air. I instructed several patients to lie in their rooms near a window with sunlight shining on the ulcer. Good results in these cases has led me to try ultra-violet irradiations with the mercury-vapour lamp, producing remarkably quick healing. I hope to continue this form of treatment, and to thoroughly test out this therapeutic agent which I feel confident will be a valuable adjunct to our armamentarium in the healing of recent and chronic soft sores.



Editorial.

OUR PROSPECTS.

We are informed from many quarters that it is possible that the foundation stone of the new Government Civil Hospital will be laid in the year 1929.

It sounds almost too good to be true, but there is no doubt that when the work starts and while it is in progress, the Resident Staff of the hospital will have many discomforts to put up with.

This brings us to a very important point, namely, air space. It is to be hoped that every endeavour will be made to secure as much ground in the immediate vicinity of the present hospital as possible,—the police training school, for example, would be a valuable asset to the hospital site, while that of the present building would be suitable for park space, grounds for convalescent patients and so forth. The hospital is in the centre of a very crowded district and park space is not only valuable to the hospital, but also to the population in general.

We understand that the building is to be high, eight storeys, with the operating theatres on the top floor, maternity on the next, and so forth, the lower floors being partly administration and partly Housemen's quarters.

We are glad to see that there is every likelihood of having adequate quarters for the Chinese staff, such as Assistants and House Surgeons. The most important of the staff to consider is the nursing staff. We would like to see the nursing profession become popular among Chinese ladies, and the Government Civil Hospital should provide a ready means of forming a nursing school on a large scale. Ultimately we hope that the nursing staff will mainly be Chinese, although the Government may well wish to keep European "Lady Superintendents" in the various units of the hospital.

This is a plan which we think might work very well in the future when we have more Chinese Sisters to call upon. That is, say there was one European Sister in Charge of the whole Surgical Unit, whose duty it would be to visit the wards in her own time, and generally see that the teaching of the nurses, and the routine and technique of the wards are kept as efficient as possible. Further, the nursing staff must be adequate to deal with the number of patients—one nurse to every three patients is a general estimate—and the hospital must not be under-staffed. The Amah as a member of the nursing staff must disappear—she is fifty years out of date. Amahs and boys are desirable for the heavy work of the wards, such as

cleaning, but they should not be entrusted with the care of dressings and sterilised instruments in the theatres and labour wards. "It is no use spoiling the ship for ten cents worth of tar."

Whether the present medical staff will all be here or not, when the hospital is completed, is hard to say, but it is to be hoped that those who are, will not neglect the opportunity of forming for the University a large clinic on the lines of those in America, such as the 'Mayo Brothers,' containing accommodation both for poor and well to do patients. In years to come, the Chinese will more and more learn to appreciate the value of expert care, in hospitals under the management of specialists, and the University might well form a large clinic for better class of patients of all nationalities, such as we understand exists in Singapore. Financially the University would profit by such a clinic, and its reputation in the Colony would be greatly enhanced, two very desirable objects. A closer association with the Government Medical Officers of the hospital would in many ways be desirable, they might, for instance, be appointed as Honorary Associate Professors in various units and the whole organization be a University Medical School.

It must not be forgotten that with the completion of the new hospital, the Medical Faculty will take an enormous stride forwards, its whole machinery will need reorganization, and its financial position will need to be recast. The Medical curriculum now extends over six years, and it must be ever kept before the minds of the authorities that for half that time, that is, the last three years the work of the student is mainly extra mural as regards the University, and a special office staff will be needed to cope with the various problems that will arise.

We must aim high for we have great possibilities and above all we must elicit the sympathy of the authorities to further our endeavours.

As the Principal of the Singapore College of Medicine says:—

"Medical Education is costly. The budgets of medical schools and research institutes throughout the world have expanded to such an extent that may well astonish the layman. It is no longer possible to conduct a school of medicine upon sound commercial principles. The revenues derived from students' fees cannot cover the cost of erecting and maintaining buildings, equipment and staff. The training of its doctors, and the advance of medical knowledge, the care of the public health—*these must all be a charge on the community.*"

* * * *

It is gratifying to note that both the British Medical Association (Hong Kong and China Branch) and the Hong Kong Chinese Medical

Association are inclined to look favourably on our project of forming an Academy or Medical Club for the advancement of medical science and for the purpose of bringing the medical practitioners of Hong Kong into a closer association. It is hoped that a Committee Meeting will shortly be held to fix the preliminary details.



Clinical Notes.

CASES OF INTERMANDIBULAR DERMOID CYSTS.

S. T. Hsiu.

Clinical Assistant to the Surgical Unit, University of Hong Kong.

The intermandibular dermoid cyst belongs to the sequestration type of dermoids, and occurs in the anterior part of the tongue, starting between the two genio-glossi. It is supposed to be due to the incomplete fusion of the two mandibular processes which help to form the primitive face in the foetus.

It should be clearly distinguished on the one hand from the tubulo-dermoid formed by incomplete obliteration of the thyroglossal duct. This lies deeper, passing deeper to the hyoid bone towards the foramen cæcum of the tongue. On the other hand it should be distinguished from the simple retention cyst which is mucous or salivary in origin. This latter apparently does not cause a marked swelling below the chin.

Because of its slow growth persons suffering from it can live for a few decades without any apparent distress. When the cyst attains some size, it pushes the tongue upwards and backwards and this may cause serious respiratory difficulty when general anæsthetic is administered. In case of such mishaps it is not necessary to perform a tracheotomy but the mere opening of the cyst by a median incision from the mandible to the hyoid bone is adequate enough for immediate evacuating of the contents and thus relieves the condition. After this the cyst wall can be dissected out at leisure from outside the buccal cavity.

We are unable to estimate the frequency of its occurrence in Hong Kong, because patients do not seek medical advice until the condition is far advanced and causing them much trouble.

So far we have had three cases on record, reported as follows:—

Case A.

C.S., Male 7, Chinese, admitted 16th November, 1924. Annual No. 553/24.

He was admitted for enlargement of the floor of the mouth as well as difficulty on swallowing of ten days' duration.

It was stated that he had an abnormally large tongue since birth, and his parents observed some abnormality in his speech as he grew older.

On examination, the floor of the mouth was found to be enlarged in all directions. A tumour was seen inside the mouth which

obstructed the posterior part of the buccal cavity from view. Patient could not protrude his tongue which was hidden behind the tumour. There was a sense of fluctuation in the tumour.

He was operated on on 19th November, 1924, and the cyst was dissected out intrabuccally.

He was discharged on 30th November, 1924, Complete recovery took place, speech being normal and movements of tongue free.

Case B.

C.T., Male 29, Chinese, Admitted 10th March, 1925. Annual No. 105/25.

He was admitted for a swelling below the jaw of six years' duration. The tumour started as a painless lump in the submental triangle. It gradually increased in size until ultimately it pushed the tongue upwards, showing itself in the buccal cavity as well as below the mandible. (see photograph I). The tumour was soft and fluctuating.

An operation was performed on 14th March, 1925, and again an intrabuccal dissection was carried out.

He was discharged on 20th March, 1925, with complete recovery.

Case C.

L.Y.K., Female 41, Chinese, 2nd March, 1928. Annual No. 96/28.

She was admitted for a swelling of the floor of the mouth of ten years' duration. Swelling was painless, commencing beneath the tongue and gradually increasing in size. (see photograph II).

There was a tumour hanging down from the lower jaw more to the left than to the right side. Intrabuccally, a big lump was seen bulging upwards, hiding the tongue from view. The tumour was soft and fluctuating, describing a diameter of about $4\frac{1}{2}$ inches.

She was operated on 5th March, 1928. In this case, owing to the difficulty in breathing during anæsthesia, an incision below the mandible had to be made to relieve the condition. The cyst wall was then dissected out and the wound sutured.

She recovered completely and was discharged on 17th March, 1928.

N.B.—In addition to the characteristic pultaceous greasy contents which are quite distinct from the glairy contents of a ranula or a thyreo-glossal cyst, microscopical sections of the cyst wall of each of the three cases show the inner lining to be stratified epithelium, proving that the diagnosis is correct.

I am very much indebted to the Professor of Surgery for permission to publish these cases.



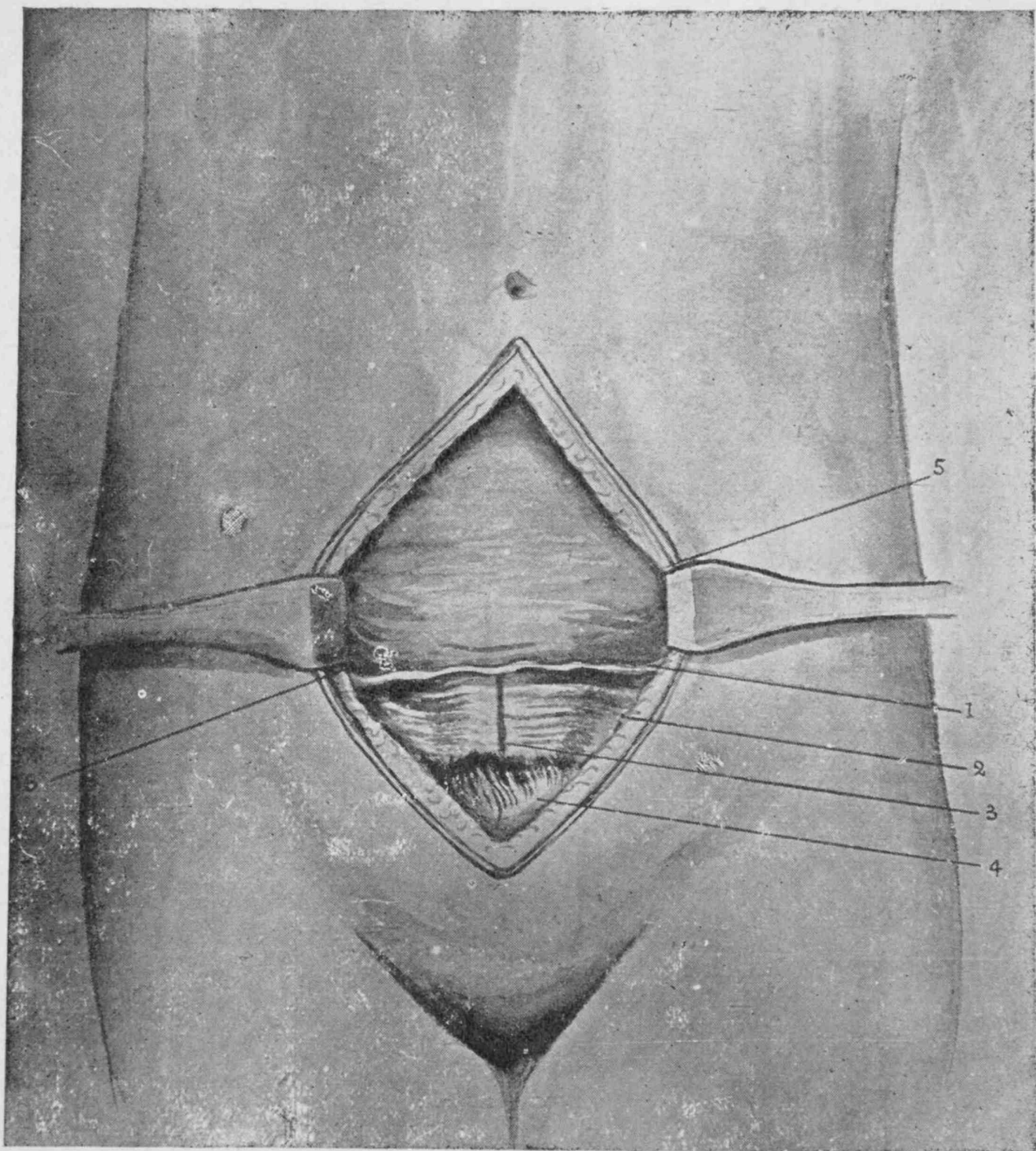
Figure I. Photograph of case B.

1. Tip of tongue.
2. Swelling in floor of mouth.
3. Swelling below chin.



Figure II. Photograph of case C.

1. Tip of tongue.
2. Swelling in floor of mouth.
3. Swelling below chin.



LOWER SEGMENT CAESAREAN SECTION.

1. Line of peritoneal reflection.
2. Lower Uterine Segment.
3. Line of Incision.
4. Bladder (pushed down).
5. Gauze Wipe.

NOTES ON THREE CASES FROM THE DEPARTMENT OF OBSTETRICS AND GYNÆCOLOGY.*

S. K. Lam.

Clinical Assistant to the Obstetrical and Gynæcological Unit, University of Hong Kong.

*A Case of Extra-Peritoneal Cæsarean Section.**

Tang Kiu, aged 25, was in labour on admission. The os was found to be dilated to the size of a 20 cent piece, the membranes ruptured. The foetal head was high up and freely movable. The internal conjugate (measured by Tottenham's pelvimeter) is 3.8 inches.

The patient is a multipara this being her second pregnancy. The first baby was born dead after several days of very painful labour.

In view of the strong desire of the Chinese to have a son and the danger the mother might run if there was no interference Cæsarean section was decided upon.

The operation, probably the first of its kind done in Hong Kong, was extra-peritoneal Cæsarean section. The abdomen was opened by a median longitudinal incision. The parietal peritoneum was also cut longitudinally exposing the bladder and the lower uterine segment. The bladder was pulled forwards putting on the stretch the vesico-uterine fold of peritoneum which was cut transversely. The lower uterine segment and cervix were exposed and sufficient room obtained for delivery. The lower uterine segment was opened vertically and the foetal head was levered out of the uterus by a vectis (one blade of the obstetrical forceps can be used). The cord was clamped and cut and the baby handed to an assistant. Gentle pressure on the fundus separated the placenta and an injection of ernutin was given to prevent post-partum hæmorrhage. The uterine incision was closed by interrupted sutures about half an inch apart. The sutures should pass through the uterine wall deeply but not through the decidual membrane. These sutures were then buried by sewing the peritoneum over them. The cut edges of the peritoneum were stitched closing the abdominal cavity. The abdominal wall was closed in the usual way.

*Torsion of An Ovarian Cyst.**

Lee Yut Ying aged 25 had abdominal pain three days before admission. The pain began very suddenly and was severe. She had to lie in bed. There was also vomiting.

* From the Tsan Yuk Maternity & Women Hospital, by permission of Professor Tottenham.

On admission the patient complained of pain in the lower abdomen especially severe in the right iliac fossa, Examination showed that the uterus was about 3 months pregnant, but above the fundus there was a large rounded tumour the size of a 5 months pregnant uterus.

On inquiring the past history the patient said that she noticed a swelling in the right iliac region ever since she was 14 years of age. Last year she delivered a full term child in the Tsan Yuk hospital. The labour was normal.

Torsion of an ovarian cyst was diagnosed and on opening the abdomen, a right ovarian was found twisted twice on its pedicle. The pedicle was clamped and the cyst removed entire. The patient made a good recovery. Abortion did not occur.

*Uterus Bicornis Unicollis.**

Li Tsoi Wan aged 22 was admitted for sterility, pain in the abdomen and leucorrhœa. Menstruation was irregular and painful. On vaginal examination the uterus was found to be retroverted and a small swelling by the side of it. The cervix was small. On laparotomy the uterus was found to be bicornuate, retroverted and adherent. Both tubes were dilated. The tubes were removed and the round ligaments brought out of the rectus muscles to suspend the uterus. A suspension ligature was also inserted into each cornue Gauze was put in the Douglas pouch for drainage and the abdomen closed.



Review of Books.

Growth of our Knowledge of Heart Disease: By R. O. Moon, M.A., M.D., F.R.C.P. Published by Longmans, Green and Co., Ltd., London, Price 6s. net.

This refreshing little volume has been inspired by the approach of the Tercentenary of the publication of Harvey's Classic, "*De Motu Cordis et Sanguinis*," in the year 1628. In less than a hundred pages, Dr. Moon takes a rapid survey of the history of Cardiology from the time of Hippocrates (460-370 B.C.) to the present day.

Aristotle and Galen followed closely on the lines of Hippocrates and they formulated ideas which to us must seem crude and fantastic. In their opinion the heart was the organ in which all body-heat was produced, the arteries carried spirits to all parts of the body, the veins carried nutriment; the septum of the heart was believed to be riddled with minute pores, through which blood percolated from right to left ventricle, also that the blood moved from the heart along certain blood-vessels and back again by the same channels.

"The works of Aristotle and Galen constituted the text on which the scientific intelligence of Europe expended itself in criticism and comment for more than a thousand years," and it was not until the Renaissance which brought forth the great Anatomists, Sylvius (1478-1555), Vesalius (1514-1564) and Servetus (1509-1553), that the study of the heart was again taken up on original lines.

Harvey (1578-1657) who had studied at Cambridge and Padua discovered that there was a circulation of the blood and that this circulation was of a double nature—a Lesser or Pulmonary Circulation, and a Greater or Systemic Circulation.

This discovery proved to be the mariner's compass of Medicine, and immediately the study of diseases of the heart became possible but it was not until Auenbrugger (1722-1809) introduced his method of percussion, and Laennec (1781-1826), invented the stethoscope that the study was placed on a scientific basis. The great strides made in physics and physiology during the last fifty years, have brought us the sphygmograph, the sphygmomanometer, the electrocardiograph, and X-Ray examination, all of which render the study of diseases of the heart increasingly scientific.

Dr. Moon has a fine command of English, an unusual acquaintance with the Classics, a remarkable flair for medical history, and the vision that comes from professional experience.

J. A.

The Examination of the Central Nervous System: By Donald Core, M.D., F.R.C.P. Published by Messrs. E. & S. Livingstone, Edinburgh, pp. 256, Price 8s. 6d.

The author modestly claims that this little book is intended for the use of medical students "who have not completed their training in neurology" but it is comprehensive enough to be a handy work of reference for clinicians who have not become specialised neurologists.

Written in a simple, clear, direct style, and reasonably illustrated, the book is very readable, and should go far to allay the student's traditional terror of a difficult subject.

The scheme laid down for the routine examination of the nervous system follows the conventional lines. Four chapters are devoted to the clinical examination of the Motor System, one to the Sensory System, one to the Cranial Nerves, one to Trophic Disorders, one to Speech, and one to the Mental State of the Patient. In addition there are chapters on Blood Pressure, Cerebro-spinal Fluid, X-ray Examination, and Electrical Tests as applied to nervous diseases.

The majority of the illustrations are delightfully artistic, but in a scientific text-book they are not so convincing as good photographs.

J. A.



Pharmaceutical Notes.

'ALEPOL' (B. W. & CO.)

The outlook for the leper has improved considerably by the development of a specific treatment which has met with an encouraging amount of success. This treatment is founded on the traditional influence which the administration of chaulmoogra oil had on leprosy patients.

Several years ago Burroughs Wellcome & Co. made available a mixture of esters of acids of the chaulmoogric series which has been widely used in leper colonies. A more recent and interesting addition to anti-leprotic agents is 'Alepol,' which is a selected fraction of the sodium salts of the total fatty acids of hydnocarpus oil. The selection of the lower melting-point sodium salts in 'Alepol' obviates to a considerable extent the old disadvantage of vein-blocking, which occurred when these compounds were injected intravenously. 'Alepol' has already received considerable clinical support both when used intravenously and intramuscularly. 'Alepol' is issued in 25-gramme bottles. (*Advt.*)

DIONIN (Merck).

DIONIN is the short name for Ethylmorphine Hydrochloride 'Merck' introduced into therapeutics by Prof. J. von MERING some thirty years ago and is the original product to which nearly all publications in medical journals dealing with ethylmorphine hydrochloride refer.

Prescribed as DIONIN it develops just those properties—without any side actions—which have placed this morphine derivative in its present conspicuous position in the treatment of *inflammatory conditions of the respiratory tract*. It rapidly lessens irritation, subdues coughing, and promotes bronchial secretion and expectoration. It also diminishes dyspnoea and is a most excellent anodyne in pains in the chest and side.

In *pulmonary tuberculosis or laryngitis* Dionin not only reduces irritation and diminishes coughing, but has a beneficial effect upon the sleeplessness and night-sweats so common in these conditions.

In the treatment of catarrhal conditions of the respiratory tract, in colds and their concomitants, Dionin is of the utmost value. Thus it is capable not only of exercising a beneficial influence upon the symptoms of coryza and its sequels, but given early in adequate doses may even cut short an attack.

DIONIN may be given with impunity to *children*. Experience has shown that whooping-cough, for example, treated with Dionin runs a much milder course, the spastic attacks being shortened and diminished in frequency with recovery setting in more rapidly.

In *ophthalmic practice* Dionin has become a standard remedy, and there is hardly a text-book of ophthalmology to-day which does not contain some references to its uses.

The ready solubility of Dionin in water, together with the fact that owing to solutions of Dionin being neutral in character their injection is painless, and the absence of cumulation and euphoric action—all these properties make Dionin most eminently adapted for use in treatment of the *morphine habit*. Veronal, or Veronal-Sodium, have proved valuable adjuvants in such treatment, a suitable combination of Dionin and Veronal having a very favourable effect in many cases otherwise not so amenable to treatment. (*Adv.*).



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 Gazette, 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, Moukden.
 Index Universalis, Moukden.
 Dr. Huang's Medical 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 Bibliotek), 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-Zasshi, 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 Volksgezondheid in Nederland-Indie.
- Polyclinica Dairen.
- Medical Conference Addresses in Commemoration of the Opening of the New Dairen Hospital, 1927.
- Reprints from the Nutrition Laboratory, Carnegie Institution of Washington, Boston, MASS.
- Perspiratio insensibilis: Ihr Wesen und ihre Ursachen. von Francis G. Benedict und Cornelia Golay Benedict.
- Études recentes sur le Metabolisme humain et animal. par le Professeur Francis G. Benedict.
- Annual Report of the Director of the Nutrition Laboratory.
- Absence of Stratification and Rapidity of Mixing of Carbon Dioxide in Air Samples by Thorne M. Carpenter and Edward L. Fox.
- The Nature of the Insensible Perspiration by Francis G. Benedict and Cornelia Golay Benedict.
- The Composition of the Urine of Steers as Affected by Fasting by Thorne M. Carpenter.
- A "Field Respiration Apparatus" for a Medical and Physiological Survey of Racial Metabolism by Francis G. Benedict.

Notes and Comments.

THE JOURNAL.

As stated in the previous issue, *The Caduceus* will appear quarterly instead of three issues a year as heretofore. In this our second quarterly issue, the Journal contains a number of interesting papers.

We are very fortunate to receive the kind support from such well-known authorities as Sir Berkeley Moynihan, Professor W. H. Maxwell Telling, and Mr. R. Lindsay Rea, etc. We hope to be able to publish in every issue one original paper from a well-known authority.

The Caduceus has now a very wide circulation, with a gradual increase annually, and is circulated all over the world. We are glad to say that our overseas readers have appreciated our Journal, and in return have sent us their publications in exchange.

POST OF READER IN BIOLOGY.

An advertisement appears in this issue inviting applications for the post of Reader in Biology for the University of Hong Kong. The salary is £600 a year rising by annual increments of £25 to £750 per annum. Unfurnished quarters will be provided. The engagement will be for three years in the first instance. An allowance will be granted to the selected candidate to cover the cost of his journey to Hong Kong.

With regard to qualification, it is expected that the candidate should be acquainted with the subjects of botany and zoology and have had some teaching experience. Candidate must not be over thirty-five years of age.

To those who are interested in research, we might add a word that the field of biological work is very wide and practically untouched. With a long vacation of four months, the Reader could make good use of his time by visiting various places for his research.

Further information may be obtained from the Registrar of the University, to whom applications with testimonials and a statement of qualifications should be submitted.

OUR GRADUATES.

Dr. Yeo Kok Cheang: We are pleased to note that at the recent examination for the Diploma in Public Health, Part I, University of Cambridge, Dr. Yeo Kok Cheang has passed with distinction.

Dr. Yeo had a very distinguished career as a student in this University where he graduated M.B., B.S. in 1925. After serving terms as House Physician, House Surgeon and House Obstetrician in

the Government Civil Hospital, he proceeded to London, and was successful in gaining the Diploma in Tropical Medicine and Hygiene. He is now pursuing his post-graduate studies at the University of Cambridge. We wish Dr. Yeo every success when he goes forward to Part II of the D.P.H. Examination.

Dr. Eva Ho Tung: We are pleased to record that Miss Eva Ho Tung has been awarded the Diploma of Tropical Medicine and Hygiene of London. She graduated in December 1926 and was the first lady graduate in Medicine of this University.

Dr. Yue Man Kwong: We note that Dr. Yue has published an article on The Epidemic of Cholera in Hingwha City, Fukien, in the March issue, 1928, of the China Medical Journal.

As a student here, Dr. Yue had a brilliant record, and after holding a year's house appointment, he went to Cambridge where he passed with distinction the examination for the Diploma of Public Health. Dr. Yue is at present attached to the St. Luke's Hospital, Hinghwa City, Fukien.

MEDICAL SOCIETY MEETINGS.

In view of the medical degree examinations it will not be possible for us to hold any further meetings this session for papers to be read. Owing to the lateness of the election of new officers it was found impossible to arrange a programme of meetings for the first term, when only two papers were read. The first paper was a presidential address by Professor Digby, and the second paper on Some Surgical Derangements of the Knee Joint was read by Major R. H. Lucas, O.B.E., M.C., R.A.M.C. which we hope to publish in a subsequent issue.

We are glad to state that the meetings are always well attended, both by the senior students and the general practitioners. In our next issue, we hope to be able to have a provisional programme for the second session, September to December.

