THE CADUCEUS

JOURNAL OF THE HONGKONG UNIVERSITY MEDICAL SOCIETY.

Vol. 7 November, 1928 No. 4

All medical papers and other scientific contributions intended for the Journal, and all books for review and magazines in exchange, should be addressed to the Editor, "*Caduceus*," Hong Kong University, Hong Kong.

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ON VITAMINS. *

by

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Vitamins, or accessory food factors, are substances of unknown chemical composition which are found in some natural foodstuffs in varying amounts and are absolutely essential to the metabolic requirements of the animal body.

For many years past it has been the custom to regard proteins, fats, carbohydrates, mineral matters and water as the constant and invariable structural components of living tissues and to consider them as the fundamental factors in the diet of animals. As a result of this narrow conception of dietary value it was not until within the last few decades that research in animal nutrition has advanced beyond the stage when the nutritive value of every foodstuff was estimated solely in terms of its chemical analysis into proteins, fats, carbohydrates and salts. Although beriberi had been known from remote times and its cure had been observed in several instances to depend on a varying of the diet, and as early as 1720 Kramer observed that certain preserved and old foods produced scurvy amongst sailors, soldiers and inmates of prisons, and that the addition of fresh fruits and of certain fresh vegetables in the diet would be followed by a cure of the condition, nothing was known of the existence of any substance different from the known foodstuffs which is indispensable for normal nutrition until 1896 when Eijkman succeeded in producing experimentally a paralytic form of illness in fowls, strikingly similar to beriberi in man, by feeding the birds on polished or milled rice and in preventing or curing it by feeding them on an extract of the rice polishings. Thus in the

* Read before the Chinese Medical Association, Hong Kong, on the 12th October, 1928.

husk of the rice the presence of a substance which plays an important part in nutrition and which existence was hitherto unknown was demonstrated, and the discovery saw the advent of a new era in the knowledge of the nutritive needs of the body and of the essential characters of foods. During the early years of the century extensive investigations into the effects of feeding laboratory animals on diets of varied kinds and constitutions had been undertaken. In 1901 Grijns was able to show that the polyneuritis of fowls produced by feeding them on polished rice could be prevented by adding beans to the polished rice diet, and in 1902 Hulshoff-Pol found that beans or their watery decoctions were effective both as a preventive and curative agent in beriberi in man. The study was followed up by Funk who in a paper published in 1911 first claimed to have isolated an active water soluble substance in a practically pure state, the absence of which was the cause of human beriberi. This he named the beriberi vitamin. Shortly after this, in 1912, Holst and Frolich gave the results of their work on experimental scurvy in guinea-pigs in which they proved that the disease was due to a deficiency in the diet of a substance soluble in water and easily destroyed by heat.

The classical experiments carried out over many years by Hopkins, the results of which were published in 1912, threw further light on the subject and marked the beginning of a full and proper appreciation of the importance of those dietary substances which he termed the accessory factors of the diet. From the evidences obtained he concluded that "no animal can live upon a mixture of pure protein, fat and carbohydrate, and even when the necessary inorganic material is carefully supplied, the animal still cannot flourish"..... "it is certain that there are many minor factors in all diets of which the body takes account." "In diseases such as rickets, and particularly in scurvy we have had for long years knowledge of a dietetic factor, but though we know how to benefit these conditions empirically, the real errors in the diet are to this day quite obscure. They are, however, certainly of the kind which comprises these minimal qualitative factors that I am considering. Scurvy and rickets are conditions so severe that they force themselves upon our attention, but many other nutritive errors affect the health of individuals to a degree most important to themselves, and some of them depend upon unsuspected dietetic factors."

Following this, in 1912, Osborne and Mendel reported that when animals were kept upon diets devoid of fat they became subject to a characteristic eye disease (xerophthalmia or keratomalacia), while the simple addition of butter fat, or as it was later found also of cod liver oil, sufficed either to prevent or to cure the disease.

A year later in 1913, it was found both by McCollum and Davis and by Osborne and Mendel that the fat of milk also possesses a growth promoting property which belongs to a fat soluble substance.

The proof of the existence of a further essential accessory dietary factor, which is of a fat soluble nature, was furnished by McCollum and his co-workers in 1922, who discovered in cod liver oil a "calcium depository substance," distinct from the anti-ophthalmic vitamin, whose function it is to promote bone growth and calcification. Lack of it will interfere with the normal process of calcification of the bones and teeth, and is generally acknowledged to be one of the chief causes of rickets.

Yet another dietary factor, soluble in fat, which is necessary for reproduction in certain animals, was recognised by Evans and Bishop in 1923. When this factor is lacking or deficient in quantity in a diet female rats do not reproduce, while male rats show degenerative changes in the testicles.

It is highly probable that further investigations may reveal the existence of other factors concerned with the general well-being and functioning of the cells of the body. So far the observation led to the conception of at least five substances of the vitamin type, two of which, vitamins B & C, are soluble in water and needed for the prevention of beriberi and scurvy respectively, while the other three are all fat soluble, vitamin A being known as anti-ophthalmic, vitamin D, anti-rachitic, and vitamin E, anti-sterilic.

ACTIONS OF VITAMINS.

We are as ignorant of the actions of vitamins as of their chemical nature, and it would appear futile to discuss at length in the present light of our knowledge the various theories which have been advanced to explain their mode of operation on the body tissues generally. Many observers believe that vitamins behave very much like hormones, acting as stimulants to certain physiological mechanisms of the body. Some regard them to be essential chemical constituents of some at least of the living tissues, like iron, calcium and phosphorus; while others have looked on them as primarily catalytic in function, operating in the same way as ordinary enzymes. These and other theories the future will need to evaluate.

VITAMIN A (*anti-ophthalmic*).

The chief sources of this vitamin in the diet are certain animal fats, such as butter fat and egg fat, green vegetables, milk and the glandular organs of animals, such as liver and kidney, in which it is found in abundance; while the richest source is cod liver oil which has about 100 times more of this factor than a similar amount of animal butter. In relatively smaller quantity the vitamin is present in the germ portion and outer covering of seeds, such as corn, wheat, barley, peas and beans. On the other hand vegetable oils and fats contain none of this factor.

Vitamin A may be extracted by such fat solvents as alcohol, ether and benzene, but not by water. It is highly susceptible to oxidation,

but in the absence of oxygen remains stable at high temperature, being not appreciably affected by the canning process, or by such exposure to heat as occurs in ordinary cooking. There is no apparent loss of this substance when milk is boiled for a few minutes, or is dried by modern methods.

Effects. When the vitamin is removed from the food there develops a pathological condition of the eyes (xerophthalmia or keratomalacia) characterised by swelling of the lids of one or both eyes followed by inflammation of the conjunctivae which in severe cases may end in total blindness. Such changes can be experimentally reproduced in the rat. The condition is generally regarded as an almost specific result of shortage of the fat soluble factor, and appears to be due to a more or less complete inhibition of the lachrymal glands. Other effects of the deficiency include atrophic changes in the epithelium of the intestinal villi and the development of a thrombopenia which by lowering the body resistance to infection increases the susceptibility of the person to various lung, skin and other affections.

VITAMIN B (*anti-neuritic*).

This is most abundant in green vegetables, yeasts, egg yolks, germ of seeds and glandular organs, such as liver and pancreas. In much smaller amount the vitamin occurs in fruits, such as tomato and orange, milk and potatoes; while meats, polished rice, white flour, biscuits, cakes, butter and degerminated cereals are almost or entirely devoid of this factor.

The substance is fairly stable towards acids, but is readily destroyed by alkalies. It is not so susceptible to oxidation as either vitamin A or C, and is not apparently affected by heat ordinarily applied in the process of canning of foods, nor by cooking. The principle may be extracted from yeast or rice polishings by water or 50 per cent. alcohol.

Effects. A diet deficient in this vitamin is the chief factor in the production of beriberi which is a disease characterised by severe nervous disorders. In one (the dry) type of the disease there is great wasting of the body, anaesthesia of the skin and finally paralysis of the limbs. In the other (wet) type the most outstanding symptom is marked accumulation of fluid in the various serous cavities and in the subcutaneous tissue of the trunk and limbs.

In both types there is atrophy of the lymphoid tissues, including the spleen and Peyer's patches, and of the glandular organs, such as the ovary, testis, pancreas, liver and thymus; while the adrenal and pituitary glands may often show hypertrophy. Other pathological changes are found in the heart, which becomes greatly dilated, and in the gastro-intestinal tract in which there is often hyperaemia, ecchymosis and atrophy of the walls. In the later stages the function of certain nerve cells of the brain and of the spinal cord becomes impaired, result-

ing in paralysis of the limbs which may be followed by coma and death. The affection of the lymphoid tissues, which have an intimate relation to nutrition and infection, probably accounts for the wasting which is a prominent feature of the disease and for the increased susceptibility to infection generally displayed by the patient. Pigeons fed on a diet lacking in this factor, e.g., polished rice, will develop a polyneuritis similar to beriberi, accompanied by marked loss of weight and, towards the end, by convulsions.

Closely associated with the anti-neuritic vitamin is another food factor (*P.P. factor of Goldberger*), absence of which is found to be the cause of pellagra—a disease characterised by certain neurasthenic manifestations, gastro-intestinal disturbances and a development of symmetrical eruptions of the skin. This factor is present in practically all the foods which contain the vitamin B, but most abundantly in yeast. It is water soluble, and can withstand oxidation and heat much better than the anti-neuritic principle, from which it can be separated by autoclaving under high pressure.

VITAMIN C (*anti-scrobutic*).

This substance is found most abundantly in certain fruits, particularly lemon and orange, in tomatoes and fresh green vegetables, and to a smaller extent in milk, egg yolk, seed germ and meat. It is absent in grains, yeast and most dried foods.

The vitamin is very readily destroyed by oxidation, and vegetables cooked in the ordinary way are deprived of much of this factor. It is soluble in water and alcohol, but not in ether and benzene.

Effects. Absence or deficiency in the diet of this vitamin results in the development of scurvy in man as well as in animals. Of the latter the most susceptible are the guinea-pig and monkey. The signs and lesions in the three species are essentially the same, evidenced by gradual loss of weight, listlessness, anaemia with haemorrhages into the mucous membrane and skin, oedema, osteoporosis of the bones and tenderness of the joints.

VITAMIN D (*anti-rachitic*).

The vitamin is fat soluble. Its richest natural source is cod liver oil. In a much smaller amount it is present in the glandular organs of animals (e.g., liver and kidney), in butter, cocoanut oil, egg yolk, and sperm oil, but absent in most other vegetable oils.

The principle shows great resistance to oxidation and heat, and is much more stable than vitamin A. Cod liver oil containing both these factors when heated, while oxygen is bubbled through, for a sufficient length of time will be found to be deprived of its vitamin A by oxidation, leaving its anti-rachitic factor intact. Thus a method is afforded of separating the two vitamins.

Effects. It has been suggested that the provitamin or the natural parent substance of vitamin D is a sterol which is an unsaponifiable fraction of certain crude fats. When certain sterols (e.g., ergosterol and cholesterol) which can be obtained from a wide variety of lower plants, including certain yeasts, are irradiated by exposure to sunlight or ultraviolet rays they become strongly anti-rachitic, and can prevent or cure rickets in rats fed on a rachitic diet. It seems therefore that underlying the production of vitamin D is the radiant energy supplied by sunlight or ultraviolet light, exposure to which is attended by a mobilisation of vitamin D in the body. To protect against rickets children obtaining little or no sunlight require a full vitamin D diet, while those receiving maximum radiation from the sun need a minimum supply of the vitamin. Further it has been shown that vitamin D, sunlight or ultraviolet ray helps to increase the deposition of calcium and phosphorus in the tissues, even when one or the other element is deficient in the diet, by aiding their absorption from the intestine, and unless the supply of vitamin D is fully adequate a diet lacking in either of these substances will also produce rickets.

The disease often occurs in domestic animals when they are fed on muscle meats alone, and experimentally it can be reproduced in growing animals by feeding them on a diet deficient in this food factor.

VITAMIN E (*Substance X*).

The vitamin is fat soluble. It is present in a number of foodstuffs, most abundantly in wheat embryo and its oil, and to a small extent in lettuce leaves, whole wheat, yellow corn, rolled oats, hemp seed, egg yolk and beef, but practically absent in milk, cod liver oil and most vegetable oils. The principle is very resistant to heat and oxidation, capable of withstanding autoclaving at 120° C. for two hours.

Effects. Experimentally it is found that if the diet is deficient or lacking in this vitamin female rats, though they may become pregnant, do not give birth to living offsprings, owing to reabsorption of the embryos or to abortion, while male rats become sterile due to degenerative changes in the testicles which may be of varying degrees of severity. There is evidence to show also that this vitamin, besides its antisterility property, possesses a specific influence on the assimilation of iron, lacking in which causes anaemia in the animal.

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CLINICAL REPORT OF THE TSAN YUK HOSPITAL AND OF THE MATERNITY BUNGALOW, GOVERNMENT CIVIL HOSPITAL. BEING THE WORK OF THE SCHOOL OF MIDWIFERY OF HONG KONG UNIVERSITY.

by

Professor R. E. Tottenham,

Drs. D. K. Pillai, S. K. Lam, P. C. Lai.

SPECIAL FEATURES OF THE REPORT.

Larger number of cases included.

Maternity	1927	826
	1928	1576

Low Mortality rate.

Tsan Yuk Hospital	·45%
Government Civil Hospital	·57%
Average	·51%

Low Operation rate.

Repair of lacerations excluded.

One operation to every 25.8 patients.

Low Caesarean section rate.

One Caesarean section to 788 patients.

During the year ended 30th April, 1928:—Admissions to Tsan Yuk Hospital numbered 1109 of these 1051 were delivered, and 58 discharged.

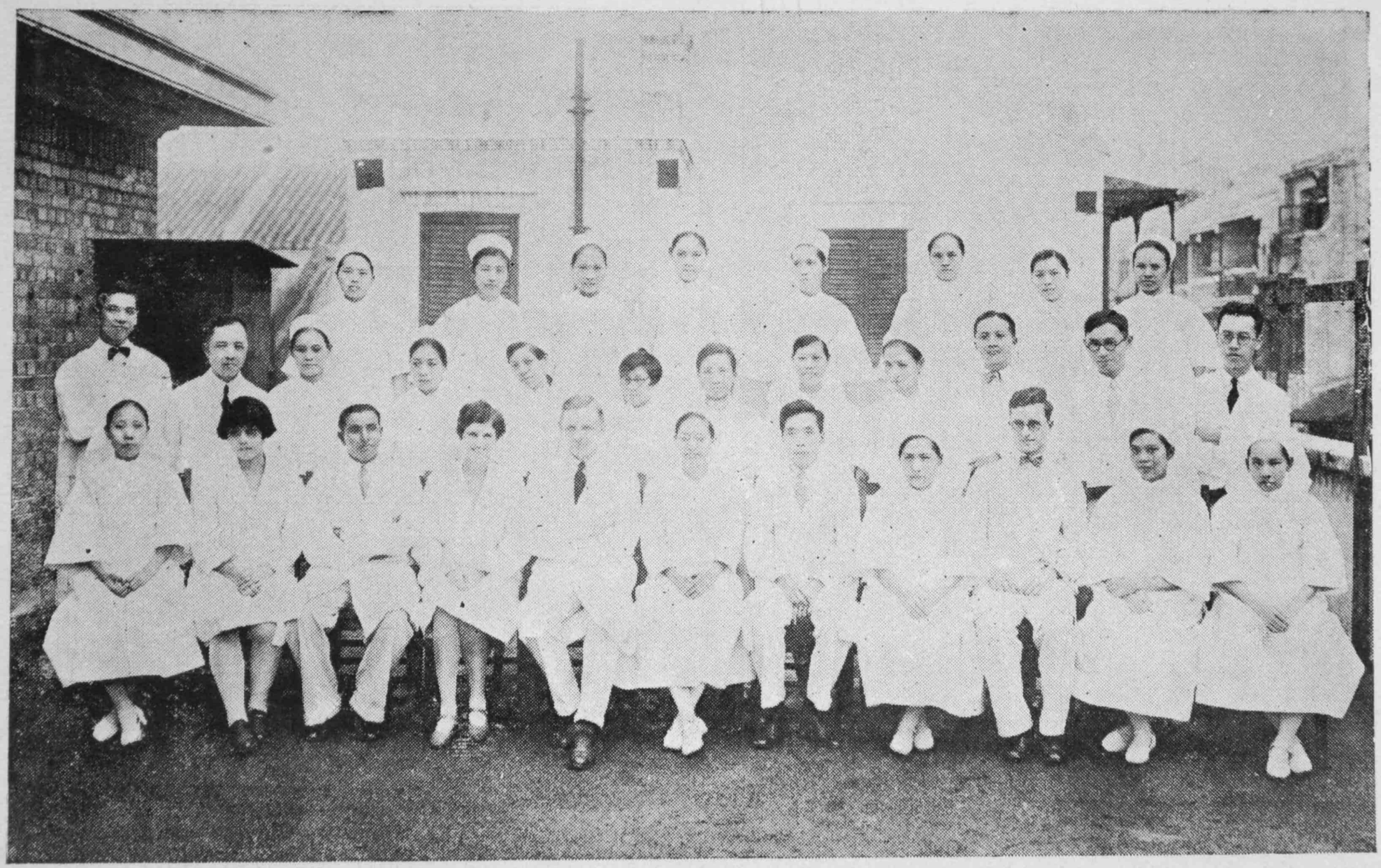
There were 1016 infants born alive, five maternal deaths, and 19 children born alive died in hospital.

Fifty-five patients left hospital against advice.

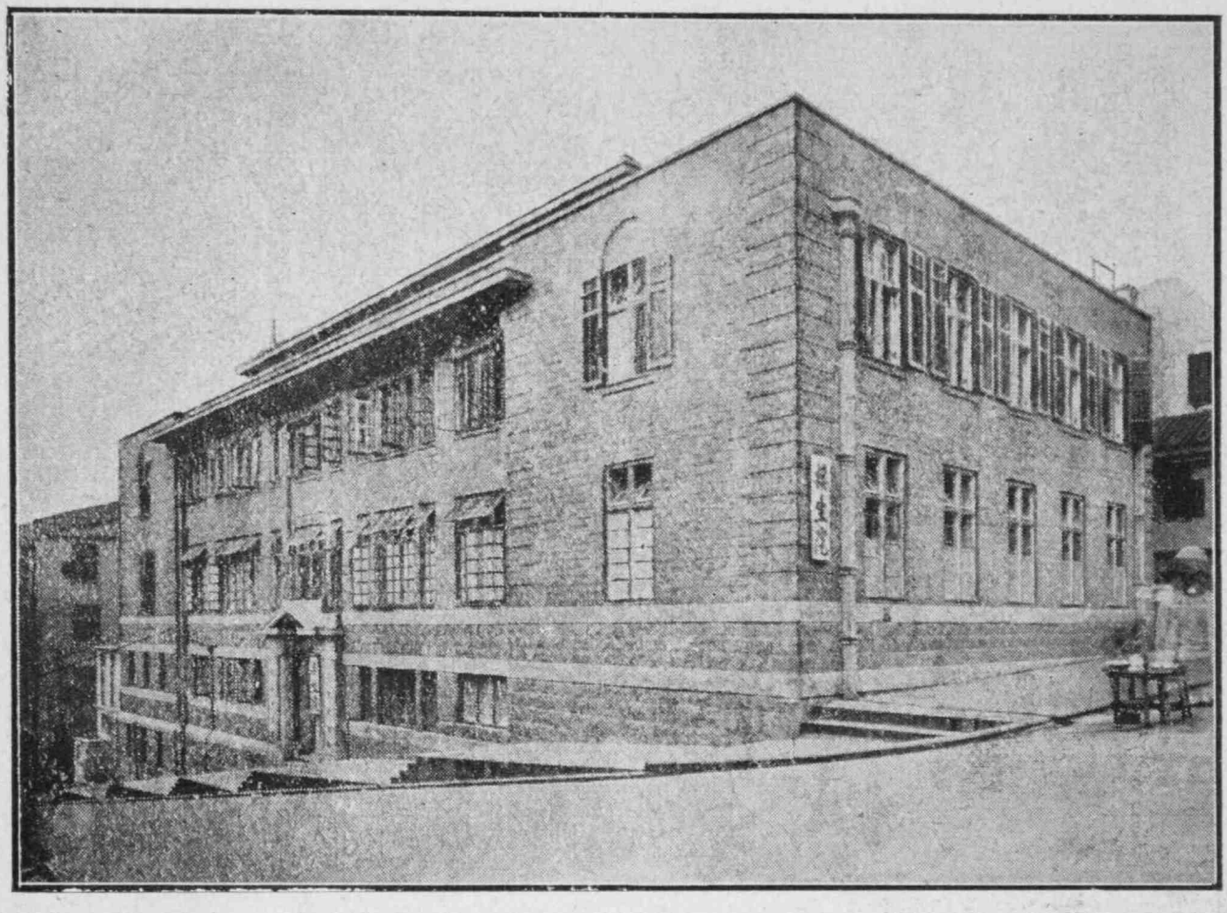
Over 90% of patients remained in hospital for a week after delivery.

In the same year at the Government Civil Hospital, there were 537 admissions to the maternity wards, 525 of these patients were delivered, 503 infants were born alive, 6 children who were born alive died in hospital, four patients left hospital against advice. 94% of patients remained six days or more in hospital. Some two years ago it was extremely difficult to induce patients to remain more than three or four days in hospital after their babies were born, and the Nursing Staff are to be congratulated on their results. There were three maternal deaths.

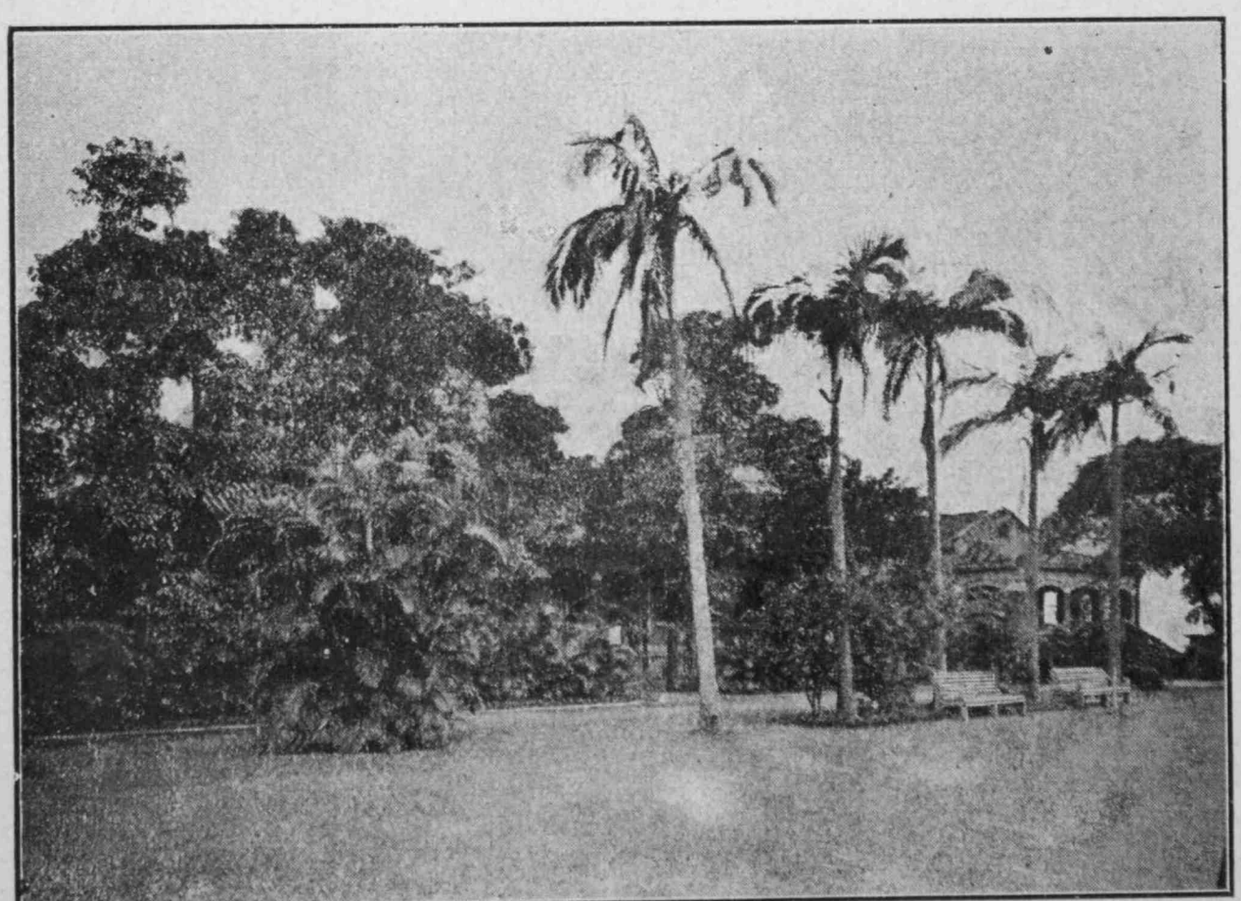
Dr. Hickling's kindness in allowing us to undertake the care of the patients in the Tsan Yuk Hospital during the time she was on



Visiting and Resident Staff, students and nurses, at the Tsan Yuk Hospital, 1928.



The Tsan Yuk Hospital, from Western Street.



Lawn, Government Civil Hospital; Maternity Bungalow in Background.

leave has given us an amount of scope, otherwise unattainable, and we greatly appreciate the privilege.

The treatment carried out in this hospital is in all respects identical with that of the Maternity Bungalow in the Government Civil Hospital. The Nursing Staff in the Tsan Yuk are all Chinese, the Matron, Miss Leung was trained for 6 months in the Rotunda Hospital, Dublin.

In the Bungalow, the sisters have all been trained in home hospitals, but the probationer nurses are Chinese. For the sake of uniformity of teaching I was particularly anxious to have at least one sister in the Maternity Wards who had been trained in the Rotunda Hospital, and I wish to thank Miss Wilson, the Principal Matron of the Government Hospital for her kindness in meeting my wishes in this matter.

BREECH.

There were in all 38 cases of breech presentation, 23 at the Tsan Yuk Hospital, and 15 at the Government Civil Hospital. Of these, 8 babies were born dead, (3 macerated, 4 premature, 1 perforation).

OBSTETRICAL OPERATIONS.

Physicians of the last century realised the dangers of "Meddlesome Midwifery." It would almost seem to be an axiom that in any given institution the mortality and the morbidity rate will vary directly with the number of operations performed.

In the past year we have been fortunate in having been able to keep our total number of operations down to 61, out of 1576 patients, giving us an operation rate of 1 in 25.8.

Forceps.

T.Y.H. 21 cases.

G.C.H. 22 cases.

Out of these 43 cases the indication in 31 was delay in the 2nd stage, (in 6 of these the occiput was posterior). Foetal distress was the indication in 6 cases, pelvic contraction in two, miscellaneous indications 5 cases.

Destructive operations on the foetus.

T.Y.H. 1.

G.C.H. 2.

T.S. age 36, 5 para. Admitted with a history of attempted forceps delivery, and labour having lasted for 3 days. Temp 102.8. The foetal head was high, and not fixed by its largest diameter. In view of the fact that the patient had living children, version was performed instead of pubiotomy. Unfortunately the after coming head had to be perforated owing to the abnormal size of the baby, which weighed 9lbs. 6 oz. Chinese infants are on the whole much lighter than European.

T.V. age 37, 6 para. Admitted with a history of attempted forceps delivery, foetal heart sounds not heard, craniotomy.

T.Y.S. age 25. para. 4. Labour was greatly prolonged owing to foetal ascites, the abdomen of the infant being abnormally distended with fluid. Evisceration was performed.

Caesarean Section. *T.T. 1 para. age 20.* Admitted with a history of having been 24 hours in labour. Indications:—Patient a dwarf, height 4ft. 4in., kyphosis, head not fixed on admission. Obvious major degree of contraction, vaginal examination not made. Mother recovered, child alive. Patient developed typhoid a few days after operatoin. Discharged well 10 weeks after operation.

T.K. 2 para. age 25. The first labour lasted for several days, and the child was born dead. On this occasion, patient was admitted in labour, but the foetal head freely movable. Internal Pelvimetry was performed, (with the author's pelvimeter). Conjugate vera was found to be 3.8 inches. As there were no pubiotomy saws left in the Colony, Caesarean section was performed, and as labour was well advanced the lower segment, or extra peritoneal operation was selected. Mother recovered, child alive.

Pubiotomy. W.M.H age 20. para. 1. On admission the presentation was transverse, external version, patient was subsequently X-rayed, presentation appeared to be Vertex iii. Internal pelvimetry, conjugate vera 3.1/5 inches. Patient was allowed to continue in labour until signs of foetal distress were apparent. Forceps failed. Pubiotomy with Doderlein's blunt needle. Unfortunately the saws broke on three or four occasions, probably owing to the length of time they had been in the Colony. The child was delivered alive face to pubes. Patient died on the third day from puerperal sepsis. I regret that at the time a Bumm's needle was not available, as the reintroduction of the saw with a blunt needle must materially have increased the chances of infection occurring.

Particulars of the remaining operations will be found in the tables.

HAEMORRHAGES.

Total of the two Hospitals	Placenta praevia	6.
	Accidental Haemorrhage	4.
	Post-partum	18.

Placenta praevia. There were 6 cases, all the mothers recovered, two children were born alive, two of the remaining children were very small. One patient with a lateral placenta praevia, was allowed to deliver herself, all the other cases were treated by bi-polar version.

Accidental Haemorrhage. 4 cases, none severe. The routine treatment for this condition is plugging the vagina.

Post Partum Haemorrhage. 18 cases, two of the mothers died. One from traumatic post partum haemorrhage resulting from sepsis the other patient died from haemorrhage associated with the pre-eclamptic state.

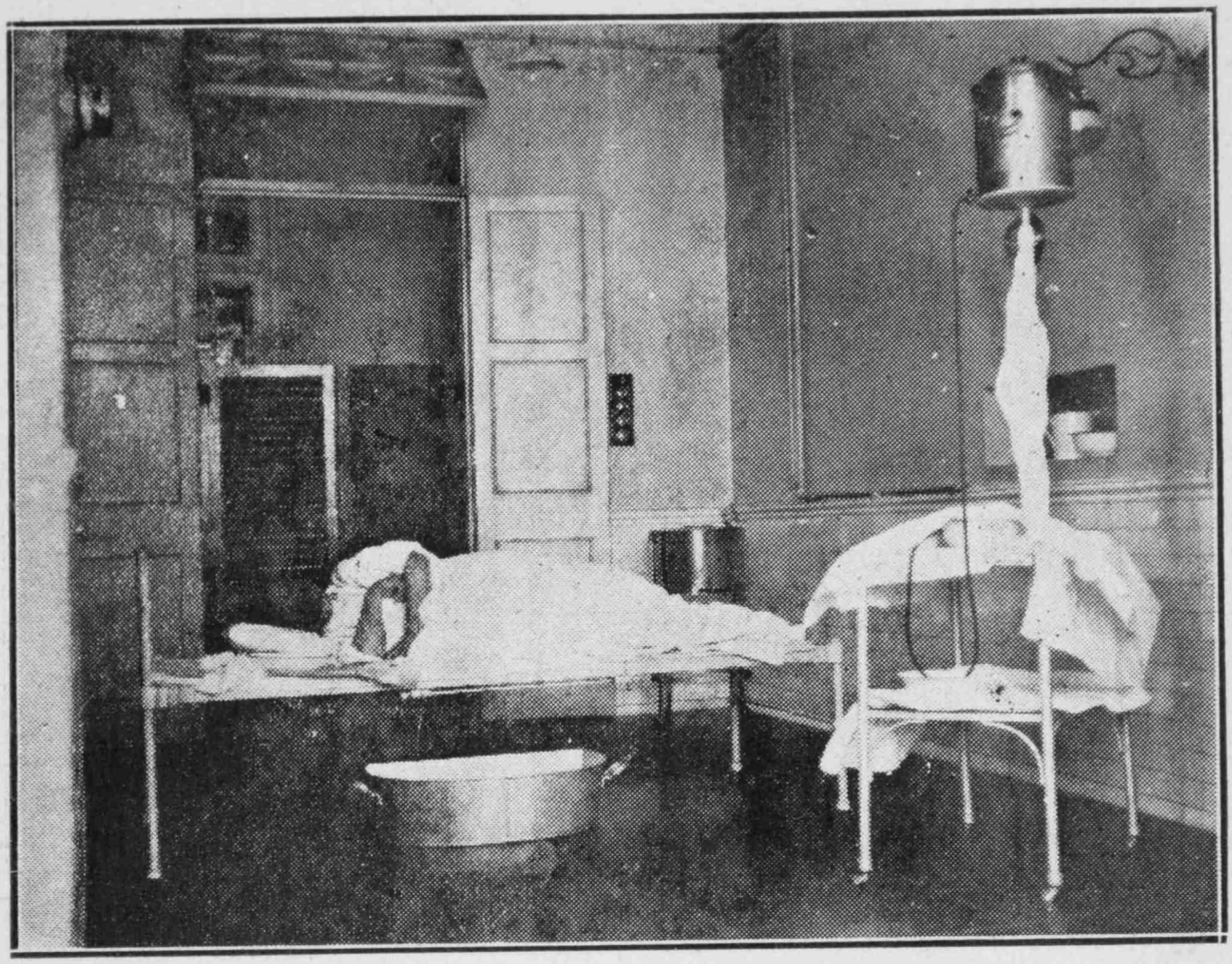
PROLAPSE AND PRESENTATION OF THE CORD.

This condition occurred in all 6 times during the year. All the mothers recovered, but only one child was born alive. (See table V.).

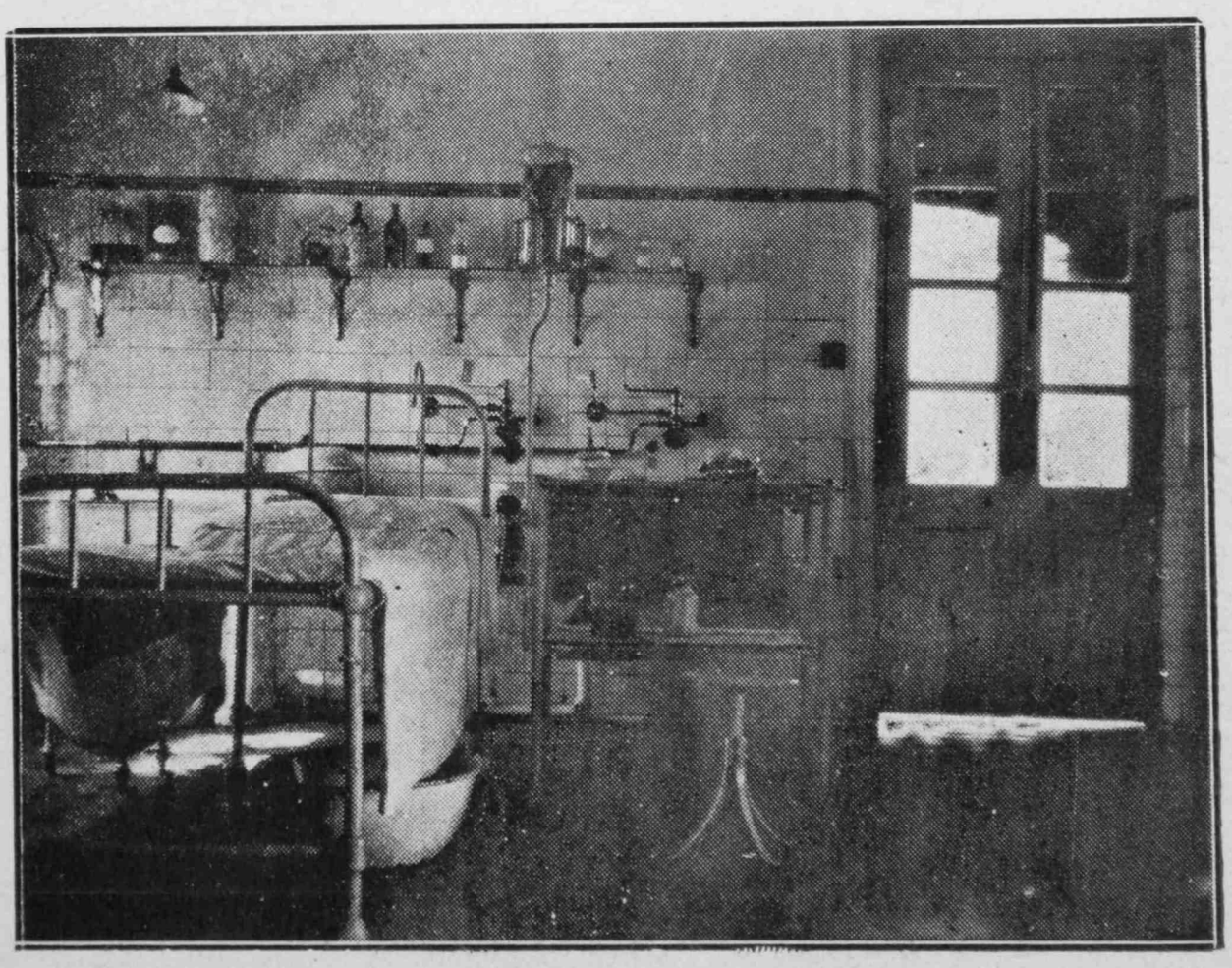
ALBUMINUREA AND ECLAMPSIA.

Albuminurea:

Slight to moderate	533
Considerable	·17

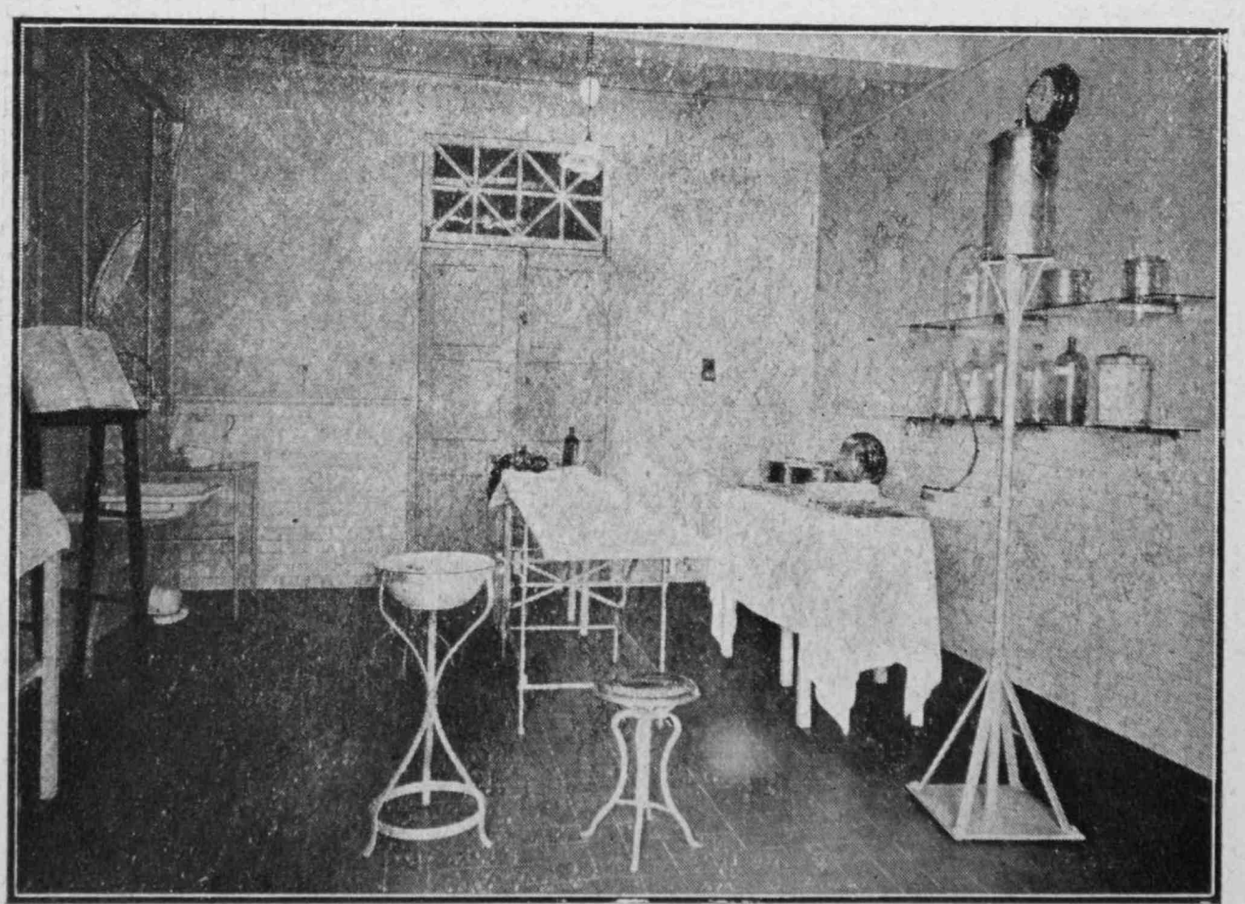


Labour Ward, Tsan Yuk Hospital.



Labour Ward, Bungalow, Government Civil Hospital.

Nurses' Dining Room, Tsan Yuk Hospital.



A view of the Theatre, Tsan Yuk Hospital.

ALBUMINUREA IN PREGNANCY.

Prof. Beckwith Whitehouse was good enough to call my attention to the number of cases of albuminurea occurring in our clinic. I take this opportunity of thanking him for his kind interest which was greatly appreciated, and we hope to have some more interesting statistics on the subject next year. In the Tsan Yuk Hospital out of a total of 1051 cases there were 458 cases of albuminurea, or 1 in 2.2. In the G.C.H. out of 525 deliveries albuminurea occurred 112 times, or 1 in 4.5.

In China many of the women work hard up to full term, the majority of our patients are housewives, but quite a number are boat women, or coolies engaged in carrying heavy loads, we are at present noting the percentage of albumin present at full term, and noting the patients occupation, in order to see if there is any relationship between the two. At the moment our cases are too few to justify any conclusions being drawn.

The treatment carried out in this clinic is essentially that of Tweedy, patients with pre-eclamptic toxaemia, are starved, given plenty of water to drink, and freely purged.

ECLAMPSIA.

Eclampsia. During the year we had a total of 5 cases, three of the mothers recovered, and three of the infants were born alive.

Since we took over charge, the Dublin treatment as laid down by Tweedy has been faithfully followed in all respects, because we are convinced that in its basic principles it is the most satisfactory at our disposal at the present time. An eclamptic patient requires skilled management, and we greatly appreciate the keenness of the junior nurses, in studying the technique involved.

In the earlier part of the year we had a severe case at the G.C.H. but at the same time I was of the opinion that she ought to have recovered. Morphia was pushed to a total of 1½ grs. in the 24 hours. About two months later at the T.Y.H. we lost another case, to whom three doses of morphia had been given.

It was subsequently pointed out to me that the Chinese are suseptable to morphia, whether this is so, or not, I cannot say; but I have taken the precaution of reducing the dosage, and if the patient required a further sedative, a small dose of olive oil and ether was given into the rectum.

L.S. age 25, Para. 1, albumin, a trace, three fits, all post partum. Morphia up to grs. 1/3 was given in the usual manner, when morphia appeared to be indicated again, ether 1 oz. (in excess of olive oil) was given by the rectum, this dose, was repeated some hours later. Mother recovered.

C.Y.K. age 24, 1 para. albumin present. Three fits in all. Morphia grs. 1/3 at the time that the stomach and rectum were washed out ether 1 oz. (in olive oil) given some hours later.

We are aware that in thus departing from routine treatment we are guilty of rank heresy, but when considering the two cases we lost we came to the opinion that narcosis induced by any method which might be regarded as stimulating to the respiratory centre, possessed advantages over morphia, even though ether may be generally injurious to the tissues in eclampsia. And when we have enlarged our experience of ether we will be in a better position to judge of its value.

Solomons has lately reported a case in which death was caused by paralysis of the respiratory centre as a result of intra-cranial haemorrhage, the pulse remained beating for some considerable time after respirations ceased. Such a case was of course hopeless, but there must be many border line cases where the respiratory centre is acting sluggishly and an excess of morphia may lead to death. From the point of view of haemorrhage ether is of course dangerous.

MORBIDITY.

According to the B.M.A. standard, the total morbidity rate of the two hospitals was 8.16%; the Tsan Yuk being 8.9%, and the G.C.H. being 7.43%.

Although probably capable of reduction, this rate when compared with that of the Rotunda Hospital last year (namely 6.2%) is not so very discouraging, particularly when one remembers the list of diseases peculiar to, or more common to the tropics. The morbidity rate at the G.C.H. is almost the same as last year, while that of the Tsan Yuk has shown a considerable improvement. In my last report I suggested that the morbidity rate of the T.Y. Hospital would drop when each bed had been supplied with its own pan, bowl, and chamber. The Matron was kind enough to order these, and she saw that each was numbered with the bed number, so that there would be no interchange between patients.

Out of a total of 133 morbid cases, 46 remained more than 10 days in hospital, in 35 cases the duration of temperature exceeded 5 days. In 17 cases the temperature exceeded 103°.

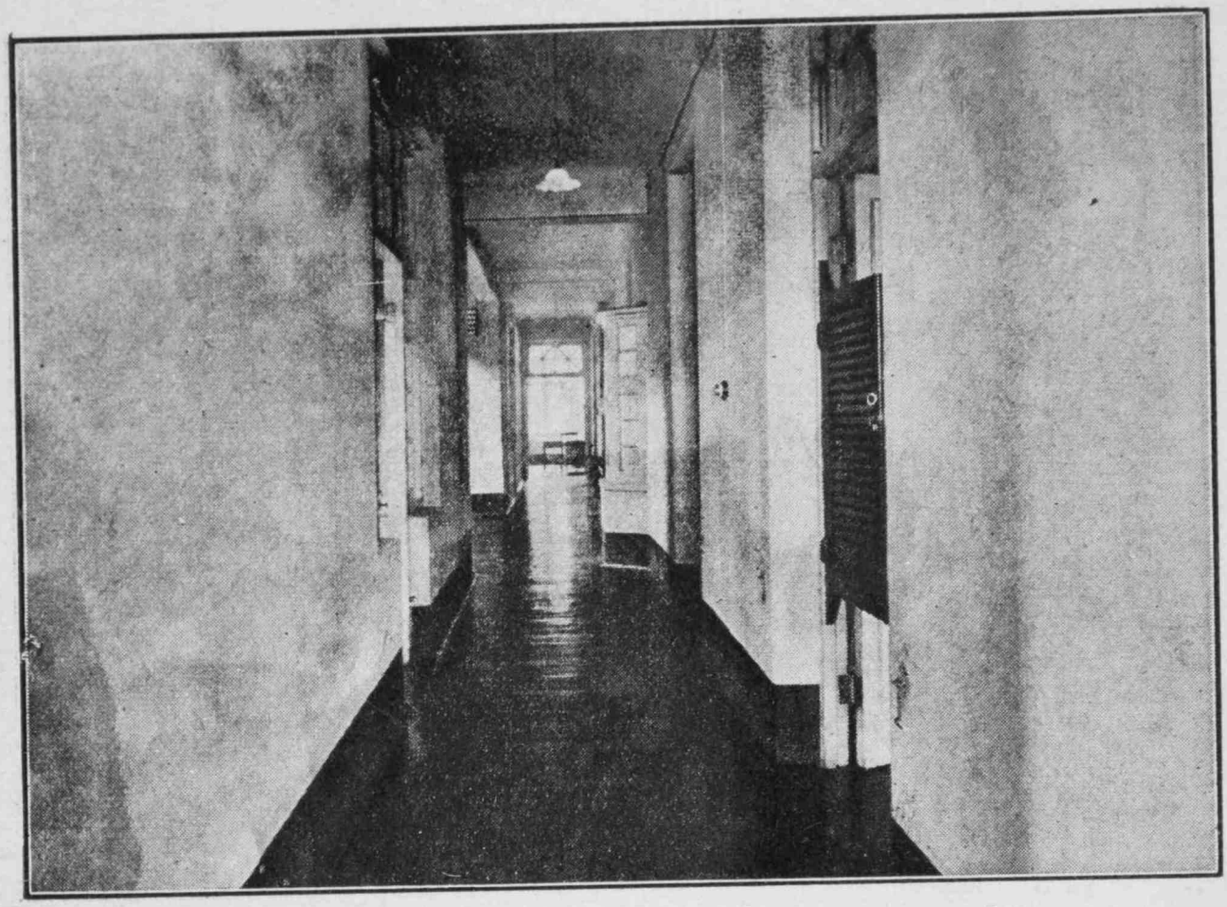
In the treating of septic cases the intra-uterine douche has not been abandoned as yet. In all cases where the temperature remains high the uterus is explored, and a culture taken.

Autogenous and stock vaccines are given as indicated.

MORTALITY.

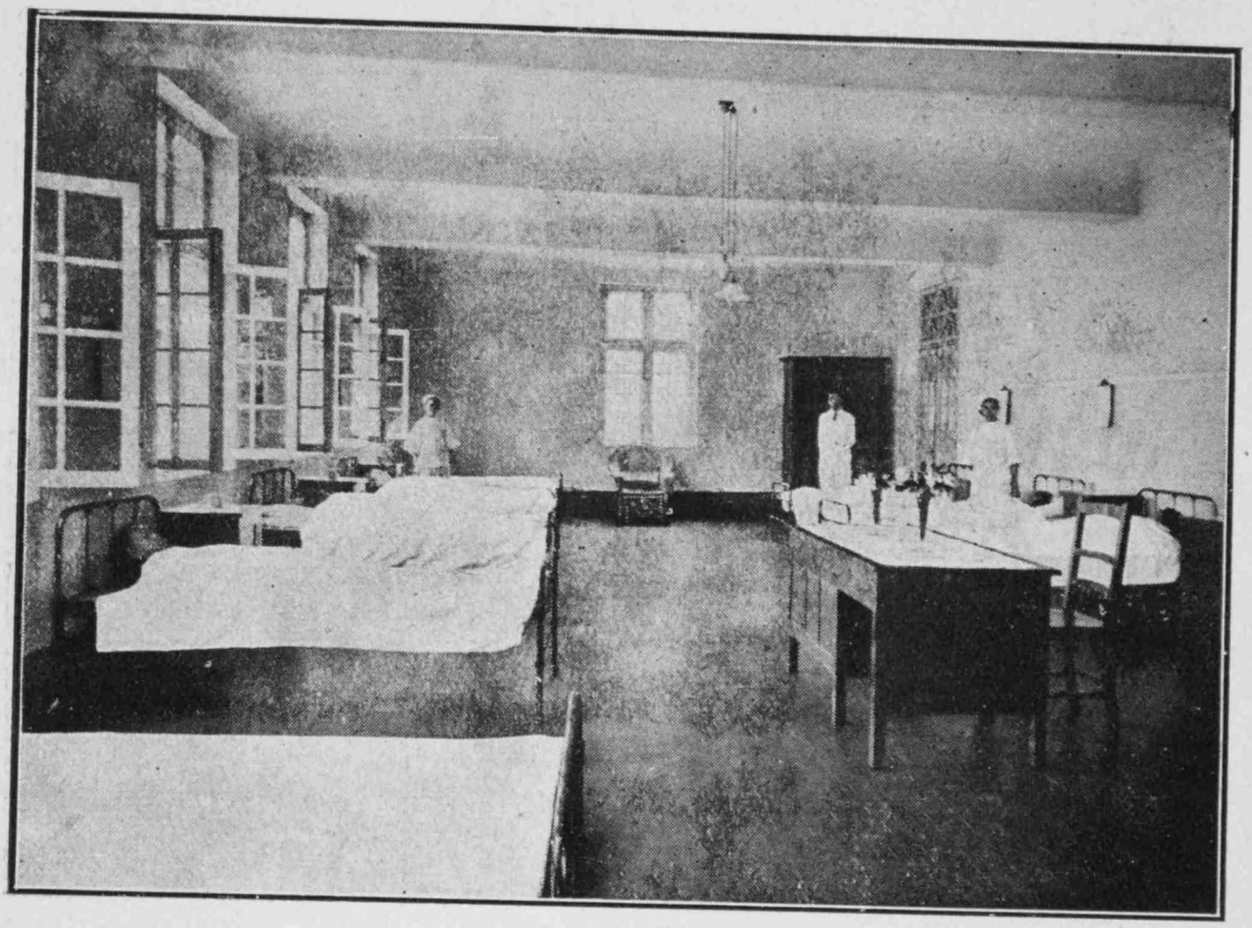
There were 8 deaths during the year, 5 of these occurred at the Tsan Yuk, and 3 at the G.C.H.

This year we have been very fortunate in only loosing one patient from a general disease, for typhoid, malaria, and dysentery, are common in the Colony, indeed one of our caesarean section cases developed typhoid but recovered. Conservative midwifery has always been the



A Corridor, Tsan Yuk Hospital.

A Maternity Ward, Tsan Yuk Hospital.



A Gynaecological Ward, Tsan Yuk Hospital.

A Group taken in the Porch, Tsan Yuk Hospital.

teaching of the Rotunda Hospital, and we have endeavoured to follow it. Many more operations are performed now than 20 years ago, but the maternal mortality rate is not always as good.

For example in 16000 hospital patients delivered in Dublin before the War the operation rate was 1 in 16, and the mortality rate .48%. In the same number of patients delivered after the War, the operation rate had risen to 1 in 7.7, and the mortality rate to .7%. The effects of a high operation rate on the maternal mortality among Chinese patients is illustrated by figures which we have just received from another port, the Hospital in question had operation rate of 1 in 4.2 and a maternal mortality rate of 4.0%.

Of our 8 deaths, one patient died from pneumonia, 3 from sepsis, 2 from eclampsia, one from rupture of the uterus, and one from post partum haemorrhage. The case of pneumonia calls for no special comment, details of the other cases are as follows:—

Sepsis. L.K.T. age 37, para. 7. Admitted with a history of having been 36 hours in labour. Pulse 140; temp. 100. Forceps—foetus dead, hydrocephalic (slight), liquor amnii putrid, manual removal of placenta. Temperature did not reach normal till the 4th day, on the 5th to 6th day, temp. rose to 103, pulse 140, patient died rather suddenly. No P.M. was obtained.

Sepsis. W.M.H. age 20, para. 1, full term, see pubiotomy, external version, presentation changed to Vertex iii, labour proceeded for 36 hours, but membranes ruptured early. Internal pelvimetry. C.V.8, cms, marked moulding of head, forceps failed, pubiotomy performed, child alive P.O.P. Patient died of sepsis on the 3rd day. The bone saws had been some years in the Colony, and broke 3 or 4 times, thus favouring the occurrence of infection.

Sepsis, Rupture of cervix, Siamese Twins. T.T. age 31, para. 7. Admitted to hospital after attempts at delivery had been made, a head was born 3 hours before admission. There was some difficulty in extracting the child, both legs had to be brought down before any progress could be made, the second child presented little difficulty. Traumatic post partum haemorrhage from torn cervix; cervix stitched, uterus and vagina plugged. Patient died of sepsis on the 4th day. *P.M.* Tear of cervix on right side, involving uterine artery, peritoneum intact. The stitch and plug had stopped external haemorrnage, but blood had burrowed behind the peritoneum to the base of the mesentery, and right kidney. Putrid endometritis, sloughing of cervix. Foetuses, both female joined together face to face, by the whole length and breadth of the chest. Combined weight 10 lbs., 2 oz.

Post partum haemorrhage, pre-eclamptic toxaemia. L.G.L. age 25, para. 2, full term. Patient appeared very toxic on admission, her condition being definitely pre-eclamptic, albuminurea. Infant delivered by forceps, P.O.P. dead; haemorrhage followed, hot douche given, uterus plugged, patient collapsed soon aferwards.

Rupture of uterus, face presentation. L.K.T. age 24, para. 4. On admission pulse 105, temp. 99, face presenting, but low down in pelvis, chin posterior, foetal heart heard, membranes ruptured. Morphia grs. 1/6. Some 5 hours later patient complained of pain, temp. 100deg. pulse 132. Foetal heart silent, presenting part receded. The chin was rotated to the front manually, and child easily delivered with forceps, and placenta removed manually. Rupture was found to involve the vaginal vault and lower uterine segment, utrus plugged with gauze, but patient died some 2 hours later The case was one of so called "quiet rupture" of the uterus.

Eclampsia. H.M.T. age 18, para. 1. Admitted in a fit, albumen in urine, had six fits in all, before labour. Morphia to a total of 1 gr. Routine treatment, patient stopped breathing during a fit, and could not be restored.

Eclampsia. W.Y. age 28, para. 2. Admitted comatose, eight fits before admission. Urine solid with albumen. Patient had 12 fits before labour. Routine treatment, morphia to a total of 1½ gr. Patient was unconscious for 36 hours and died without regaining consciousness.

For some three years the wassermann reaction has been carried out almost as a routine on patients in the Bungalow. This year 1 patient in 32 showed a positive result, whereas last year the positives numbered as many as 1 in 8.2. The improvement in the figures is of course purely a matter of chance.

In the foregoing tables those of the Tsan Yuk Hospital have been put first, as they deal with the greater number of cases.

In conclusion I wish to thank Dr. May and Dr. Dovey for the help they have given me on many occasion, and the Matron and staff of both hospitals for their most loyal co-operation. I am indebted to Dr. Pillai, Dr. Lam, and Dr. Lai, for working out the various tables, and Mr. van Bergen who has been of considerable service in getting the material ready for press.

Table No. I.—*STATISTICS OF MATERNITY DEPARTMENT.*

Nature and number of cases treated:

	T.Y.H.	*G.C.H.*
Total admissions	1109	537
Total deliveries	1051	525
Multiparae	698	381
Primiparae	353	144

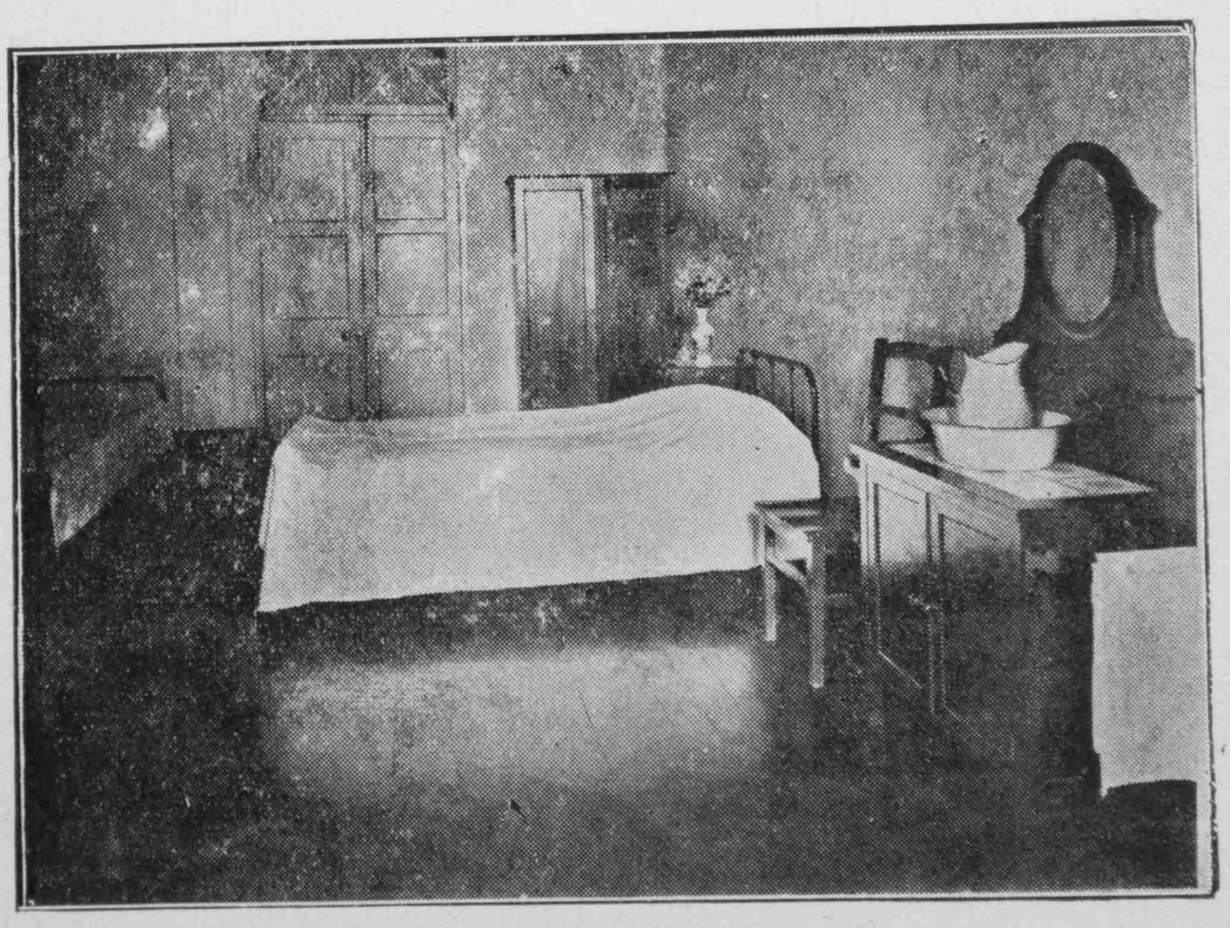
Presentations:

Vertex, normal rotation	1015	489
V. I.	68%	70.14%
V. II.	29%	28.22%
V. III.	2%	1.22%
V. IV.	1%	0.42%
Vertex, face to pubes	2	14
Face	1	—
Breech	23	15
Transverse	3	1
Twins	7	3
Miscarriages	23	11

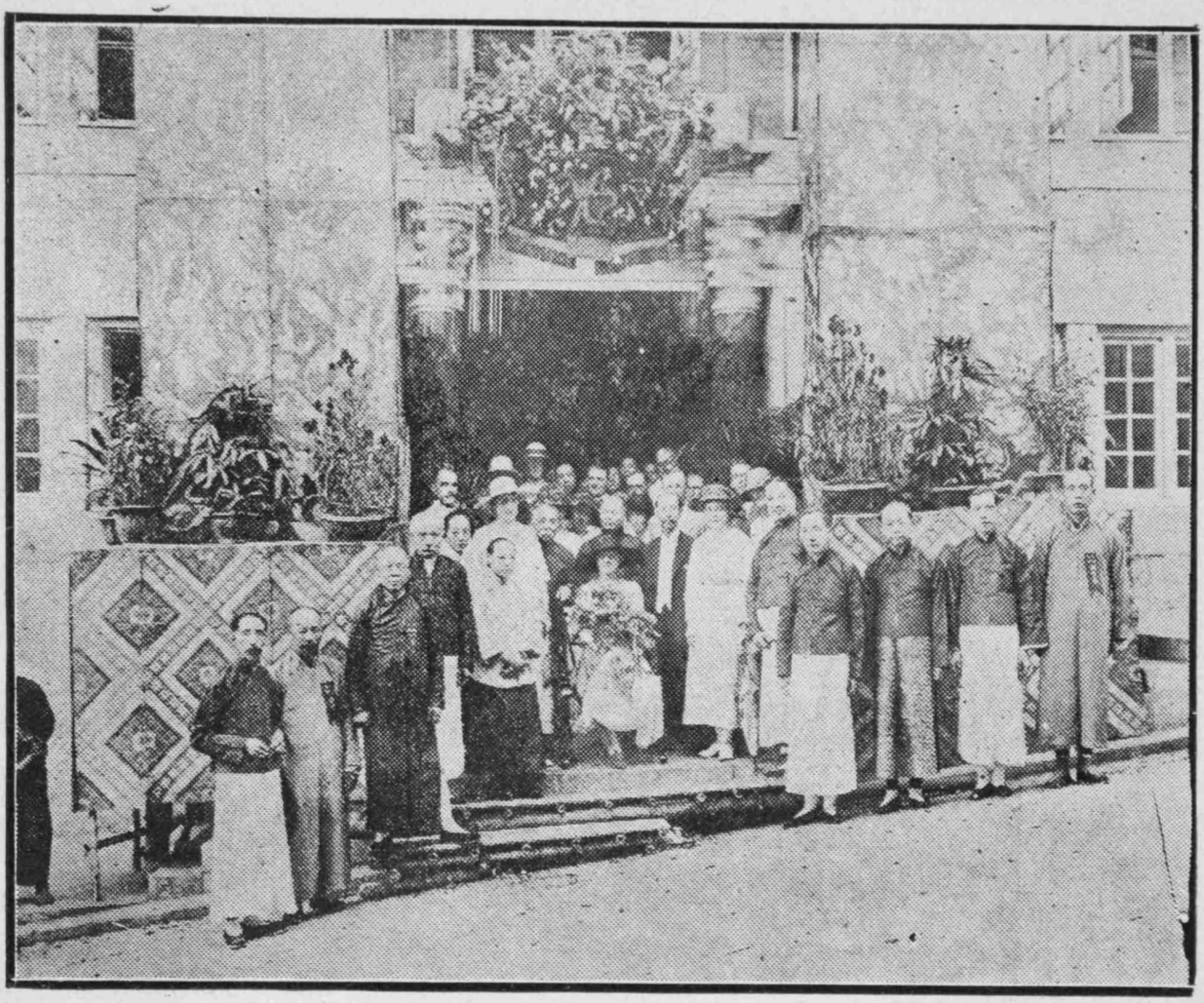
Haemorrhages:

Placenta Praevia	4	2
Post-partum	15	3
Accidental	1	3

Infant Welfare Clinic, Tsan Yuk Hospital.



Private Ward, Tsan Yuk Hospital.



Opening of the Tsan Yuk Hospital,
Mrs. (Dr.) Hickling, standing seventh from left.

Staff of the Tsan Yuk Maternity Hospital.
(Mrs. Hickling sitting in the middle).

	T.Y.H.	*G.C.H.*
Abnormalities:		
Prolapse of Cord	1	3
Prolapse of Hand	—	4
Hydramnios	—	4
Eclampsia	3	2
Albuminuria:		
Slight to moderate	445	108
Considerable	13	4
X-Ray Diagnosis		2
Operations:		
Suture of perineal lacerations:		
Complete	1	—
Incomplete	117	142
Multiparae		35
Primiparae		107
Suture of Cervical lacerations	—	3
Forceps	21	22
Destructive Operation on Foetus	1	2
Version;—		
Bi-polar	4	1
Internal	—	2
Manual Removal of placenta, full term	5	2
Caesarean Section	1	1
Pubiotomy	—	1
Accidental Complications:		
Puerperal Ulcers	16	—
Puerperal Mania	—	1
Malaria	—	7
Dysentery (amoebic)	—	2
Diarrhoea	1	—
Typhoid	2	3
Hook worms	1	2
Round worms	1	1
Tuberculosis	—	3
Mitral Disease	—	5
Syphilitic Neuritis	—	4

	T.Y.H.	*G.C.H.*
Syphilitic Arthritis	1	—
Tonsillitis	—	1
Alveolar Abscess	—	1
Pneumonia	1	1
Trachoma	—	1
Septic Scabies	—	1
Veneral ulceration of vulva and condyloma	—	4
Haematoma of Vulva	—	1
Cystitis	—	1
Mastitis	2	—
Acute gastro-enteritis	1	—
Chronic pleurisy	1	—
Bronchitis	1	—
Ulcer of foot	1	—
Chyluria	1	—

Morbidity, B.M.A. Standard:

Average	one in	10.8	13.1
Percentage		9.2%	7.6%

Mortality:

Total		5	3
Average	one in	221	175
Percentage		0.45%	0.57%

Left Hospital against advice	55	4

Table No. II.—*INFANT STATISTICS.*

Total births	1051	528
Alive:	1016	503
Dead:—	35	25
Premature		9
Full term		4
Recent		2
Macerated		10
Children born alive who died in hospital	19	6

Abnormalities:

Tumour of Scalp	—	1
Hare lip and cleft palate	2	2
Tongue tie	—	4

	T.Y.H.	*C.G.H.*
Supernumerary finger	—	1
Syphilitic jaundice	—	3
Circumcision	—	1
Deformity of toes	1	—
Undescended Testis	1	—
Patent foramen ovale	1	—
Accessory penis and supernumerary toes	1	—

Complications:

Cerebral haemorrhage	1	1
Melaena	1	1
Cephalo haematoma	—	2
Green Diarrhoea	—	4
Icterus neonatorum	—	2
Anencephalic monster	—	2
Siamese twins	—	1
Foetal ascites	—	1
Ophthalmia	1	—
Effusion into scrotum	1	—
Enteritis	1	—

Table No. III. *Pelvic Presentations.*

Para	Total	Dead Children	Remarks
T. Y. H.			
Primiparae	8	Macerated 2 Premature 3 5	3 cases occurred in twin pregnancy.
Multiparae.....	10	One full term baby died several hours after birth.	
G. C. H.			
Primiparae	6	—	Two cases with extended legs. No foetal deaths.
Multiparae.....	6	Pre-mature (7 mths) 1 Macerated 1 Perforation 1 Total 3	One case version and perforation of after coming head.

Table No. IV.

Placenta Praevia.

Name	Age	Para.	Variety	Period of Pregnancy	Presentation	Result to Mother	Result to Child	Treatment and Remarks
T.Y.H.								
W.W.K.	39	2	Marginal	7 months	Transverse	Recovered	Dead	Bipolar Version Slight haemorrhage 2 days before admission.
L.M.H.	20	2	Marginal	7 months	Transverse	Recovered	Dead	Prolapse of cord. 2 finger os. Rapid pulse. Bipolar Version.
L.S.	31	4	Central	—	Vertex	Recovered	Dead	Bipolar Version.
C.T.	20	1	Marginal	Term	Vertex	Recovered	Dead	Bi-polar Version. 2 finger os.
G.C.H.								
T.S.	22	2	Lateral	Term	Vertex I	Recovered	Alive	Spontaneous Delivery.
L.C.S.	29	2	Central	Term	Vertex I	Recovered	Alive	Bipolar Version. 2 finger os. Post-partum haemorrhage. Manual Removal of placenta.

Table No. V. *Prolapse and Presentation of the Cord.*

Name	Age	Para.	Weight of Child	Presentation	Treatment	Result to Mother	Result to Child	Remarks
T.Y.H. L.M.H.	20	2	1¾ lbs.	Transverse	—	Recovery	Dead	Marginal placenta praevia Bipolar Version. (*See Table IV*)
G.C.H. L.H.Y.	29	4	3½ lbs.	Breech with Prolapse of Hand	Spontaneous Delivery	Recovery	Alive	Corpora Conduplicate.
H.Y.S.	32	3	2 lbs.	Transverse with prolapse of Left Hand	Spontaneous Delivery	Recovery	Dead	Corpora Conduplicate.
L.O.	18	1	6½ lbs.	Vertex with Prolapse of Cord	Forceps	Recovery	Dead	No pulsation of cord felt.
K.S.	35	7	6½ lbs.	Prolapse of Hand and Cord in a Vertex Presentation	Forceps	Recovery	Dead	No pulsation of cord felt.
C.P.Y.	27	5	7 lbs.	Prolapse of Cord and Hand in a Vertex Presentation	Replaced	Recovery	Dead	No pulsation of cord felt. Normal delivery.

Table No. VI.

Application of Forceps.

INDICATION	Number of Cases		Result to Mother				Result to Child				REMARKS
			Recovered		Dead		Recovered		Dead		
	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	
Delayed in Second Stage	19	13	18	13	1	—	15	13	4	—	T.Y.H. 2 cases P.O.P. G.C.H. Kielland's forceps applied once to rotate head in a P.O.P. Occiput to posterior 4. Pubiotomy case delivered as P.O.P. *See Table XVIII.*
Foetal Distress	—	6	—	5	—	1	—	6	—	—	
Pelvic Contraction	—	1	—	1	—	—	—	1	—	—	
Cardiac Distress	—	1	—	—	—	1	—	—	—	1	
Prolapse of Cord and Hand ..	—	1	—	1	—	—	—	—	—	1	Patient admitted with cord, not pulsating, and hand presenting outside vulva.
Prolase of Cord	—	6	—	1	—	—	—	—	—	1	
Persistent Mento Posterior ..	1	—	—	—	—	1	—	—	—	1	Rupture of Uterus.
Eclampsia.....	1	—	1	—	—	—	1	-	—	—	Albumen + + + + Oil Ether 1 oz. per rectum.

Table No. VII.

Number of Pregnancy of Patients in whom Forceps were applied.

PARA.	Number of forcep cases.		
	T.Y.H.	*G.C.H.*	*Grand Total*
1	16	13	29
2	1	5	6
3	-	-	-
4 and para.	4	4	8
Total	21	22	43

Table No. VIII.

Age of Patients in whom Forceps were applied.

AGE	Number of forcep cases.	
	T.Y.H.	*G.C.H.*
17—25	15	9
26—30	6	7
31—35	-	1
35 and over	-	5
Total	22	21

Table No. IX.

Destructive Operation on the Foetus.

Name	Age	Para	Indication	Operation	REMARKS
T.V.H.					
T.Y.S.	25	4	Prolonged Labour. Mother's pulse rate going up.	Foetus tapped and eviscerated.	Foetus' abdomen enormously distended by fluid.
G.C.H.					
I.T.S.	36	5	In labour 3 days with temperature of 102·8, Maternal distress. Foetal heart sound heard.	Perforation of after coming head.	Several attempts at forceps delivery by general practitioner outside. Internal Version. Perforation of after coming head. Weight 9.2 plus 4 ozs. Manual removal of placenta, and uterus explored.
T.V.	37	6	Foetal heart sounds not heard.	Craniotomy.	Forceps unsuccessfully applied by General Practitioner outside hospital.

Table No. X.

Morbidity, B.M.A. Standard.

	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.
Total Deliveries..	28	54	34	61	48	74	52	97	56	80	36	126	51	103
Cases Morbid.....	3	7	3	12	3	4	2	15	4	10	3	8	4	12

	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	
Total Deliveries..	50	109	48	92	40	96	39	93	43	66	525	1051	1576
Cases Morbid.....	3	6	10	5	1	4	1	8	3	8	40	97	137

	G.C.H.	T.Y.H.	GRAND TOTAL
Total number of morbid cases	40	97	137
Total average morbidity .. .. one in	13.1	10.8	11.9
Total percentage morbidity	7.6%	9.2%	8.4%

Table No. XI.

Comparative Morbidity in Primiparae and Multiparae.

Primiparae	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.
Total Deliveries..	7	16	4	21	11	16	14	25	11	32	15	43	14	34
Cases Morbid.....	0	5	1	4	2	1	2	8	0	7	3	3	1	5

Primiparae	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	
Total Deliveries.	19	46	14	30	10	27	15	38	10	25	141	353	497
Cases Morbid....	2	4	6	2	0	1	0	4	1	4	18	48	66

	G.C.H.	T.Y.H.	GRAND TOTAL
Total average morbidity primiparae .. .. one in	8	6.9	7.45
Total percentage morbidity primiparae	12.5%	13.6%	13.05%

Table No. XI.—*(Cont.)*

Comparative Morbidity in Primiparae and Multiparae.

Multiparae	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.
Total Deliveries.	21	38	30	40	37	58	38	72	45	48	21	83	37	69
Cases Morbid.....	3	2	2	8	1	3	0	5	4	3	0	5	3	7

Multiparae	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	
Total Deliveries..	31	63	34	62	30	69	24	65	33	41	381	698	1079
Cases Morbid.....	1	1	4	3	1	3	1	4	2	4	22	39	71

	G.C.H.	T.Y.H.	GRAND TOTAL
Total average morbidity multiparae .. .. one in	17.31	17.9	17.6
Total percentage morbidity multiparae	5.7%	5.68%	5.69%

Table No. XII.

Extra-genital causes of Morbidity.

	T.Y.H.	*G.C.H.*
Malaria	—	4
Syphilitic neuritis	—	4
Amoebic Dysentery	—	1
Pernicious Anaemia	—	1
Dengue	—	1
Scabies, septic	—	1
Helminth infection	2	2
Tonsillitis	—	1
Typhoid	2	1
Cystitis	—	1
Venereal ulceration	—	1
Tuberculosis of lung	—	1
Mastitis	1	—
Acute gastro-enteritis	1	—
Diarrhoea	1	—
Syphilitic arthritis	1	—
Chronic pleurisy	1	—
Pneumonia	1	—
Bronchitis	1	—

Table No. XIII.

Caesarean Section.

Name	Age	Para.	Date	Nature of Operation	Indications	When Performed	Result to Mother	Result to Child	Remarks
T.Y.H. T.K.	25	2	13-4-28	Caesarean Section Extra-peritoneal.	Contracted Pelvis. Internal conjugate, 3.8 ins.	During Labour	Recovery	Recovery	One previous baby born dead after several days of painful labour. On admission the foetal head was freely movable. Patient in labour.
G.C.H. T.T.	20	1	13-11-27	Classical Caesarean Section	(*a*) Generally Contracted Pelvis in a dwarf. height 4′ 4″. (*b*) Kyphosis. (c) Trial labour for 24 hours. Head not fixed. Membranes intact. One rectal examination made	After a trial labour of 24 hours	Recovery	Recovery. Female 6 lbs.	Puerperium. Two days after operation, patient developed pneumonia and diarrhoea. Adominal incision suppurated on the 6th day. Sixteen days after operation patient developed a swinging temperature. Blood smear for malarial parasite negative. Widal report positive for Para A. Treated as typhoid. Recovered, discharged in good health 10 weeks after operation.

Table No. XIV. *Eclampsia.*

Name	Admitted	Age	Para.	Condition on Admission	Urine	Number of Fits.			Treatment	Result to Mother	Result to Child	Remarks
						Before Labour	During Labour	After Labour				
T.H.Y. H.M.T.	8-11-27	18	1	Brought in a fit.	25% Esbach's estimation.	6	—	—	Morphia 1gr. Stomach and bowel lavage Breast infusion.	D.	—	Brought in during a fit. Face and limbs much oedematous. Had 3 fits before admission, and 3 fits in hospital.
L.S.	18-12-27	18	1	Normal	A trace of albumen.	—	—	3	Morphia ½gr. Rectal washed out. Rectal ether 1 oz on two occasions. Stomach washed out. Purgation.	R.	A.	Patient delivered a child in a normal labour 3 days before. Convulsions came on suddenly. On rectal wash-out, large amount of faeces passed out.
C.Y.K.	3-2-28	24	1	Normal	++++	1	1	1	Morphia ½gr. Rectal wash-out Purgation Forceps. Rectal oil aether 1oz.	R.	A.	Patient was in labour on admission. A fit occurred 10 minutes after admission.
G.C.H. W.Y.	8-9-27	28	2	Comatose, having had 8 fits outside.	Solid with Albumen	12	—	—	Stomach and bowel lavage. Saline purges. Breast infusions. Morphia 1½ gr. in 24 hours.	D.	—	Marked oedema. Patient unconscious for 36 hours, died without regaining consciousness. P.M. typical lesions in liver and kidneys. Foetus-minute haemorrhage under the pleura, lungs, liver and kidneys.
S.C.	29-3-28	31	8	General oedema and dyspnoea.	Almost solid with albumen. +++	2	—	—	Stomach and bowel lavage. Saline infusions, under breasts. Rectal aether Morphia ¼ gr. Saline purges.	A.	A.	Normal delivery. Wassermann negative. Albumen cleared up completely on 5th day discharged on the 14th day.

Table No. XV.

Operative Cases showing Morbidity.

Nature of Operations	Number		No. Morbid		Percentage Morbid		Average Morbidity		REMARKS	
	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.H.Y.	G.C.H.	T.Y.H.	G. C. H.	T. Y. H.
Forceps	22	21	3	5	14%	23·8%	1 in 7	1 in 4·2	Two cases, forceps applied by G. P. outside unsuccessful.	One case died of ruptured uterus—persistent mento-posterior. One case; pre-eclamptic and post-partum haemorrhage, died.
Internal Version	1	-	1	—	100%	—	1 in 1	-	—	—
Bipolar Version	1	4	1	1	100%	25%	1 in 1	1 in 4	Term, central placenta praevia with 2 finger os.	Marginal placenta praevia.
Suture of Perineal Lacerations.	142	118	4	12	2·8%	10·1%	1 in 35	1 in 9 8	- -	— —
Destructive Operations on the foetus.	2	1	1		50%	—	1 in 2	-	One case admitted with temperature. Forceps applied with bad laceration of perineum and vagina. No foetal heart sound heart.	—
Manual Removal of Placenta.	2	5	2	3	100%	60%	1 in 1	1 in 6	Hydramnios and Anencephalic Monster.	One case had a macerated baby died of sepsis. One case of hour glass contraction. Profuse haemorrhage.
Induction of Labour with stomach tube.	2	—	1	—	50%		1 in 2	—	Indication — one case with carcinoma of liver, the other with aricular fibrillation.	- -
Prolapse of hand and cord.	4	—	1	—	25%	—	1 in 4	—	—	—
Prolapse of cord.	3	—	1	—	33⅓%	—	1 in 3	-	All cases admitted with prolapse of cord. No pulsations felt.	—

Table No. XVI.

Duration of Stay in Hospital of Morbid Cases.

	T. Y. H.	G. C. H.
Less than 10 days	59 cases including 5 deaths.	28 cases including 3 deaths.
10 to 19 days	31 „ „ — „	11 „ „ — „
20 to 29 days	4 „ „ — „	— —
Over 29 days	— —	— —
Total	94 cases including 3 deaths.	39 cases including 5 deaths.

Table No. XVII.

Duration of Temperature.

	T. Y. H.	G. C. H.
Less than 10 days	68 cases including 0 deaths.	30 cases including 2 deaths.
5 to 9 days	22 „ „ 1 „	8 „ „ — „
10 to 19 days	1 „ „ — „	1 „ „ — „
Over 19 days	— „ „ — „	— „ „ — „
Total	94 cases including 1 death.	39 cases including 2 deaths.

Table No. XVIII.

Highest Temperature Charted.

	T. Y. H.	G. C. H.
Below 100°	0 cases including 0 deaths.	0 cases including 0 deaths.
100° to 100.9°	25 „ „ 0 „	5 „ „ — „
101° to 101.9°	39 „ „ 0 „	19 —
102° to 102.9°	19 „ „ 1 „	9 „ „ 1 „
103° to 103.9°	5 „ „ 0 „	5 „ „ — „
104° and over	6 „ „ 0 „	1 „ „ 1 „
Total	94 cases including 1 deaths.	39 cases including 2 deaths.

Table No. XIX.

Mortality.

Name	Age	Para	Admitted	Delivered	Died	Cause of Death	REMARKS
T.Y.H. C.K.Y.	57	7	18-6-27	18-6-27	24-6-27	Sepsis.	Threatened rupture of uterus. Forceps applied. Macerated foetus.
C.M.	28	5	4-10-27	—	5-10-27	Eclampsia.	Patient brought in semi-conscious. Had 3 fits before admission 3 fits in hospital.
L.K.T.	24	4	2-11-27	15-11-27	13-11-27	Rupture of uterus.	Persistent mento-posterior. Uterus ruptured. Forceps applied. Uterus plugged.
L.G.L.	25	2	9-1-28	9-1-28	9-1-28	Pre-eclamptic and Post Partum Haemorrhage.	Albuminura + + + +. Patient looked very toxic. Delayed labour. P.O.P. Forceps applied. P.P.H. Uterus plugged.
T.C.K.	26	3	16-4-28	17-4-28	20-4-28	Lobar Pneumonia.	Temperature 102·5. Respiration rate 50 per minute. Delivered a live baby.
G.C.H. T.T.	31	7	19-8-27	19-8-27	24-8-27	Tear of Cervix, lacerating uterine artery, Post-partum Haemorrhage. Sepsis.	***Siamese Twins*** Attempts at delivery outside. Case admitted with head and body presenting up to the nipple line and 3 hands. Two female children joined together in front, full length and breadth of chest, extracted with difficulty-Thoracophagus.
W.S.H.	20	1	25-2-28	27-2-28	1-3-28	Sepsis.	Trial labour 30 hours. Internal conjugate 8 cm. Pubiotomy. Forceps applied owing to foetal distress. Died four days later of sepsis.
W.Y.	28	2	8-9-27	—	9-9-27	Coma.	Admitted unconscious. Total fits 12. Solid albumin. Rotunda Treatment carried out in full. Died without regaining consciousness.

Table No. XX.

Induction of Labour.

(Castor Oil, quinine and pituitrin method).

	T.Y.H.	*G.C.H.*
Number of cases successful	1	2
Total number of cases	1	3
Successful cases with intramuscular injection of pituitrin	100%	100%

Table No. XXI.

Duration of Stay in Hospital.

	T.Y.H.	*G.C.H.*
Total number	1,109	525
Less than 3 days	·72%	0
From 3 to 5 days	1·53%	5·52%
From 6 to 8 days	88·0 %	82·28%
From 9 or more days	9·75%	12·20%

Table No. XXII.

Wassermann.

	T.Y.H.	*G.C.H.*
Total taken	—	525
Number of positive cases	—	16
Number of negative cases	—	509

CLINICAL REPORT OF THE GYNAECOLOGICAL DEPARTMENT FOR THE YEAR ENDED APRIL 30, 1928.

During the year 265 gynaecological cases were treated (150 in the Tsan Yuk, and 115 in the Government Civil Hospital). Out of the 150 cases treated in the Tsan Yuk Hospital, 76 patients were operated on, one patient died.

K.Y.C. age 24. Myoma of the uterus size of a 7 months' pregnancy. The tumour sprung from the anterior wall of the uterus and was extra-peritoneal. Its removal necessitated considerable manipulation. Patient died of shock 12 hours after the operation.

In the G.C.H. out of 115 patients admitted there were 63 operations. Three patients who were operated on died.

C.S. age 44. Malignant ovarian cyst. Exploratory laparotomy under local anaesthesia condition inoperable. Patient died in hospital.

W.T. age 28. Double ovarian cyst, one cyst malignant. Patient died 2 hours after operation. P.M.: Active tuberculosis, chronic nephritis.

L.T.T. age 39. Patient was suffering from an ovarian cyst which ruptured 3 days before admission to hospital, cysts contents were escaping through the umbilicus. Culture from cyst showed streptococci. Patient died 7 hours after operation.

In the G.C.H.

Five patients died who were not operated on. *Three* of these were admitted some days after delivery with a provisional diagnosis of puerperal sepsis, they had all been delivered in a local Maternity Hospital. (In all three organisms were found in culture frm the uterus. In addition two of these three patients gave a positive Widal reaction. Particulars will be found in Table XI).

Two patients died of heart disease.

C.Y. age 23. T.B. peritonitis, no operation. Patient had several heart attacks while in hospital.

C.Y. age 64. Tumour of uterus, heart disease, no operation. Died 4 days after admission.

Operations.

Hysterectomy. This operation was performed 7 times, (5 sub totals 2 Wertheims'). One patient in whom the myoma was the size of a 7 months' pregnancy died of shock 12 hours after operation. The remaining patients recovered.

Ovariotomy. There were 17 cases of ovarian tumour operated on. Two patients died, one of them, W.T. had active tuberculosis and renal disease, associated with two ovarian cysts. The other L.T.T. died of sepsis following rupture of cyst. Rupture occurred before operation.

The largest cyst removed weighed 17 lbs., there were two cysts each weighing 16 lbs. In one case in which the cyst could not be removed, it was drained through the anterior abdominal wall. When the patient left hospital there was still a sinus discharging. In three similar cases which we have had, the sinuses closed up.

Operations on the tubes and ovaries. 17 cases, in all of which one or both tubes were removed. All recovered.

Extra Uterine Pregnancy. 3 cases, all recovered.

Operation for Prolapse. 17 cases, all recovered.

Prolapse of the Uterus is common among Chinese women, of the hospital class, many of these women are either coolies who carry heavy loads, or boat women.

The gynaecological wards are fed by no lless than 9 out-patient dispensaries situated in different parts of the Colony. Many of which are largely attended, and the fact that our total admissions only numbered 265, illustrates the great difficulty we have to contend with in persuading Chinese patients to come into hospital for operation, or even treatment.

There are a total of 30 beds available for gynaecological patients more than 20 of which are in the Tsan Yuk Hsopital, and as time goes on, I have no doubt will be fully occupied.

Table No. I.

Statistics of Gynaecological Department.

	T.Y.H.	*G.C.H.*
Number of admissions	150	115
Number of operations	76	63

Table No. II.

Nature and Number of Operations.

	T.Y.H.	*G.C.H.*
Vulva—		
Papilliferous cyst adenoma	—	1
Bartholin Abscess	1	2
Imperforate Hymen	1	—
Perineum—		
Complete tear	1	1
Incomplete tear	—	3
Perinaeorrhaphy	2	—
Bladder—		
Removal of Calculus	1	—

	T.Y.H.	*G.C.H.*
Urethra—		
Repair of Sphincter	—	1
Excision of Hypertrophied tissue	—	1
Caruncle	—	1
Urethral polypus	1	—
Vagina—		
Stricture	1	—
Vesico-vaginal fistula	—	2
Anterior colporrhaphy	—	2
Perinaeorrhaphy (complete)	—	1
Posterior colpotomy	—	2
Uterus—		
Currettage	18	6
Prolapse (procidentia)	8	9
Myomectomy	1	—
Ventro-suspension (abdominal)	17	9
Subtotal Hysterectomy	3	1
Vaginal Ventro-suspension	2	5
Wertheim's Hysterectomy	1	1
Cervix—		
Trachelorrhaphy	2	3
Amputation	3	1
Polypus	1	2
Tubes and Ovaries—		
Marsupialization of cyst	3	—
Salpingo-oophrectomy	2	7
Ovariotomy	4	9
Salpingectomy	5	2
Extra-uterine gestation	1	—
Resection of Ovary	4	—
Tubal pregnancy	—	2
Par-ovarian cyst	—	1
Miscellaneous—		
Ascites due to malignant disease of ovaries, tapped	—	3
Laparotomy (exploratory)	1	2
Breast Abscess	2	3
Cystoscopy	—	1
Removal of tissue for section	3	—

	T.Y.H.	*G.C.H.*
Piles	1	—
Stricture of Vagina	—	1

Table No. III.

Nature and Number of Cases Treated without Operation.

	T.Y.H.	*G.C.H.*
Refused treatment	38	3
Operation contra-indicated by general health	1	2
No operation indicated	14	—
Pregnancy with gonorrhoea	—	1
Pregnancy with phthisis	2	—
Pregnancy with diarrhoea	2	—
Pregnancy with mitral stenosis	1	—
Pregnancy with prolapse of anus	1	—
Pregnancy with cystocele and rectocele	1	—
Pregnancy	—	3
Salpingitis	2	—
Imperforate anus and recto-vaginal fistula	—	2
Inoperable malignant disease	2	5
Pelvic cellulitis	—	2
Cystitis	2	1
Venereal	5	—
Congenital syphilis	—	1
Urethritis	1	—
Pruritus vulvae	2	—
Stricture of vagina	1	—
Ulceration of vulva	1	—
Condyloma	1	—
Pernicious vomiting	—	1
T. B. puritus	—	2
Post-partum neuritis	—	6
Infantile retro-verted uterus	—	1
Constipation	—	3
Ophthalmia neonatorum	—	1
Retro-version, dysentery	—	1
Retro-version, typhoid	—	4
Salpingitis—tampons G. & I. plugs	—	8
Salpingitis—Diathermy	—	1
Gonorrhoea	—	3
Stone in bladder	—	1
Vesical vaginal fistula	—	1

Table No. IV.

Hysterectomy (Abdominal).

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H.							
234	W.H.	26-1-28	37	Myoma	Subtotal hysterectomy	Recovery	Tumour enlarged irregularly, size of six months pregnant uterus. Considerable oozing during operation.
252	C.H.	22-3-28	24	Cancer	Wertheim's hysterectomy	Relieved	Ureters embedded in cancerous tissue. Bladder infiltrated. There was a profuse discharge from the vagina, on leaving hospital.
266	K.Y.C.	12-4-28	24	Myoma	Subtotal hysterectomy	Died	Uterus size of 7 months pregnancy. Tumour found to have sprung from the anterior wall of uterus and had grown up extra-peritoneally. Patient died of shock 12 hours after operation.
157	Y.G.M.	14-7-28	40	Myoma	Subtotal hysterectomy	Recovery	Uterus irregularly enlarged size of two fists.
G.C.H.							
1	W.C.	8-2-28	46	Carcinoma of body of uterus	Wertheim's hysterectomy	Recovery	Six days after operation urine drained from abdominal wound. Discharged in good condition six weeks after operation.
2	F.S.	23-3-28	48	Fibroid of uterus	Subtotal hysterectomy	Recovery	Size of a foetal head.

Table No. V.

Miscellaneous Operations.

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H.							
212	L.Y.	24-11-27	42	Submucous Myoma	Myomectomy (vaginal)	Recovery	Tumour springing from the interior of the cervical canal size of a ping-pong ball.

Table No. VI.

Ovariotomy.

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H. 128	C.H.F.	19-5-27	30	Par-ovarian cyst	Removal	Recovery	Patient refused laparotomy. Posterior colpotomy was done. Two small cysts of the par-ovarium were punctured and removed through colpotomy opening. Ovaries retained.
197	Y.S.	27-10-27	32	Ovarian cyst	Marsupialization of ovarian cyst	Recovery	Cyst size of a 7 months' pregnant uterus, adherent, particularly to posterior abdominal wall. Drainage lasted about two months.
222	M.K.	15-12-27	31	Ovarian cyst	Ovariotomy	Recovery	Cyst size of a foetal head, uterus ventrally-suspended.
232	M.L.S.	29-12-27	34	Ovarian cyst	Marsupialization of cyst	Recovery	Cyst size of two fists, adherent. Cyst ruptured during operation and greenish pus discharged which was sterile. Drainage lasted 1½ months.
246	W.S.	23-2-28	40	Ovarian cyst	Marsupialization of cyst	Still draining	In the first operation the cyst was found to be densely adherent. Cyst opened and drained.
		8-8-28			Cyst punctured		Second operation, lower part of cyst punctured but found to be solid and only a small discharge drained. Patient still in hospital.

Table No. VI.—*(Continued).*

Ovariotomy.

No.	Name	Date	Age	Disease	Operation	Result	Remarks
265	C.C.T.	5-4-28	21	Right ovarian cyst	Ovariotomy trachelorrhaphy	Recovery	Cyst size of a pine-apple with thin wall and watery content. Cyst and intestines studded with tubercules, section of cervix showed no evidence of growth,
271	L.Y.Y.	21-4-28	25	Torsion of right ovarian cyst	Ovariotomy	Recovery	Patient had acute abdominal pain three days before admission. On opening the abdomen a right ovarian cyst was found twisted twice on its pedicle.
G.C.H.							
1	K.Y.	10-5-27	36	Papillary cyst adenoma	Ovariotomy	Recovery	Weight of tumour 8 lbs. Undergoing malignant change.
2	C.C,	12-6-27	38	Twisted ovarian cyst	Ovariotomy	Recovery	Cyst size of a foetal head. Slow torsion with plastic peritonitis.
3	W.K.C.	22-6-27	17	Right ovarian cyst	Ovariotomy	Recovery	Weight of tumour 8 lbs. 14 oz. Ascitic fluid 9½ pints Multilocular cyst adenoma.
4	W.A.H.	29-6-27	27	Right ovarian cyst	Ovariotomy	Recovery	Cyst-adenoma.

Table No. VI.—*(Continued).*

Ovariotomy.

No.	Name	Date	Age	Disease	Operation	Result	Remarks
5	W.Y.	14-7-27	28	Double ovarian cyst	Double ovariotomy	Died	Right side multilocular cyst adenoma Left side papilliferous cyst. Patient died suddenly two hours after operation P.M. findings:— (*a*) active tuberculosis. (*b*) chronic nephritis.
6	L.T.T.	28-9-27	39	Ruptured ovarian cyst	Ovariotomy	Died	Cyst ruptured three days before admission through the umbilicus. Both ovaries removed. Died seven hours after operation. Culture from cyst—streptococcal infection.
7	T.T.	30-9-27	24	Left ovarian cyst	Ovariotomy	Recovery	Weight of tumour 16 lbs.
8	N.A.T.	11-1-28	36	Ovarian cyst	Double ovariotomy	Recovery	Weight of tumour 17 lbs. Free fluid 5 pints.
9	C.M.Y.	3-2-28	51	Ovarian cyst	Ovariotomy	Recovery	Weight of tumour 16 lbs. solid. Uterus ventrally suspended.
10	L.C.Q.	2-3-28	29	Ovarian cyst	Double ovariotomy	Recovery	Weight of tumour 6 lbs. Free fluid 12 pints.

Table No. VII. *Salpingectomy.*

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H.							
132	C.N.M.	1-6-27	30	Double salpingitis Retroversion.	Double salpingectomy and ventral suspension.	Recovery	Uterus bound down by adhesions. Both ovaries resected and tubes removed. Suspension stitch inserted. Douglas' pouch drained.
142	Y.C.K.	21-6-27	29	Suppurative salpingitis.	Double salpingectomy. Ventralsuspension. Modified guilliaume, trachelorrhaphy.	Recovery	Both tubes taken. Adhesions of uterus separated.
203	K.H.H.	3-11-27	26	Fibrosis of left ovary and left salpingitis.	Salpingo oophorectomy, ventral-suspension. Modified guilliaume.	Recovery	Left tube and ovary thickened and inflamed. Few adhesions near the right tube.
214	L.P.F.	24-11-27	23	Salpingitis nodosa. Ovarian haematoma (chocolate cyst).	Right salpingectomy Resection of left ovary, Modified guilliaume and ventral-suspension.	Recovery	Right tube dilated and adherent, Left tube patent. Small chocolate coloured cyst of left ovary cut out.
215	C.C.S.	24-11-27	28	Left salpingitis, Retroversion.	Left salpingectomy Modified guilliaume and ventral suspension.	Recovery	Many adhesions.
251	H.Y.K.	8-3-28	29	Left salpingitis.	Left salpingo oophorectomy. Ventral-suspension.	Recovery	

Table No. VII.—*(Continued).* *Salpingectomy.*

No.	Name	Date	Age	Disease	Operation	Result	Remarks
258	L.T.W.	18-4-28	22	Bicornuate uterus. Double salpingitis.	Double salpingectomy Ventral-suspension.	Recovery	Uterus retroverted and adherent. Both tubes dilated. The round ligaments were brought out through rectus muscles. Suspension sutures inserted.
G.C.H.							
1.	L.H.	18-5-27	24	Salpingitis.	Excision of left tube.	Recovery	Pouch of Douglas drained.
2.	L.C.P.	11-6-27	24	Salpingitis and lacerated cervix.	Trachelorrhaphy and excision of left tube and ovary.	Recovery	Uterus suspended by fundus and round ligaments.
3.	P.S.L.	16-7-27	27	Retroversion fixed with salpingitis.	Excision of left tube and ovary.	Recovery	Uterus suspended.
4.	C.Y.	2-8-27	32	Retroversion with salpingitis.	Excision of left tube and ovary.	Recovery	Uterus suspended by fundus.
5.	C.G.	29-8-27	25	Salpingitis.	Excision of Right tube and ovary.	Recovery	Uterus bicornuate.
6.	C.H.	17-10-27	31	Pyosalpynx.	Excision of right tube.	Recovery	Right tube size of a fist, removed intact. Abdomen drained.
7.	T.H.	15-3-28	29	Salpingitis.	Excision of left tube and ovary, right ovary.	Recovery	Ventral-suspension.
8.	Y.L.S.	29-3-28	30	Fixed Retroversion.	Excision of left cystic ovary and tube.	Recovery	Ventral-suspension.

Table No. VII.—*(Continued).* *Salpingectomy.*

No.	Name	Date	Age	Disease	Operation	Result	Remarks
9.	W.W.S.	5-4-28	24	Lacerated cervix and fixed retroversion.	Excision of both tubes and right ovary.	Recovery	Uterus suspended by round ligaments and fundus.
10.	S.W.	25-4-28	27	Salpingitis.	Excision of right tube and ovary.	Recovery	Uterus suspended by fundus and round ligaments.

Table No. VIII. *Extrauterine Pregnancy.*

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H. 174	C.W.F.	1-9-27	23	Ruptured right extrauterine gestation.	Marsupialisation.	Recovery	Many adhesions, impossible to remove. Drainage lasted for one month.
G.C.H. 1.	C.P.	2-5-27	24	Ruptured extrauterine.	Excision of left tube and ovary.	Recovery	Uterus ventrally suspended by fundus and round ligaments. Rupture took place three weeks before admission. Intravenous saline.
2.	K.N.	2-1-28	28	Ruptured extrauterine.	Excision of left tube and sac.	Recovery	Intravenous saline. Amenorrhoea. four months.

Table No. IX. *Prolapse.*

No.	Name	Date	Age	Disease	Operation	Result
T.Y.H. 138	F.L.H.	14-6-27	34	Prolapse and cystocele.	Vaginal suspension and shortening of Mac. ligaments. Amputation of cervix. Anterior colporrhaphy. Perinaeorrhaphy.	Recovery
147	T.W.	30-6-27	27	Procidentia.	Anterior colporrhaphy. Amputation of cervix. Shortening of Mac. ligaments. Perinaeorrhaphy.	Recovery
148	L.D.	30-6-27	37	Procidentia.	Supra-vaginal amputation of cervix. Shortening of Mac. ligaments. Perineorrhaphy. Patient to return for ventral suspension.	Recovery
159	C.H.M.	21-7-27	32	Procidentia.	Anterior colporrhaphy. Supravaginal amputation. Shortening of Mac. Ligaments.	Uterus Vertical
162	L.L.	2-8-27	55	Procidentia.	Anterior colporrhaphy. Shortening of Mac. ligaments. Amputation of cervix.	Recovery
180	L.Y.L.	15-9-28	49	Retroversion and Slight descend.	Shortening of Mac. ligaments. Amputation of cervix. Perinaeorrhaphy.	Recovery
220	T.A.C.	15-12-27	22	Prolapse. Old tear of cervix and perineum.	Ventral-suspension. Circular amputation of cervix. Shortening of Mac. ligaments. Reconstruction of cervix. Perinaeorrhaphy.	Recovery

Table No. IX.—*(Continued).* *Prolapse.*

No.	Name	Date	Age	Disease	Operation	Result
236	L.S.L.	9-2-28	17	Procidentia.	Anterior colporrhaphy. Supra-vaginal amputation of Cervix. Vaginal Suspension. Shortening of Mac. ligaments and utero-sacral ligaments. Curettage.	Some hypertrophy of cervical tissue following operation uterus vertical.
G.C.H.						
231	C.S.	7-6-28	26	Complete prolapse	Currettage, Shortening of Mac. ligaments, Vaginal ventral suspension. Supra-vaginal amputation of cervix. Post colpo-perinaeorrhaphy.	Recovery
242	C.Y.	6-7-27	42	Complete prolapse	Currettage, Shortening of Mac. ligaments, vaginal ventral suspension. Supra-vaginal amputation of cervix. Colpo-perinaeorrhaphy. General anaesthesia contraindicated owing to a bad heart and goitre done under ½% novocaine anaesthesia.	Recovery
257	Y.A.M.	20-7-27	34	Complete prolapse	Currettage, Vaginal ventral-suspension, Supravaginal amputation of cervix. Shortening of Mac. ligament. Post Colpo-perinaeorrhaphy. Under ½% novocaine anaesthesia.	Recovery
262	S.G.	30-7-27	22	Complete prolapse	Currettage, Vaginal ventral-suspension, supra-vagina lamputation of cervix. Shortening of Mac. ligament. Post colpo-perinaeorrhaphy. Under ½% novocaine anaesthesia.	Recovery

Table No. IX.—*(Continued).* *Prolapse.*

No.	Name	Date	Age	Disease	Operation	Result
271	H.M.	12-10-27	31	Complete prolapse	Currettage, Vaginal ventral-suspension, supra vaginal amputation of cervix. Shortening of Mac. ligament. Post colpo-perineorrhaphy. Under ½% novocaine anaesthesia.	Recovery
275	W.S.	19-10-27	35	Complete prolapse	Curettage, Vaginal ventral-suspension, Supra-vaginal amputation of cervix. Post colpo-perinaeorrhaphy. General anaesthesia contraindicated owing to bad heart. ½% novocaine anaesthesia.	Recovery
293	S.S.	3-1-28	35	Complete prolapse	Currettage, Vaginal ventral-suspension, Supra-vaginal amputation of cervix. Shortening of Mac. ligaments. Post colpo-perinaeorrhaphy. Under ½% novocaine anaesthesia.	Recovery
318	C.T.	27-2-28	36	Complete prolapse	Currettage, Supra-vaginal amputation of cervix. Shortening of Mac. ligaments. Post colpo-perinaeorrhaphy. Rectal Aether.	Recovery
339	T.K.K.	2-5-28	21	Complete prolapse	Currettage, Shortening of Mac. ligaments. Vaginal ventral-suspension. Supra-vaginal amputation of cervix. Post colpo-perinaeorrhaphy.	Recovery

Table No. X.

Miscellaneous Operations.

(only important major operations are included).

No.	Name	Date	Age	Disease	Operation	Result	Remarks
T.Y.H. 133	H.Y.E.	8-6-27	36	Stricture of vagina	Plastic	Improved	Cervix adherent to stricture.
143	L.Y.	28-7-27	33	Urethral polypus movable retro version	Alexander Adam's Excision of polypus curettage	Improved	
146	C.Y.	25-7-27	56	Pedunculated myoma	Tomour was twisted off	Recovery	Tumour size of an orange with long pedicle.
152	W.H.Y.	7-7-27	30	Complete tear of perineum. Stricture of vagina	Incision of stricture Perinaeorrhaphy	Stitches did not hold	
248	T.K.	23-2-28	23	Imperforate hymen	Excision	Recovery	Haematocolpos and haemaeometra. Fundus reached up to umbilicus.
G.C.H. 1	L.C.	16-7-27	20	Tuberculous caecum	Exploratory laparotomy	Recovery	Under ½% novocaine anaesthesia inoperable apparent improvement after operation.
2	C.C.	29-8-27	28	Pelvic abscess	Laparotomy and drainage	Recovery	Vaginal drainage unsuccessful.
3	L.F.S.	5-8-27	24	Lacerated cervix Fixed Retroversion	Ventral suspension Repair of cervix	Recovery	Suspension by fundus and round ligaments.

Table No. XI.

Mortality of Puerperal Sepsis Cases.

No.	Name	Age	Admitted	Died	Diagnosis	Treatment	Remarks
G.C.H.							
1	C.S.S.	27	22-1-28	3-2-28	Puerperal sepsis organisms from uterine culture. (*a*) Gas forming organism. (*b*) Gram negative bacilli no vaccine could be prepared	Intra-uterine douches. Anti-streptococcus serum. Quinine and tonics	All three cases admitted from a neighbouring maternity hospital some days after delivery. Two of the cases gave a positive Widal.
2	C.Y.	23	2-1-28	10-1-28	Puerperal sepsis organisms from uterine culture. (*a*) Streptococci. (*b*) Gram negative bacilli Patient unconscious four days	Intra-uterine douches. Anti-streptococcus serum. Quinine, Tonics and autogenous Vaccine.	
3	C A.W.	18	26-3-28	30-4-28	Puerperal sepsis organisms. (*a*) Diptheroid. (*b*) Staphylococcal Vaccine prepared.	Intra-uterine douches. Anti-streptococcus serum. Quinine, Tonics and Autogenous Vaccine.	

Table No. XII.

Table of Compound Operations.

Nature of Operations.	**No. of Cases.** *T.Y.H.*	*G.C.H.*
Vaginal repair. See table IX. Prolapse	3	2

Under the heading of "vaginal repair" are included such operations as perinaeorrhaphy, trachelorrhaphy, amputation of cervix, and colporrhaphy.

A SHORT REPORT ON GYNAECOLOGICAL SPECIMENS.

by

C. Y. Wang,

(From the School of Pathology, University of Hong Kong).

As in previous years the examination of specimens from the Obstetrical Unit of the University has been undertaken by the Reporting Department of the School of Pathology. The following list shows the total number of specimens examined and the nature of the investigation :—

Blood for Syphilitic Reaction	844
Blood for Widal Reaction	36
Blood for Bacterial Culture	12
Smears	3
Vaccine Preparation	12
Tissues for Section	51

This gives a total of 952 specimens, as against 580 in 1927, representing an increase of 372, or over 60 per cent. on the figures for the preceding year in the number of specimens dealt with for the Unit.

Of the 844 bloods for test of syphilis, which were taken as a routine in the Maternity Bungalow of the Unit, 59 yielded a positive reaction, 767 a negative reaction, while 18 were doubtful.

The tissue specimens for diagnosis were obtained in 21 instances from tumour-growths, and in the remainder from inflammatory lesions.

A summary of all specimens dealt with in the period under review is comprised in the table furnished below :—

Blood for Syphilitic Reaction	844*	
Positive		59
Negative		767
Doubtful		18

Routine blood examination in the G.C.H.

Tumour-Growths	21	
Carcinoma of Vaginal Wall		1
Carcinoma of Cervix		3
Carcinoma of Omentum		1
Cystadenoma of Ovary		1
Cystadenoma of Fallopian Tube		1
Simple Cyst of Ovary		10
Chocolate Cyst of Ovary		1
Papilloma of Uterus		1
Papilloma of Vulva		1
Myoma of Uterus		1
Inflammatry Lesions	30	
Of Uterus and Cervix		12
Fallopian Tube		8
Ovary		6
External Genitals		4
Blood for Widal	36	
Blood for Bacterial Culture	12	
Smears	3	
Vaccine Preparation	12	

COLONIC ETHER IN OBSTETRICS & GYNAECOLOGY. *

by

S. K. Lam, and P. C. Lai,

Introduction. During a visit to the United States in 1924, I had the privilege of seeing rectal ether given, at the New York Lying In Hospital, and it is a matter of opinion as to whether this method of giving ether has received the attention it deserved.

The usual solution for surgical use is a 50% of ether in olive oil, and the dose being either ½oz. for every 20 lbs. body weight of the patient. Our work lies among Chinese patients who are of much lighter build than Europeans.

I suggested to Dr. Lam that 25 cases should be delivered under rectal ether, and he and Miss Lai were kind enough to carry out this work, they also anaesthetised some patients for operation, and the notes of the cases are added.

I would like to emphasise the fact that we allowed a large margin of safety as regards dosage, and that olive oil was given in excess of ether.

The advantages of the method are undoubted, but our cases are too few for us to correctly estimate the risks.—(R.E.T.)

* Supervised by the Professor of Obstetrics and Gynaecology.

COLONIC ETHER IN OBSTETRICS.

Colonic ether was given to 27 primiparae in the Tsan Yuk Hospital with the object of diminishing the suffering of labour.

The drugs used are olive oil, ether and paraldehyde. To safeguard against injury to the intestine by the ether, we used an excess of olive oil.

The Technique. An enema is given at the start of labour. When the os is nearing full dilatation, morphia gr.$\frac{1}{12}$ is injected, a rectal tube is passed into the colon. An ounce of pure olive oil is run in followed by a mixture of one ounce of olive oil and 1 to 1½ oz. of ether, with or without paraldehyde. Finally another ounce of pure olive oil is put in. The mixture must be run in very slowly otherwise it is liable to be expelled by the patient. The room must be quiet and the patient carefully watched. After 2 or 3 hours, if labour is not yet finished, the ether may be repeated, but the morphia should not be repeated. The rectum should be washed out when labour is finished.

16 patients received morphia gr.$\frac{1}{12}$ ether 1 oz.
2 patients received morphia gr.$\frac{1}{1}$ ether 1¼ oz.
5 patients received morphia gr.$\frac{1}{12}$ ether 1½ oz.
4 patients received morphia gr.$\frac{1}{12}$ ether 1½ oz. paraldehyde 1 dr.

Morphia gr.⅙ had also been tried but we find that when in combination with ether it either stops the progress of labour entirely, or labour is unduly prolonged.

From our cases we obtained the following information:—

1 Labour is prolonged.

2 Labour is too prolonged in patients who received morphia gr.$\frac{1}{12}$ ether 1½ oz. paraldehyde 1 drachm. Better results are obtained when paraldehyde is omitted.

3 There is no ill effect on the baby.

4 The third stage is not prolonged, and we had no case of post-partum haemorrhage.

5 The perineum is not so liable to be torn, because the foetal head is born slowly.

6 When the perineum is stitched there is a certain amount of analgesia resulting from the colonic ether.

7 No ill effect on the colon and rectum.

8 No nausea and vomiting.

9 The patient does not remember the pain.

10 The patient usually sleeps soundly after labour.

11 The eye reflex is present throughout the anaesthesia.

12 One patient was super-sensitive, she received 1½ oz. of ether and was drowsy for over 5 hours.

We regard 1½ oz. of ether in excess of olive oil, with morphia gr. $\frac{1}{12}$ hypodermically as the most satisfactry dosage for Chinese patients.

Colonic ether (Ether 1½oz. Paraldehyde 1 dr.) was also employed in 9 gynaecological operations. The procedure is as follows:—Half an hour before the operation an injection of morphia gr. ⅙ and atropin gr. $\frac{1}{150}$ is given, followed by the colonic ether. At the end of half an hour, open ether is given on a mask till the lid reflex is lost. Then the operation begins. If the patient moves during the operation only a few drops of ether will make her quiet again. There is anaesthesia although the lid reflex may be present throughout the operation. This method has certain advantages:—

1 It is easy to put the patient under. There is no struggle.

2 There is no stage of excitement.

3 It is economical, as it does not waste much ether.

4 The patient is not liable to respiratory embarrassments.

5 Nausea and vomiting are greatly diminished.

Progress of labour	Morphia	Ether	Paral-dehyde	Drowsy in	Frequency of Pains	Baby born in	Placenta delivered in	Perineum	Remarks
Membranes ruptures	gr $\frac{1}{12}$	1 oz	–	—	4 m.	2 hrs.	20 m.		Laceration of vaginal mucous membrane.
Membranes not ruptured	gr $\frac{1}{12}$	1 oz	—	5 m.	3 m.	2½ hrs.	20 m.		Laceration of vaginal mucous membrane.
Os nearly fully dilated	gr $\frac{1}{12}$	1 oz	—	10 m.	5 m.	3½ hrs.	15 m.		
Os fully dilated	gr $\frac{1}{12}$	1 oz	—	—	4 m.	45 m.	18 m.	Torn.	
Membranes ruptured	gr $\frac{1}{12}$	1 oz	—	—	—	2 hrs. 25m.	20 m.	Torn.	
Os fully dilated	gr $\frac{1}{12}$	1 oz		—	3 m.	2 hrs. 35 m.	25 m.	Torn.	
Os fully dilated	gr $\frac{1}{12}$	1 zo		5 m.	4 m.	2 hrs.	10 m.	Torn.	
Membranes ruptured	gr $\frac{1}{12}$	1 oz		10 m.	5 m.	35 m.	15 m.	Torn.	Morbid 3 days. Highest temperature 102°F.
Membranes ruptured	gr $\frac{1}{12}$	1 oz	—	15 m.	3 m.	1 hr.	15 m.		
Membranes not ruptured	gr $\frac{1}{12}$	1 oz		10 m.	—	3½ hrs.	15 m.		
Os fully dilated	gr $\frac{1}{12}$	1 oz	—	10 m.	3 m.	1 hr. 15 m.	15 m.	Torn.	
Membranes ruptured	gr $\frac{1}{12}$	1 oz	—	10 m.	5 m.	45 m.	10 m.		
Membranes ruptured	gr $\frac{1}{12}$	1 oz	—	15 m.	—	30 m.	20 m.		Morbid 2 days. Highest temperature 100·6°F.
Os fully dilated	gr $\frac{1}{12}$	1 oz	—	20 m.	5 m.	1 hr. 55 m.	25 m.	Torn, due to cord round the neck, & both hands presenting with the shoulders.	Morbid 5 days. Highest temperature 102·2°F. Foul lochia. Some of the ether was expelled.

Colonic Ether in Obstetrics.

Progress of labour	Morphia	Ether	Patal-dehyde	Drowsy in	Frequency of Pain	Baby born in	Placenta delivered in	Perineum	Remarks
Os nearly fully dilated	gr $\frac{1}{12}$	1 oz	—	20 m.	—	1 hr. 25 m.	25 m.		A certain amount of ether was expelled.
Os fully dilated	gr $\frac{1}{12}$	1 oz	—	15 m.	7 m.	1 hr. 25 m.	25 m.		Patient developed eclampsia 3 days after delivery.
Membranes ruptured	gr $\frac{1}{12}$	1¼ oz	—	15 m.	—	10 m.	10 m.		Morbid 3 days. Highest temperature 102·4°F
Os dilated to the size of a dollar	gr $\frac{1}{12}$	1¼ oz	—		5 m.	11 hrs. 20 m.	10 m.		Morbid 5 days. Highest temperature 101·5°F Colonic ether repeated twice.
Membranes ruptured	gr $\frac{1}{12}$	1½ oz	—	25 m.	5 m.	3 hrs. 5 m.	10 m.		Morbid 7 days. Highest temperature 103.
Os fully dilated	gr $\frac{1}{12}$	1½ oz	—	2 m.	4 m.	1¼ hrs.	15 m.		
Os nearly fully dilated	gr $\frac{1}{12}$	1½ oz	—	10 m.	—	3 hrs. 52 m.	10 m.		
Membranes not ruptured	gr $\frac{1}{12}$	1½ oz	—	15 m.	2 m.	2½ hrs.	15 m.	Torn.	Some of the ether was expelled.
Membranes not ruptured	gr $\frac{1}{12}$	1½ oz	—	10 m.	2 m.	47 m.	15 m.		
Membranes not ruptured	gr $\frac{1}{12}$	1½ oz	1 drachm	20 m.	2 m.	3 hrs.	20 m.	Torn.	Baby slightly asphysiated Patient complained of giddiness.
Membranes ruptured	gr $\frac{1}{12}$	1½ oz	1 drachm	almost immediately.	—	3 hrs. 10 m.	30 m.	Torn.	
Membranes ruptured	gr $\frac{1}{12}$	1½ oz	1 drachm	45 m.	4 m.	6 hrs. 10 m.	20 m.		Some of the ether was expelled
Membranes ruptured	gr $\frac{1}{12}$	1½ oz	1 drachm	13 m.	5 m.	4 hrs.	15 m.		

Colonic Ether in Gynaecological Operation.

Nature of Operation	Amount of Ether	Paraldehyde	Time when patient becomes drowsy	Total time of Open ether	Duration of Operation
Double Salpingectomy	oz $1\frac{1}{2}$	1 dr	15 minutes	23 minutes	42 minutes
Ovariotomy & Trachellorrhaphy	oz $1\frac{1}{2}$	1 dr	20 minutes	31 minutes	1 hr 25 minutes
Subtotal hysterectomy	oz $1\frac{1}{2}$		20 minutes	40 minutes	2 hrs 30 minutes
Hysterectomy for myoma	oz $1\frac{1}{2}$	1 dr	—	30 minutes	1 hr 25 minutes
Vential Suspension	oz $1\frac{1}{2}$	nil	15 minutes	15 minutes	35 minutes
Marsupialisation of ovarian cyst	oz $1\frac{1}{2}$	nil	10 minutes	15 minutes	1 hr minutes
Vaginal Repair	oz $1\frac{1}{2}$	nil	5 minutes	5 minutes	1 hr
Ventio-suspension modified Guilliaume Salpingectomy	oz $1\frac{1}{2}$	1 dr	5 minutes	25 minutes	1 hr 25 minutes
Hysterectomy for myoma	oz $1\frac{1}{2}$	1 dr		45 minutes	1 hr 13 minutes

ACUTE INFLAMMATION OF THE ANTERIOR SEGMENT OF THE EYEBALL. *

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INFLAMMATION OF THE CORNEA OR KERATITIS.

Anatomy.

The cornea may be divided into three anatomical components:— The epithelium covering its anterior surface, the corneal substance proper, and Descemet's membrane with its covering of endothelium. Embryologically, each of these represents one of the adjacent membranes; thus, the epithelium with the underlying Bowman's membrane may be regarded as the continuation of the conjunctiva over the cornea, the substancia propria corneae represents the sclerotic, and Descemet's membrane together with its endothelium, the uvea. This relationship is of clinical significance in that inflammations of any of these membranes tend first of all to involve its embryological counterpart. Thus diseases of the conjunctiva will primarily spread to the corneal epithelium, and those of the sclerotic to the corneal stroma.

In normal circumstances the cornea is avascular. It is nourished by the blood-plasma derived from a loop of vessels situated at its periphery. Under pathological conditions these vessels overstep the limbus and invade the cornea thus causing an impairment in the vision.

The nerves supplying the cornea are derived from the trigeminal and they may be seen coursing through the corneal substance when the eye is examined under the corneal microscope. They ramify and form plexuses, one on each side of Bowman's membrane.

The cornea normally has a bright, smooth and clear appearance, and images of objects focussed upon its anterior surface (a window situated at a distance for instance) retain the shape and clearness of the original. One of the first objective signs that connotes a pathological involvement of the cornea is a change in this corneal image. It becomes blurred and indistinct and may even be distorted should there be an irregularity on the surface of the cornea.

Suppurative Keratitis or Corneal Ulceration.

Loss of the corneal epithelium produces the lesion known as an 'abrasion.' When the loss of substance involves Bowman's membrane, then an 'ulcer' is the result. When an ulcer arises from the cornea

* Being part of a paper read before the Hong Kong University Medical Society on 3rd October, 1928.

ab initio it is termed primary; the commonest cause of this type of ulcer is trauma. When it is caused by the spread of infection from the adnexa, the ulcer is termed secondary.

Semeiology.

Subjectively, it is characterised by pain which is referred to the eyeball itself and to the supraorbital region. There is photophobia or resentment to light, lachrymation, and blepharospasm. Vision is diminished, but specially so when the ulcer occupies the pupillary area. Objectively, the conjunctiva is hyperaemic, the congestion increasing in intensity as the sclero-corneal junction or limbus is approached. This pericorneal vascularisation is often spoken of as 'ciliary injection' owing to the fact that the vessels involved are the anterior ciliary.

Hypopion Ulcers.

Pus in the anterior chamber of the eye is termed an 'hypopion.' This pus differs from that ordinarily met with elsewhere in that it does not contain organisms. It is in other words—sterile. Hypopion ulcers are caused in the majority of cases by the pneumococcus. It may occur as a complication of pneumococcal conjunctivitis, or it may arise independently through infection of a simple ulcer by this organism.

The pneumococcus does not form part of the normal flora of the conjunctival sac. It occurs in large numbers however in the presence of a chronic inflammation of the lachrymal sac—dacryo-cystitis. Owing to the high potentiality in the virulence of this organism, it is important that every case of chronic dacryo-cystitis should be properly cured in order to rid the conjunctival sac of this dangerous parasite.

The diagnosis of an hypopion is important in that it gives us a clue as to the nature of the infection present. The hypopion is seen as a segment of a circle situated at the bottom of the anterior chamber. When it is large, no difficulty will be experienced in discovering it, but owing to the manner in which the sclerotic overlaps the cornea in the region of the limbus, an early hypopion is not easily seen. I have discovered for myself a method for recognising its presence, and which I do not remember having seen described in any text-book. This consists not so much in searching for it in the usual manner, but rather in noting the presence of an oblateness or flattening of the lower part of the circumference of the cornea. Instead of concentrating our attention on the inferior angle of the anterior chamber and trying to peer over the imbricating margin of the sclerotic, as it were, we should stand away from the patient and survey the whole corneal circumference from a distance, when the flattening will be more easily discernible.

The great danger of an hypopion ulcer lies in its tendency to perforate; it has also the vicious habit of travelling from place to place,

all over the cornea in a serpiginous manner, thus acquiring for itself the name—ulcus serpens. An intense irido-cyclitis is a frequent accompaniment of hypopion ulceration.

Complications.

Corneal ulceration is a common cause of blindness. Of the immediate complications one of the most important is.—Perforation, bringing with itself a *cortège* of other complications such as:—Prolapse of the iris, of the lens, or of both; purulent irido-cyclitis, leading on to endophthalmitis and even to panophthalmitis. Of the remote complications the commonest are:—leucoma or corneal scar; anterior synechia or adhesion of the iris to the cornea; anterior capsular cataract, and staphyloma.

Treatment.

The treatment of all uncomplicated corneal ulcers consists in combating infection, and clearing away the *dèbris* and other necrotic material produced by the disintegration of the parts. It is in fact based on the treatment of an ordinary ulcer situated elsewhere in the body.

The conjunctival sac is washed out frequently with an antiseptic lotion such as boric acid 3% and a drop of 1% atropine solution, or a piece of the ointment of equivalent strength, is introduced into the eye.

For the majority of simple ulcers this treatment alone will suffice. For the hypopion ulcer, if the ordinary treatment fails it may be cauterised with pure carbolic acid or with the galvanocautery. If in spite of all treatment the ulcer threatens to perforate, it is better then that this should be brought about artificially by surgical intervention on the part of the medical attendant.

IRITIS AND IRIDO-CYCLITIS.

Anatomical Considerations.

The iris differs in colour in different individuals. It may differ in the two eyes of the same individual (heterochromia iridis), but this often implies a pathological condition. The surface of the iris is fairly uniform in colour and appearance and its pattern is clear and bright. On careful examination it will be seen to present a series of elevations and depressions arranged in a radiating manner. The pupil is normally round and regular in appearance and should be equal on the two sides. It should react briskly to light and accommodation. Lying in front of the iris is the space known as the anterior chamber, which is occupied by the aqueous humour. Inflammatory affections of the iris and of the ciliary body invariably involve the aqueous humour, and in fact it is by examining the anterior chamber under the modern method of "slitlamp microscopy" that we are able to detect a very early case of iritis or cyclitis even before these structures showed any gross pathological variation from the normal. Further

it is by judging the depth of the anterior chamber that we are able to obtain an indirect estimate of the level at which the iris diaphragm is situated. When it is shallow it signifies an increase in the intra-ocular tension, and when deep that the lens is missing or dislocated.

The ciliary body is a circular structure situated immediately behind the sclero-corneal junction, from which the iris takes origin. It has two main functions:—

1. Nutritive.—Through the aqueous fluid which it produces it serves to nourish the avascular parts of the eye—the crystalline lens, the vitreous body, and in a slight degree also the cornea.
2. Accommodative.—Through its attachment to the lens by means of the suspensory ligament (Zonula of Zinn) it causes an augmentation or diminution in the relative thickness of this structure and thus enables the eye to focus for a proximal or distant object as the case may be.

The two structures, the iris and the ciliary body, are so intimately connected that it is seldom that an inflammation of the one is not accompanied by involvement of the other. Hence in the so-called 'iritis,' the exact pathological condition present is in reality an 'irido-cyclitis.'

Etiology.

The causes of inflammation of this part of the eye are many and various, the commonest of which are:

The infectious fevers, syphilis, gonorrhea, 'rheumatism,' focal sepsis, etc.

Semeiology.

The subjective symptoms are: Diminution of the visual acuity, photophobia, which may be very intense, lachrymation and pain. The latter appears to be localised in the orbit and round about the eye rather than in the eyeball itself. Objectively, there is congestion of the anterior conjunctival vessels and ciliary injection. The iris itself when compared to that of the other side will be seen to be 'muddy,' that is to say, its delicate pattern "instead of being clear and sharply defined, becomes blurred and indistinct." The pupil is contracted and may lose its circular shape, becoming irregular in outline, owing to adhesions between its free border and the anterior surface of the lens. The tension of the eyeball is unaffected but may be increased at times, thus making it difficult to distinguish the condition from a case of acute glaucoma. Keratic precipitates (or "k.p." for short) may be seen on closer examination. They are deposits of exudation which become adherent to the posterior surface of the cornea.

Diagnosis.

Irido-cyclitis has to be distinguished from conjunctivitis on the one hand and from acute glaucoma on the other. It should be noted with

regard to the diagnosis of acute pathological conditions of the anterior part of the eye, that a greater or lesser degree of hyperaemia of the conjunctival vessels is always present. As this is the most striking feature in acute conjunctivitis, it is a common mistake to diagnose this disease merely on account of redness of the conjunctiva.

In conjunctivitis the discharge is purulent or muco-purulent depending on the severity of the condition and the type of infection present. Ciliary injection does not occur and the iris is seen to be clear and active.

In acute glaucoma the onset of the disease is more dramatic and sudden. The pain is severe and may spread over the whole of the affected side of the head; it may be so violent as to cause nausea or vomiting. The sight is rapidly lost, but it should be noticed that unless the other eye is also affected, this symptom is not as a ruled complained of by the patient. The cornea is hazy and insensitive to touch and there is marked ciliary congestion. The anterior chamber is shallow but the iris in itselt is clear. It should be noted however that owing to the oedematous state of the cornea through which the iris is seen, the latter may appear 'muddy' and an iritis erroneously diagnosed. The pupil is dilated, oval in shape, and inactive, and the intraocular tension is very much increased.

It will be seen that acute glaucoma has many points in common with iritis, and in fact there are occasions when even the most experienced find it difficult to arrive at an accurate diagnosis. Nevertheless it is very important that the nature of the disease be recognised in as much as the treatment of iritis and of acute glaucoma are diametrically opposite, and whereas atropine is the sheet-anchor in the treatment of the one, the same drug is simply disastrous to the other.

Treatment.

We are again guided here by the general principles in vogue in the treatment of acute inflammations in other parts of the body. Rest is obtained in the eye by the use of atropine which paralyses the ciliary muscle and dilates the pupil; it has another beneficial effect in causing the rupture of synechiae. Heat may be applied in the form of warm collyria or as hot fomentations. In the more obstinate cases blood-letting may be resorted to, by the application of leeches to the temple.

PULMONARY FORMS OF MALIGNANT TERTIAN MALARIA

by

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Two interesting cases of this condition have occurred recently at the British Military Hospital, Hong Kong, and it is because of its supposed comparative rarity, that it is thought worth while venturing to record a few notes on the subject.

In each case the clinical signs were suggestive of lobular pneumonia, while the Temperature Chart bore an undoubted resemblance to that of subtertian malaria.

CASE I.

He was admitted to hospital as pneumonia (?), complaining of the following symptoms:—

Severe headache, cough with expectoration and pain in the left side of the chest.

On examination it was noted that the patient was flushed and that the respirations were much quickened, the temperature was 104·6. A blood film was examined on the same evening for malarial parasites, with negative results.

The following day there was little change, cough very severe, physical signs of broncho-pneumonia were evident and there was probably a mild degree of pleurisy on the left side. There was no apparent enlargement of the spleen. The blood was cultured for possible infection with enteric group, and a further blood film examined and total cell counts done—no malarial parasites were seen, but it was noted that the total white cell count was 7,000 per c.m., a very low count for pneumonia.

The differential W.B.C., count, was not of any interest, apart from 4 per cent. Eosinophiles, and apart from the absence of a relative increase in the polymorphs.

Bacteriological Examination of the sputum showed the presence of Pneumococci, micrococcus catarrhalis, a bacillus morphologically and in its strong reactions indistinguishable from B. Pfeiffer.

The next few days saw no great change in the symptoms or physical signs, apart from the fact that the temperature, which was at first continuous at or about 104° line, was tending to become remittent in type, and also that drownsiness was becoming a feature.

He was now regarded as a definite case of severe broncho-pneumonia, possibly influenzal.

Headache still remained severe and was a constant symptom throughout the man's illness.

It was on the 6th day when the patient's condition was becoming very serious, that another blood film was examined and was found to contain parasites of malignant tertian malaria. A few cells were infected with the small ring forms, but most striking was the presence of large numbers of appliqué forms, (the minute, thin elongated forms attached round the edge of the red cells.)

Only with a particularly good film, and perfect light were these at all obvious, factors which possibly led to their being overlooked on the previous examinations.

Intra-venous quinine combined with oral administration very soon produced abatement of all symptoms, and eventual recovery of the patient.

An additional and incidental feature of the case was the passage per rectum of an adult ascaris lumbricoides. This no doubt being brought about by the patient's high temperature at time.

CASE II.

The second case of "pneumonia" was admitted shortly afterwards. He was very similar in type to the above, and it is therefore thought not necessary to go into details.

Again drowsiness and severe headache were noticeable from the first, and absence of obvious enlargment of the spleen. Here also after some negative blood films, M.T. parasites, similar to those described above, were found. Quinine soon cleared up all symptoms. "Rusty" sputum was a feature in this case which suggested a lobar pneumonia at one time.

In considering the diagnosis of these cases, there would appear to be three prominent features: —

(i). Resemblance of the temperature chart to that of Malignant Tertian Malaria. (It is regretted that the temperature charts are not available for publication).

(ii). Severe persistent frontal headache, much more pronounced than in ordinary cases of pneumonia, and very intractable.

(iii). Drowsiness: This symptom, though slight at first, came on with increased severity as the disease in Case I. progressed.

SUMMARY.

(i). The presence of Malignant Tertian Parasites in two cases of what appeared to be typical cases of pneumonia. They were of the small ring type and appliqué forms. Blood films require to be particularly well made, well stained, and examined in a good light.

(ii). Both cases reacted well to oral and intravenous quinine and convalescence was not unduly prolonged—No cardiac lesion was noted.

(iii). It is advisable to try quinine in all cases of the type described above.

AN INTRODUCTION TO THE SCIENCE OF CHIROLOGY: A FORGOTTEN BRANCH OF MEDICINE. *

by

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A wise man will listen to advice, accept the encouragement it gives, and follow it only in so far as it accords with reason and good judgment.

Chirology is the scientific study of the human hand, unblemished by witchcraft, or the so-called powers of the occult. It is no more an occult science than is the study of practical medicine. *Chirology* is divided into two main branches; *cheirognomy*, the science of interpreting the *shape* of the hands, and *cheiromancy*, the science of interpreting the *lines* of the hand.

Nature has endowed us with a most marvellous house in which to live, namely the human body,—but it has done something more—it has also presented each human house with an identification sign board, which can be read from the exterior of that house,—I refer to the human hand. This identification sign tells us what may be found within, what are the faults in this building, and also what are the goods points of this human house within which the owner of that particular signboard lives.

Ordinary physical signs in medical practice, however well known, may fail us in the critical hour, but the identification sign, when properly interpreted will never fail us. I again refer to the human hand with its shape and markings.

Medical men have neglected this wonderful science of medicine which since the days of Grecian fame, has almost become a lost art. This has been largely due to misconceptions, especially those of a religious nature. Even the Church must surely be challenged with the significient words from the original Hebrew of the Book of Job, Chapter XXXVII verse 7: "God caused signs or seals on the hands of all the sons of men, that the sons of men might know their works."

It is an established fact that no two hands are the same. This was first revealed to the World by *Bertillon*, the well-known French Criminologist, who introduced the finger-print identification

* Read by Professor Hoffmann, in Dr. Cannon's absence, at the Science Conference, held at the Ling Nam University, Canton, on Oct. 19th, 1928.

(Readers are recommended to study Count Louis Hamon's excellent works on this subject.)

test, which although then caused his name to be ridiculed, is to-day so valuable and universal, that the Great Scotland Yard of London, and the Criminal Intelligence Departments of all Countries, use this system daily and find it indispensible.

Even when the skin is burned off the hands or removed by an acid, in a short time the lines re-appear exactly as they were before, and this is true of all other marks on the hand, which have been shewn to be produced by brain or mental mechanisms, influencing the peripheral "corpuscles" found constantly and fixedly present in the palms of the hands.

Meissner in 1853 proved that these little molecular substances called "corpuscles" were distributed in a peculiar manner in the hand itself. In the tips of the fingers they number 108 to the square line, with 400 papillae; they give forth certain distinct vibrations, and are most numerous in the red lines of the hand, and strange to say are constantly found in straight individual rows in the lines of the palm. Experiments reveal that these vibrations could be distinctly detected in relation to each individual,—no two hands giving the same vibrations——These vibrations were also shewn to increase or decrease in every phase of health, thought, or excitement, and were extinct the moment the Angel of Death had claimed his victim. It is by a mastery in the detection of these individual vibrations that a blind man can identify a person who is dumb and so is unable to be identified either by sight or tone of voice.

In Paris many experiments have been carried out with blind people.

Sir Charles Bell also took up the study of these "corpuscles" and in 1874 demonstrated that each "corpuscle" contained the end of a nerve fibre, and was in immediate connection with the brain. This well-known doctor-scientist also demonstrated that every portion of the brain was in communication with these "corpuscles" through the nerve fibre, and more particularly with those found in the tips of the fingers and the "lines" in the palm of the hand——He showed that tendencies towards insanity could be foreseen.

Sir Thomas Browne in his "Religio Medici" says: "Now there are besides these characters in our faces, certain mysterous figures in our hands, which I dare not call mere dashes, strokes, *a la volcé*, or at random, because delineated by a pencil that never works in vain, and hereof I take more particular notice, because I carry that in mine own hand which I could never read nor discover in another."

Alexander the Great said, speaking of Chirology, "A study worthy of the attention of an elevated and enquiring mind."

The following men of learning were disciples of this great Science: Aristotle, Albertus-Magnus, Emperor Augustus, Cardamis, Paracelsus, and Pliny.

In spite of the denunciation by the Church of Chirology, it is extremely interesting and significant to note that almost the first book ever published was on this subject..... *Die Kunst Ciromantia*, printed in Augsburg in the year 1475.

Greek civilization has been, in days gone by, the highest and most intellectual in all the World, and it is from the Greek word, Xeip, the hand, that this study derived its name Chir - ology.

More recent authorities are those of D'Arpentigny and Adrien Desbarelles and St. Hill, and other members of the London Chirological Society. D'Arpentigny, a French Military Officer, was a frequent guest at the parties of a rich land owner and his wife, and having beautiful hands himself, was struck with the diversity of form in those of the other visitors. He noticed a marked contrast between the hands of artists and those of mechanicians, the fingers of the artist being smooth and tapered, whilst those of mechanician and scientist were invariably knotted (at the knuckles). It was upon this foundation he began to work and evolved a theory which was subsequently shown to be strengthened by experiment and observation, until eventually sufficient material was collaborated to form a Science. This, together with the great ancient Grecian art, now form this instructive Science of Chirology, as we know it to-day.

One outstanding fact in relation to physiology, anatomy, astrology, and chirology, is the Law of Periodicity playing a great role in these related sciences, and so in the life of man. Change and decay in all around we see..... seven years must pass, ... and so complete one period of this Law of Periodicity. It is an established fact that our whole human body is changed completely every seven years. This is more than a mere fluke. History also has its Law of Periodicity. So has disease: epidemics have periodic cycles. In fact, whether we like to, or want to, believe it or not, everything seems to be governed by Astrological phenomena (even to weather), even to the growing of grass.

Examine one's own career, and this Law of Periodicity is made self-evident. Look into History: Lord Kitchener's career was governed by this Law, when he was planning out the Egyptian Campaign, which resulted in his great victories of Atbara, and Omdurman in 1896 and 1897, are exactly the same for him in 1914-1915; and 1916 gives again the same radix number that in 1898 saw him receive a vote of thanks from both Houses of Parliament, and a gift of £30,000 from the State.

Gladstone, Maxmuller, Lord Russel, King Edward VII, and others, have been deeply interested in this fascinating study.

By a careful study of the contour and markings of the hand, we can gain a reliable and accurate knowledge of the following facts:—

(A) by the left hand the hereditary tendencies.

(B) by the right hand our developed tendencies, etc., as:

1. state of health
2. temperament
3. mental capacity
4. possible length of life.
5. likely illnesses and when.
6. possible happenings.

These are probably intended as *warning signs* also, for it does not imply that life must end at a certain date, nor that certain illnesses will come to pass, if one takes heed of those warnings and so *prevents* certain dangers from coming to pass. *It is providence that warns us.*

The Scientific explanation of such "warnings" is that years before a certain event occurs, it is being prepared for by the brain (Bell & others), and hence leaves its impressions *prematurely* (years in advance) on the palm of the hand and even on the fingers. These facts have been worked out by well known alienists and physicians, and is no theory or guess work.

By the shape of the hand we can learn of the individuals temperament and inclinations, and so form our judgment of a person's character, and suitability or otherwise. Scotland Yard have long since commanded the use of this science in criminology.

Certain lines, their position, length, character (whether straight, wavy, broken, chain-like, crossed, &c.), inform us of a person's mental capacity, and in what direction or directions that lies. The so-called "life line" is no mere myth, and is affected also by the circulation in the great palmer arch (blood-vessels) and hence is a true guide to fair judgment of how long a person will live *at the present rate and conditions of living. With changes, the "life line" also changes,* and so "fortune telling" is rather a misnomer to use in interpreting this science, which makes no pretence of being occult.

The "heart line" can inform us of the general condition, physically of the physical heart, and also mentally of the "heart-of-the-affections," (the "psychological heart").

The "head line" points to sanity or insanity (and its intermediate stages); mental concentration power or otherwise, and so forth.

The shape of the hand and fingers tells of a man's disposition, his general traits, his *true* nature.

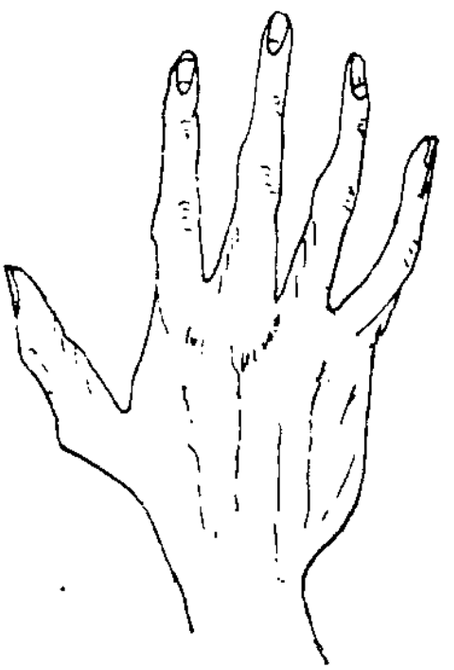
Now, how do we come to know all these things? The answer lies in the careful study of the above factors at length, just as one comes to a knowledge of anatomy, physiology, pathology, medicine, by a prolonged untiring study of the data involved in each study.

The *outline of the hand* can be classed according to type as:—

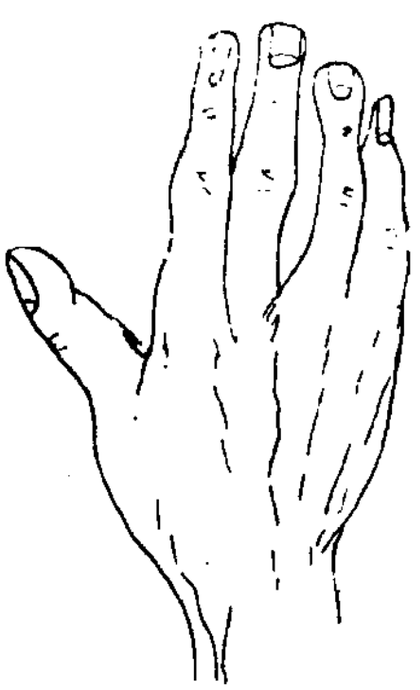
1. pointed 2. square 3. spatulate

The conical hand is a combination of spatulate and pointed varieties. These are roughly illustrated in the sketches below:—

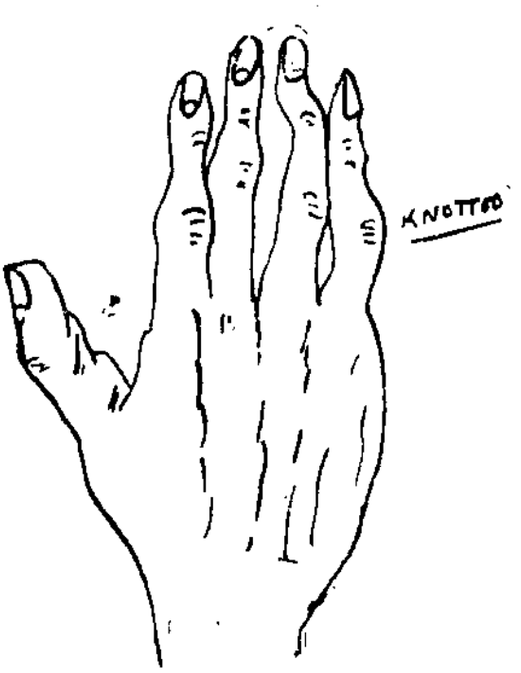
CONIC HAND.
(Artistic)
Emotional.



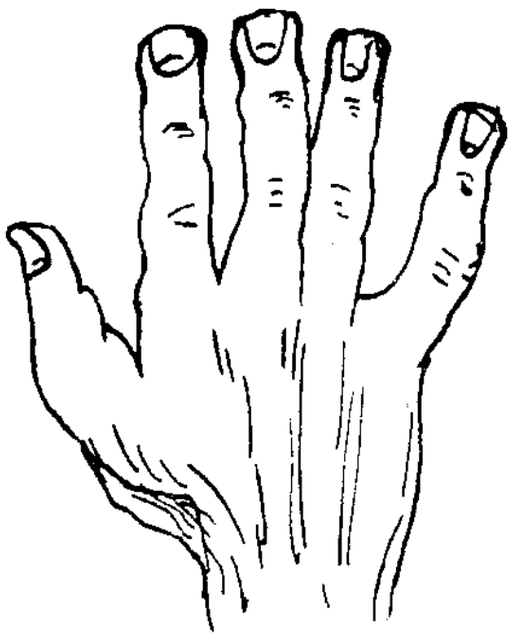
PSYCHIC HAND.
(The Idealist).
Theoretical but not practical unusualy constitutionally weak.



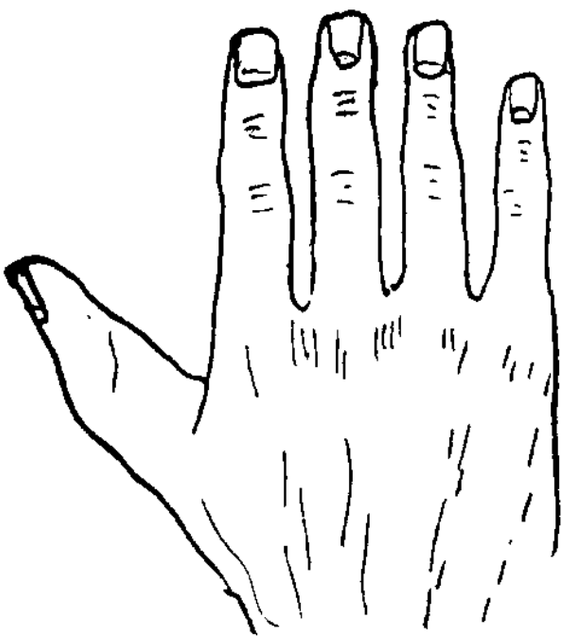
VERSATILITY Mixed Hand
"Jack of all trades and master of none"
(Of general use but varied mentality)



PHILOSOPHER HAND.
Great Church Workers &
Literary Tastes.
(Power of reasoning and thought, &c.)



SPATULATE HAND.
(Nervous highly intellectual person).
Originality & Great Capacity for Work.



SQUARE HAND.
(General manual and mental use).
Practical People.

The *pointed hand* indicates *thought.* The owner of this hand has power of origination but allows other people to carry out these (his) suggestions.

The *square hand* indicates *reasoning power,* analysis, enquiry, and very little ideal. The owner can trust nothing, and must have everything demonstrated first.

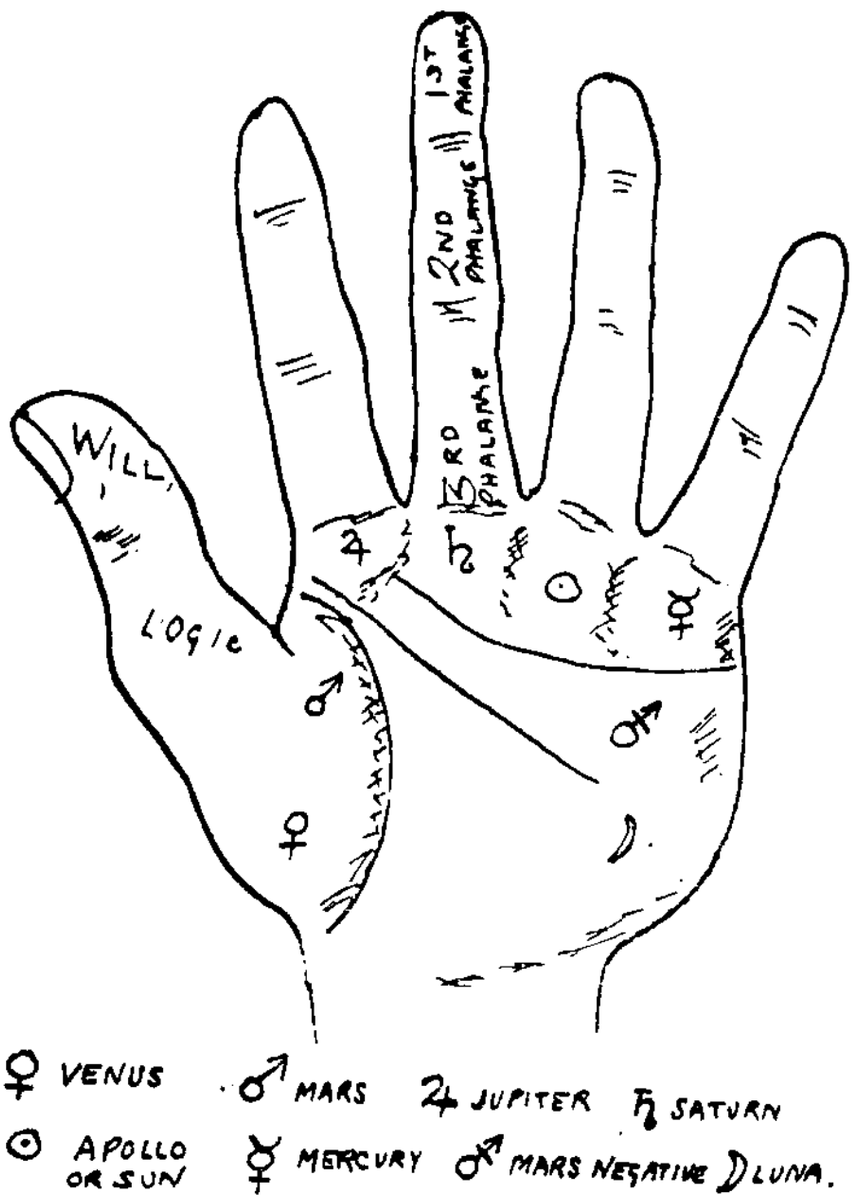
The *spatulate hand* is the property of the individual who is a *real active worker,* and likes change and variety.

There is usually a mixed type of hand, and fortunately so, for it will be seen that any single form would show a very unbalanced person. One type, however, usually outweighs all the others in this mixed type and so gives us the key to the door of character.

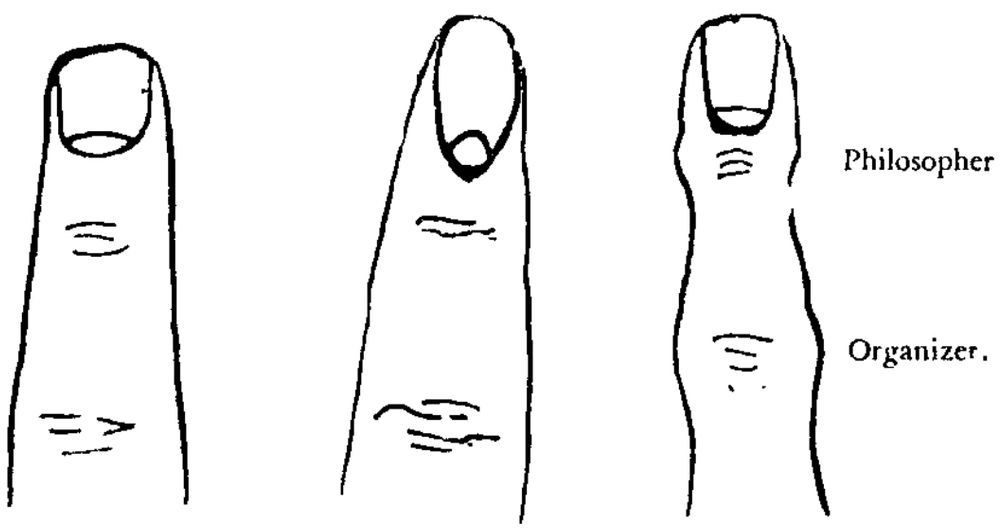
The *fingers* also speak volumes: *short* fingers indicate lack of detailed work, without analysis, showing hasty, impulsive and energetic temperament; *long* fingers show slowness of speech, action, and time in coming to any decision..... a fondness of detail, inquisitiveness, fidgetiness, and fastidious love of order.

To form a well-balanced character, the fingers and palms should be of equal length. The *palms* should be moderately wide, almost square, and this shows that the intellectual (upper half of the palm) and the material (lower half of the palm) natures, are equally developed and controlled.

The *mounts* symbolise the intellectual and spiritual side of man. They are seen in the upper part of the palm. The mounts in the lower half signify passions, emotions, and animal tendencies. This sketch shows the main topography of these in the hand:



Knots or highly developed finger joints are not a sign or rheumatic infection as a rule. The *first* knot is known as the *philosopher*..... showing powers of interrogation, investigation, and reasoning power on abstract subjects. See sketch below:—



Square Finger with smooth joints.

The Pointed Finger.

The Knotting Finger.

When found only on the "Jupiter" or *index* finger it reveals the *sceptic*, with freedom of thought, especially on religious matters. The *second* knot indicates order, and method, and powers of management, exactness and punctuality.

The *third* knot indicates good domestic qualities.

Absence of knots denotes rapid flux of ideas, spontaneous thought, *unchecked by reason.*

Space does not allow of expansion on these points, but if one will discuss the "pros and cons" of a hand for example with all three knots, with only two, or one, and consider their relative significance, it will amaze one how accurate the interpretation of these signs are, and how useful it is, to be able to readily know these facts. For example, a man of letters with a "knotted" hand will show little imagination in the writing of books. Biographies, histories and travels will be more within his scope than imaginary or poesy descriptions and plots.

A musician with the same form of hand will play correctly, but purely mechanically and will put no feeling or "soul" into his efforts.

Pointed and knotted fingers are less prone to enthusiasm, romance, and fancy, than smooth pointed, and are usually more practical.

Square tipped and knotted fingers show a tendency towards calculation, deduction and science.

Spatulate and knotted fingers indicate love of engineering, locomotion, navigation, and manual labour.

The contour of the fingers individually conveys much sound fact, for they are the principle index to capability and talent.

A straight finger, well-developed, and in proportion to the rest of the hand is a good sign. One of the signs of a successful person is to find the bases of the fingers nearly on a level with each other. A finger appearing lower than the rest loses much of its significance.

The fingers are labelled :—

1. Index : Jupiter . 3. Third : Apollo .
2. Second : Saturn . 4. Fourth : Mercury .

The *index finger* when straight, indicates strong sense of justice and honour. If prominently forward, leadership is desired. A falling back indicates shunning responsibility.

When short : no feeling of obligation or duty. A markedly bent index finger denotes lack of honour. A very long first finger shows a domineering and tyranical character, especially if the pollex or thumb be also long. Should the "jupiter" finger be pointed, a love of reading, quick apprehension, and intuition are shown. The square "Jupiter"

demands plain blunt speech, and truth. The spatulate "Jupiter" speaks of a dull perception.

The *second* or middle finger, when well-developed, points to a well-balanced nature. Too much length indicates extreme cautiousness, so much so, that these people throw most of their chances in life away. The short "Saturn" finger makes the owner lack prudence, and calculation, and shows that he (or she) is "head-strung." A pointed "Saturn" shows frivolity. A square second-finger shows prudence, reason, calculated decision. A crooked "Saturn" indicates morbid and apprehensive tendences. A spatulate "Saturn" shows activity mental and bodily , according to the other indications of the hand.

The *third* or ring finger ..... the finger of "Apollo" shows love of art and literature. If too long, the talents are directed towards the acquirement of wealth. When this finger is the same length as the middle finger, a love of gambling is revealed. With a good "head line" and a pointed Jupiterian finger, the person is inclined to literatery tastes. A prominently forward "Apollo" shows a tendency to art. The crooked "Apollo" shews that the individuals talent is directly chiefly to the acquirement of wealth, rather than devotion to duty. A pointed "Apollo" indicates artistic feeling, but nothing practical. A square "Apollo" reveals practical art or literary tastes. A spatulate "Apollo" shews dramatic talent, and love of colour.

A good little or *fourth* finger is essential to success in general. It should be on a level with the other fingers and be straight.

A lowly situated "Mercury" finger shews great struggle against circumstances, and if these are to be overcome the finger must not be crooked. A straight little finger shews capacity for using talents and opportunities. It is the key to the door of opportunity. The long and prominent "mercury" shews power to make one's way in this world without difficulty, even to the surmounting of all obstacles. A short "mercury" indicates reverse. A crooked fourth finger indicates lack of tact and diplomacy. A pointed little finger denotes tact. With such a shaped finger, deficiencies in other qualities will be made up for, as he will know how to cover his ignorance and quietly pick up information and use opportunities that come his way. A square "Mercury" tells of scientific reasoning and good perception. The spatulate "Mercury" speaks of capable management in all things.

The *thumb* is the most important member of the hand. The first phalange of the thumb when well-developed shows strength of purpose and reliability. The second phalange being proportionately sized shews that reason guides the will. A generous nature is indicated by a wide stretch between the thumb and fingers, and if at the same time the first phalange of the thumb turns backwards, the love of spending

money is evident. Should the "heart-line" be clear, the possessor will be philanthropic. Extreme care of money is indicated by a thumb situated close to the fingers. Dramatic talent is shewn by a turning back of the tip of the thumb. A too heavy type of thumb indicates a tyrant: a too slight type, a weakling. If low down on the hand, versitality is shewn, and the old proverb here is proved by experience "Jack of all trades and master of none." A clubbed thumb points to a brutal nature. A pointed thumb shews a liking for flattery and the possible influence of other people. A square thumb shews that reason controls the will. A spatulate thumb points to a decided opinion, obstinately maintained, particularly when the first knot is well developed.

THE THUMB.

(Brutal and like animals in their unreasonable obstinacy)

CLUBBED.

(Relies on tact and diplomacy to gain points)

WAIST-LIKE.

(Unconventional pliable nature broadminded)

SUPPLE-JOINTED.

(Lacks tact and relies on argument and reason)

STRAIGHT.

(A proposition is usually first refused and later agreed upon)

FIRM JOINTED

(Lacks most successful qualities)

ELEMENTARY.

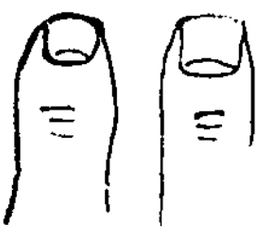
The Thumb represents the natural will power, whereas the Head Line indicates mental will.

The *palm* of the hand is a living book, describing untold valuable information to those who will study the "language" in which it is written. A *thick* palm betrays selfishness; a *thin* palm combativeness; a *hard* palm shews energy; a *soft* palm lack of energy; a *hollow* palm, a peaceful nature; a *wide* palm denotes tolerance and generosity of mind (if "hard" also, a love of outdoor occupation is shown); a *narrow* palm shews meaness, lack of consideration for others, and want of sympathy.

A nervous temperament is revealed by many lines on the palm.

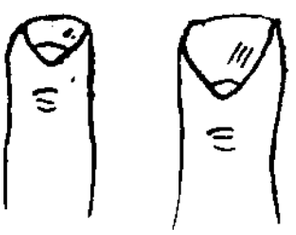
The *nails* indicate temper, and shew self-control or absence thereof. *Filbert-shaped and pinkish* show sweet temper; *filbert-shaped and red* a hasty temper; and *filbert-shaped and white* show slowness to anger, but unforgiving in nature. *Short red* nails passionate and irritable nature; *short, square-based* nails (with a high plain of Mars)—pugaciousness. See sketch :—

CARDIAC NAILS.



Short Square Nails indicate weak heart action.

NEUROTIC NAILS.



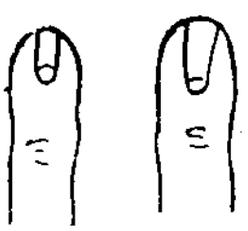
Shell Shaped Nails indicate a marked tendency towards paralysis.

RESPIRATORY NAILS.

Throat delicate.

Delicate chest, bronchial affection chronic.

Lungs delicate.



Long Narrow Nails indicate spinal weakness.

short roundbased nails indicate a critical, irritable, and non-passionate individual; *short round based white* nails point to the cynic; *large square based white* nails shew revenge that will await its opportunity; *pointed base* nails—easily offended.

A *short nail* on the little finger indicates mockery (and with other signs, the power of mimicry). These people soon discover peculiarities in others.

Large nails generally, shew good business qualities.

Exceptionally bright nails indicate rapid mental apprehension (when not due to manicuring).

Hard nails shew tendency to paralysis.

Fluted nails point to rheumatic diathesis.

White spots in nails reveal indigestion.

Very thin nails indicate a delicate person.

Highly curved nails speak of tuberculosis of the lungs.

Dents relate past illnesses.

The *phalanges* or digits or fingers themselves, are also informants.

The *distal* phalanx signifies pyschic or spiritual tendencies. The *second* phalanx gives the power of intellect. The *proximal* digit—the material world of "matter-of-fact."

The deductions are obvious and instructive, and indicate the relative tastes of a person, according to whether one or other phalanx is more highly developed than the next.

Applied individually: The Jupiter or *Index finger* with a long distal phalanx indicates psychological tendencies; the second phalanx shewing ambition; and the proximal digit the desire to rule. The Saturn or *Middle Finger* with a long phalanx tells of a melancholic nature; the second digit of love of agriculture generally; and a long proximal digit of economy.

The Apollo or *Ring Finger*: here the distal phalanx speaks of love of art, if well developed; the *second* phalanx of intellectual appreciation of art; and the proximal digit of love of riches, fondness of pomp and show, and of conceit.

The Mercury or *Little Finger* with distal phalanx of good size speaks of eloquence in speech (if too large it shows a capacity for lying). (Notice a lawyer's hand!)

Thumb: A well-developed distal phalanx shews constancy and firmness of will power; the second indicates power of logic; and the proximal, the emotional nature.

The *mounts* (see sketch), if overdeveloped are unfavourable, the good qualities becoming perverted. They are good when well placed, firm to touch, and evenly developed. The upper and lower mounts should be proportionately developed: the upper indicates intellectual qualities and the lower animal qualities.

Jupiter's mount shews love of Society, and self-respect. If in excess—snobbery, and absence shews selfishness and lack of self respect.

Saturn's mount indicates caution, and love of solitude: in excess—morbidness and fear, or mania, and if absent..... melancholy. *Apollo's* mount speaks of mercy, love of beauty, and desire for fame, in excess ..... ostentatious, likes variety, love of money or notoriety, and absence..... soft-hearted, overemphatuated with beauty.

Mercury's mount shews cheerfulness, hopefulness, wit, recuperative power, tendency to make light of ailments. In excess..... scheming, and absence..... no sense of humour.

Mar's mount speaks of moral courage, self-control and power of forgiveness. In excess..... reserve, and great power of resistance. If absent, ... no power of endurance.

Mar's negative mount (the soldier's mount) shew activity, aggressiveness, promptness, love of danger. In excess..... daringness; and if absent..... want of courage, and presence of mind.

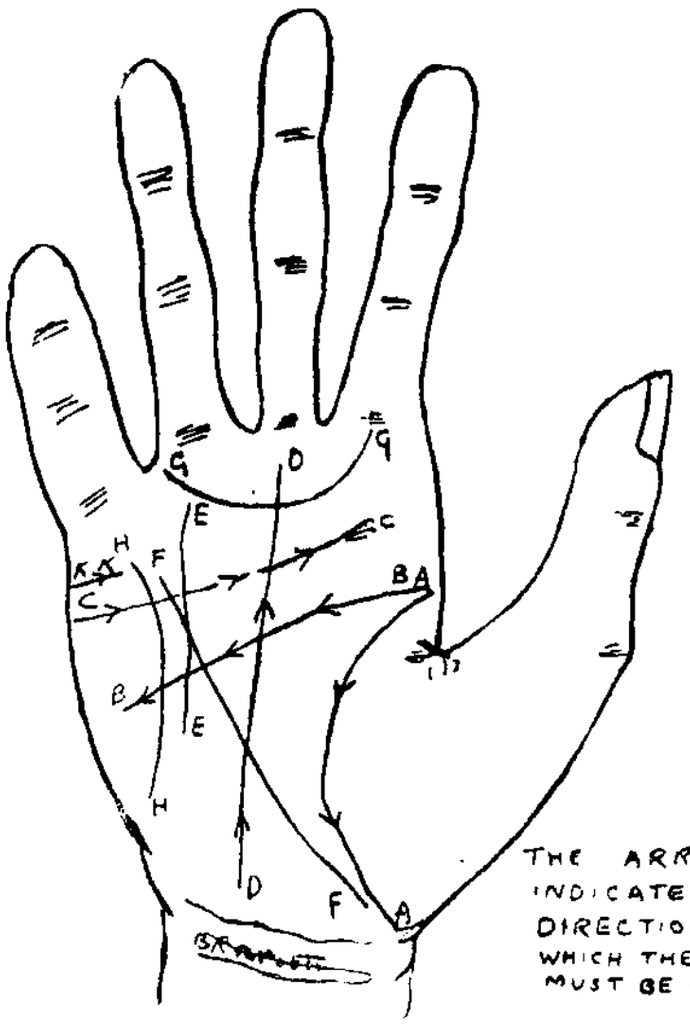
Luna's mount tells of imagination, sentiment, sympathy, love of charming surroundings: in excess..... delusions; and absence..... soul-less, and cold natured.

Venus' mount shews benevolence, demonstrativeness, love of melody. Excess..... sensuality; and absence..... selfish disposition.

Displaced mounts denote various qualities of character according to the direction they take, and the interpretation can be deducted from the foregoing.

Combination of mounts indicate certain qualities. Jupiter and Apollo together make a good ruler (justice and mercy go hand in hand). Jupiter and Venus combined indicate shining "society lights." Saturn and Mercury together make lovely company, but dull home-life. Saturn and Mars shew prudent and calculating persons. Saturn and Luna reveal apprehensive individuals, and so forth.

On the *palm* are engraved by the brain, *lines,* the principle of which are shewn here:—



A—A Life Line

B—B Head Line

C—C Heart Line

D—D Fate Line

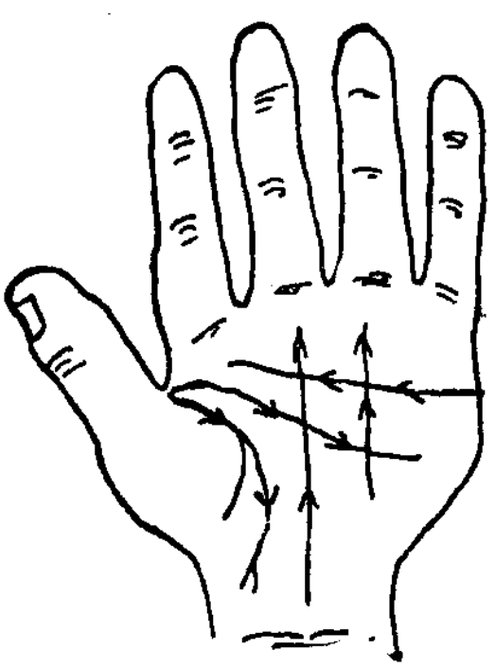
E—E Apollo or Sun Line

F—F Hepatic or Liver Line or Health Line.

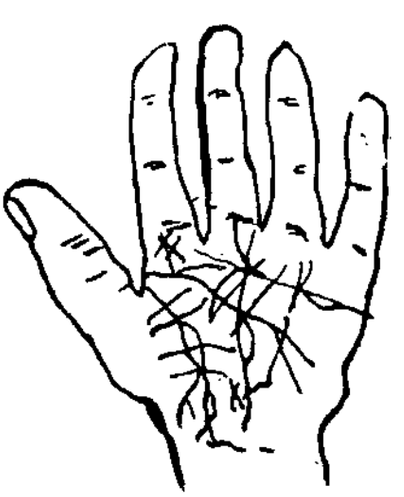
G—G Ring of Saturn or Girdle of Venus.

H—H Intuition Line

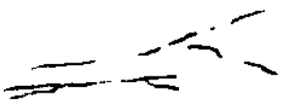
K—K Marriage Line.

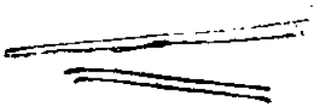


A Fortunate Hand

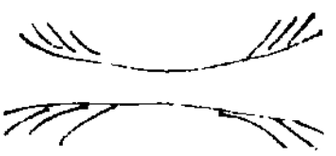


A Very Unfortunate hand.

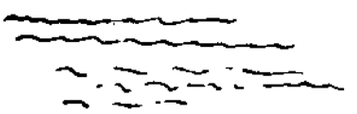
FORKED LINES  indicate good & increase of quality of that line.

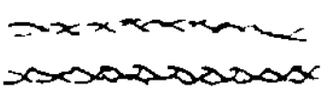
SISTER LINES  double the power of any line.

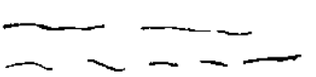
TASSELLATED LINES  Bad Sign: they indicate weakening of their particular line.

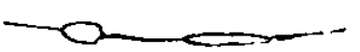
ASCENDING & DESCENDING LINES  denote increased energy.

denote decreased energy.

WAVY LINES  indicate uncertainty, lack of decision and force.

CHAINED LINES  lack of fixity of purpose and lack of force.

BROKEN LINES  destroy the meaning of the line at their particular location.

ISLANDS  denote weakness or failure.

Space does not permit me to explain all these lines in detail. Suffice it to say that the lines give accurate information regarding the organ or factor after which they are named, and the study is one upon which I could write interesting volumes. The hand of a labourer is usually devoid of lines, whilst the intellectual have abundance of lines. Hence it is quite evident that work does not make these lines, as some people imagine, but the brain alone.

A *cross,* or *triangle,* on the hand has its scientific interpretation, as have *"loop holes"* or rings, in the course of a line, just as have the *wavy, chained, or incomplete lines.*

THE CIRCLE — Indicates success or Honour when on the mounts, but misfortune when on the lines.

THE STAR — denotes fortunate career (Varies according to location as do all the other signs).

THE TRIANGLE — shows aptitude for scientific pursuits.

THE CROSS — speaks of misfortune except when placed on mount of Jupiter which indicate extraordinary fortunate affection late in life.

THE SPOT — is unfavourable: on Head Line indicates typhoid fever (if blue or black); red on mounts for wounds;
if white = deafness.
on Heart line, cardial weakness.

THE GRILLE represents an obstacle, according to location.

THE SQUARE indicates preservation.

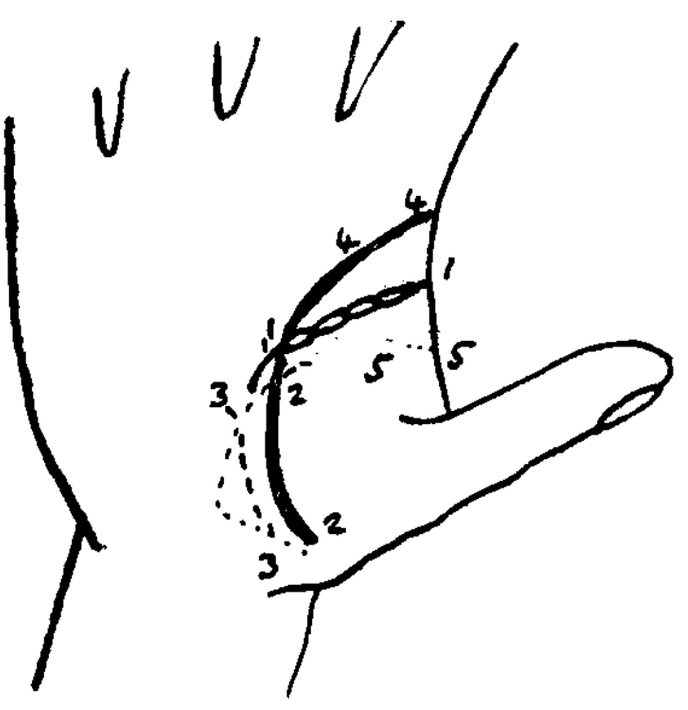
My own observations are that the minor markings on the hand are indicative of the cares and sorrows of this world, rather than the joys. My deductions are made from personal histories, and also physiognomy, and even perhaps natural intuition: pleasures do not leave their marks stamped on the face or hand in the same degree as misfortunes or calamities do. Witness the "care-worn" wrinkled face, the smooth care-free face: also with the hand the same is shewn.

It is interesting to note that *post-mortem examinations* of the hands of *the blind* have shewn that in the nerves at the tips of the fingers, cells of grey matter have formed, identical in substance with the grey matter of the brain, by which no doubt, the lack of vision was supplied, the extreme sensitiveness of touch enabling the man depriving of sight, to sense what he cannot see, indicating an extreme close connection between brain and hand.

The lines are not stationery, ...they grow, alter, fade, and re-appear. It will therefore be observed that it is not possible to foretell accurately the number of years that may be allotted to the person's span of life, nor with certainty of any coming event, although many predictions deduced from indications found on the hand do fulfil themselves. It should also be remembered that the indication of a forthcoming disease or disaster is there, in order to warn us and so try and avoid the danger in the future.

An outline study of the principal lines is given below:—

LIFE LINE VARIATIONS.



1—1 = Tendency to ill health.

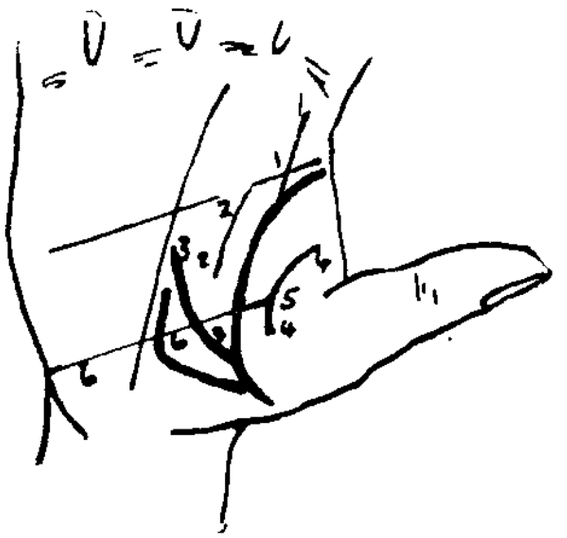
2—2 = Delicate constitution and less force of animal magnetism.

3—3 = (Either Route) A more strong constitution.

4—4 = Much control of self.

5—5 = Little control over temper.

INNER LIFE LINE (Sometimes called Line of Mars).



1—1 = Desire and ambition to rise in life.

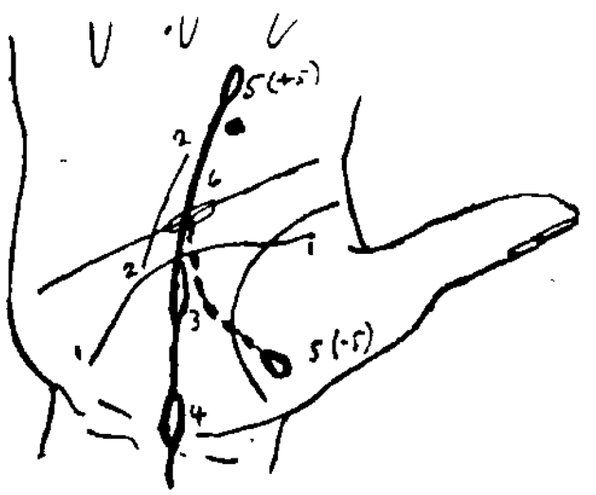
2—2 = Stupidity or error of judgment.

3—3 = Gives two distinct dates: the first when this line leaves the Life Line; the second on the Fate Line. A sign of success.

4—4 = (Re-inforcement of Life Line; Inner Life Line) indicates great vitality, and resistance to disease.

5 = Foreshadows intense craving for excitement.

6—6 = A *different kind of fate, from the time of its commencement.*



1—1. Influence that turns to hate and will injure the persons career.

2—2. Leading a "Double" Life.

3. A bad sign.

4. Some mystery concerning commencement of career.

5 (—5). On a woman's hand indicates seduction.

6. Loss through own stupidity or lack of intelligence.

5 (+5). Career will finished in poverty and despair.

The *line of life* commences under Jupiter and encircles the mount of Venus. In the left hand, the inherited constitution in shewn, and in the right hand illness gone through and those that may occur. Compare both hands before warning oneself of any coming illness or liability to disease.

The life line should be long, clear, unbroken: this will denote a long life, and freedom from illness. A break in the continuity of the line indicates an illness, or great debility. If in both hands it is accentuated. Note that if care be taken during the period when the line is broken, it will mend itself, and so illness will be avoided. When the life line is short it does not necessary mean an early death, but points to necessary caution at that age.

The most sure sign of the date of death is the stopping of all the principle lines at the same date. A duplicated life line denotes great strength and stamina and with a high mount of mercury, great recuperative power.

Small lines crossing the life line indicate family illnesses or family troubles. A chained life line indicates a prolonged period of ill health. A forked ending denotes loss of vitality. A star or cross ending denotes sudden death by accident. If a branch is sent to the mount of Luna, along residence abroad is foreshadowed.

The *line of the head* usually commences with the life line and proceeds from the radial side to the lunar side of the hand. Information regarding intellectual powers or

capacity is given here. If long and sloping, mental activity and imagination are indicated and not necessary intelligence. The deeper the line, the greater the power of concentration. If short at the same time, the person's concentration is confined to certain subjects. Excessive sloping indicates eccentricity. A straight head line denotes good practical common sense, and if long as well, that money is the main object in life. A duplicate head line indicates interest in some study or pursuit as a hobby. When forked, diplomacy is shown and a tendency to twist the truth. If accompanied by a long little finger, the person has a notorious capacity for lying. The nearer to the middle line of the hand the head line remains joined to the life line, the more slow is the development of the mind, and the more the lack of self confidence.

When the head and heart lines are far apart, audacity, independence and rashness are indicated.

For the head and heart line to be joined is not a good sign: it indicates physical weakness of brain or heart and also a struggle between the persons desire and his better judgment.

It is strange to say that such an occurrence is frequent in highly intelligent persons, and seldom in those of little narrow minded individuals. When the head line is "islanded," weakness from over-study or delirium, is inferred. A chained head line shows instability. Should this line cease at the fate line, trouble or arrested development are suggested. A "feathery" head line reveals mental strain.

A STUDY OF SOME HANDS, IN BRIEF.

HEAD LINE VARIATIONS

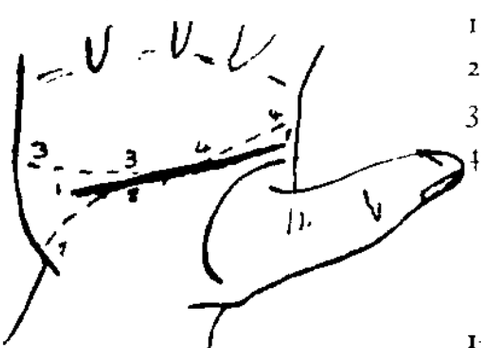
1—1 = Distinct control over the imagination.

2—2 = Sensitive person but has great courage of his opinions.

3—3 = (Forked) want of decision.

4—4 = Slave to his imagination

5—5 = Morbid forbodings.

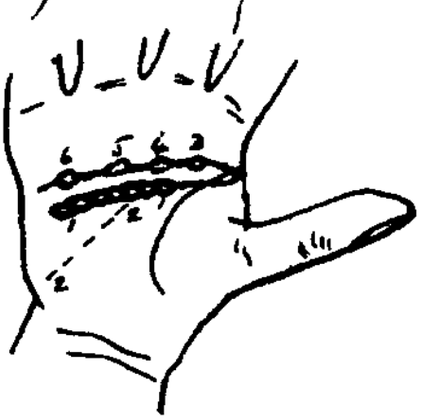


1—1 = Lack of caution and sensitiveness.

2—2 = Full of imagination.

3—3 = Self-appointed leaders and organizers.

4—4 = An excellent balance of temperament.



1—1 = Insanity—or marked tendency—usually produced by ill-health.

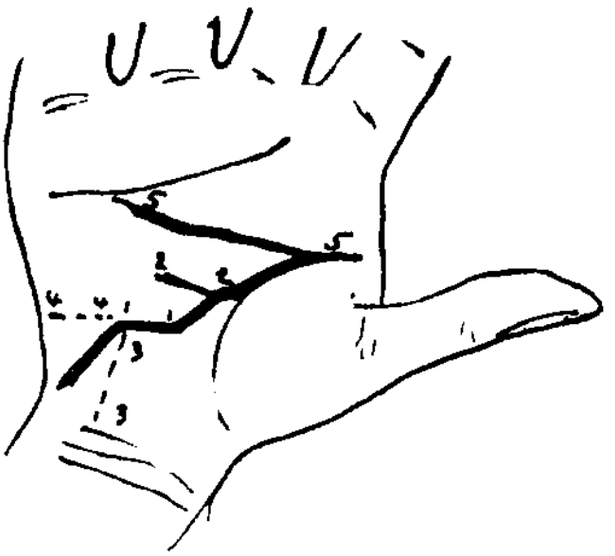
2—2 = Inclined to fits of depression and melancholy.

3—3 = In early life was delicate mentally, had no will-power, no ambition, &c.

4—4 = Suffers from morbidness, melancholy, perhaps headaches, and tendency to basal meningitis.

5—5 = Tendency to suffer from weak eyesight & myopia. (More marked may indicate possible blindness later).

6—6 = Senile dementia and a highly nervous and worrying disposition.



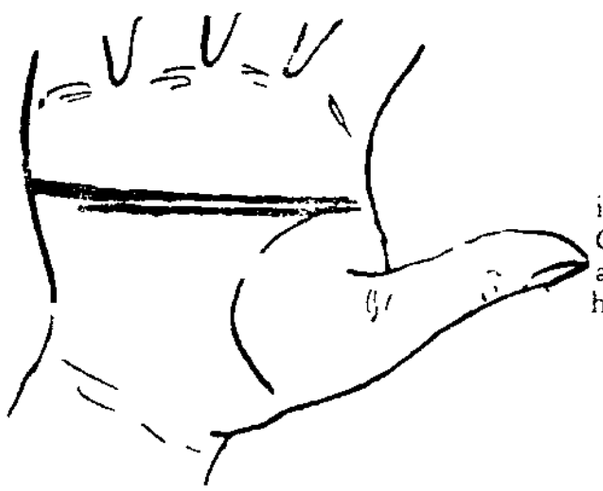
1—1 = Unusual strain upon person at that period of life.

2—2 = Person tends to cultivate the practical side of his nature.

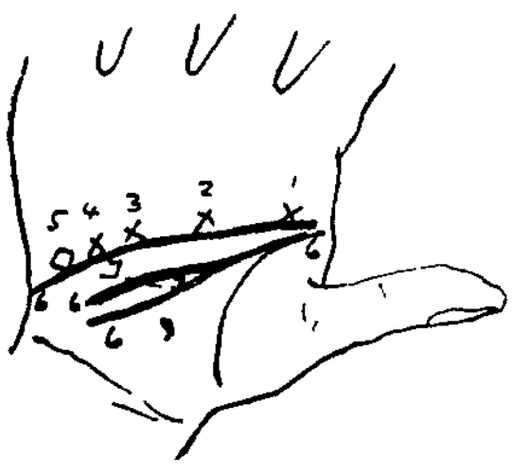
3—3 = At that date individual has become less practical.

4—4 = The longer the person lives, the greater will be his desire for money.

5—5 = Person will develop an enormous fixity of purpose for some one desire.



Double Line of Head denotes tremendous intensity of character, for good or evil. Great power of concentration, (if fixed on any purpose, it would be united with his heart nature).



1 × Brought about by blows caused usually by the subjects desire to rule and be tyrannical.

2 × Indicates injuries to the head from accidents.

3 × Concussion of the brain, &c.

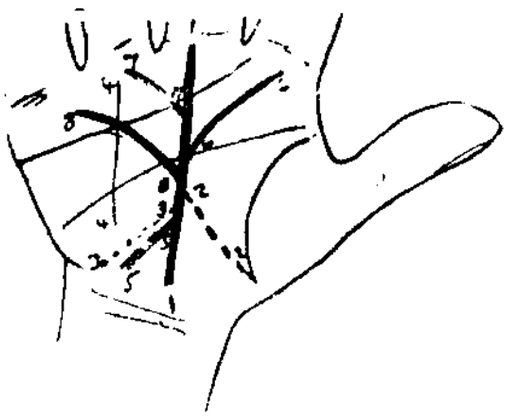
4 × Injuries to the head due to accidents produced by scientific experiments or hazardous business venture.

5 ⊐ A sign of preservation, relating to the particular qualities of the mount under which they are found.

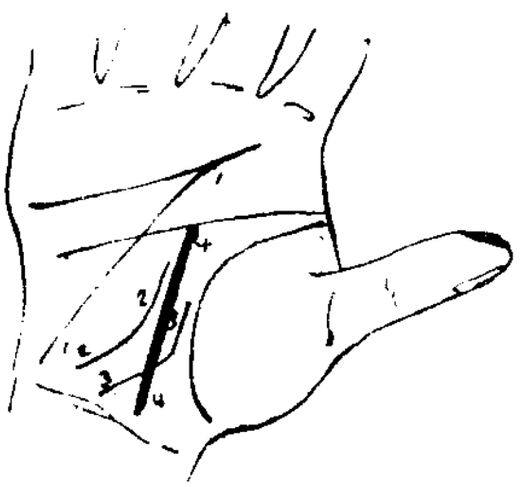
6—6 = (*double lines*) dual mentality, capable of an enormous amount as mental work.

7—7 = Dual mentalities which act independently of each other.

LINE OF FATE & DESTINY VARIATIONS.



1—1.—Brilliance.
2—2. Success made by personal effort.
3—3. Eventful and changeable life.
4—4. Luck, success and brilliance, extremely good career.
5—5. Some outside persons influence has helped the owner.
6—6. Power of command over others and responsibility.
7—7. Success in direction of riches and public life.
8—8. Success in direction of some special achievement in science or commerce.

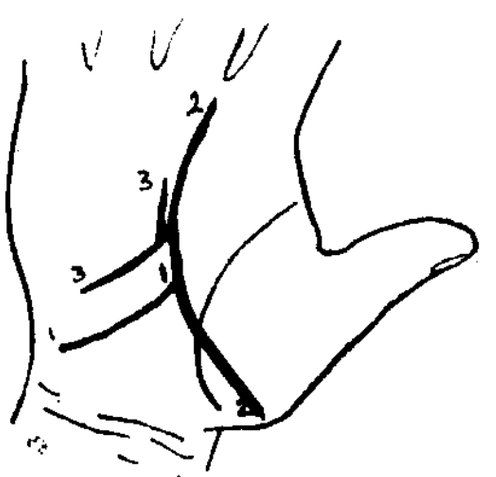


1—1. Happy and prosperous marriage.

2—2. Other persons life remains distinct.

3—3. Person whose influence it shows will only be attracted by personal ambition.

4—4. Career will be spoiled by owners own stupidity and misjudgment.



1—1. Career of romance and passion.

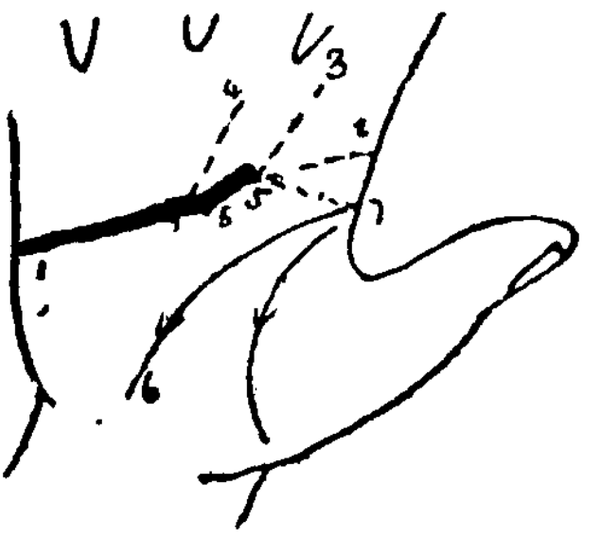
2—2. Passionate love affects whole career.

3—3. Indicates marriage at date of junction.

The *line of the heart* commences under the Mercury mount. It proceeds in the direction of Jupiter's mount, and shews capacity for affections of the heart in the dual sense of the word. A narrow long, clear, and branched line is best especially when placed low down in the palm, as it indicates high ideals, and loving disposition. If close to the fingers, an exacting and jealous nature are certain. Should it rise up between Jupiter and Saturn's mounts, devotion and feeling are excessive. A Jupiter ending shews ideal love, but if the line passes through the mount, passion even leading to crime is likely. When short, selfishness is evident. Branches on this line shew friendships and crosses in these branches indicate disappointed friendships.

No line indicates no love, but isolation. When there is a branch from the heart line down to the life line, the loss of a much loved friend is shewn. When forked, affection and trustworthiness are certain.

LINE OF THE HEART VARIATIONS.



1—1. Affectionate disposition.

1—2. Jealous.

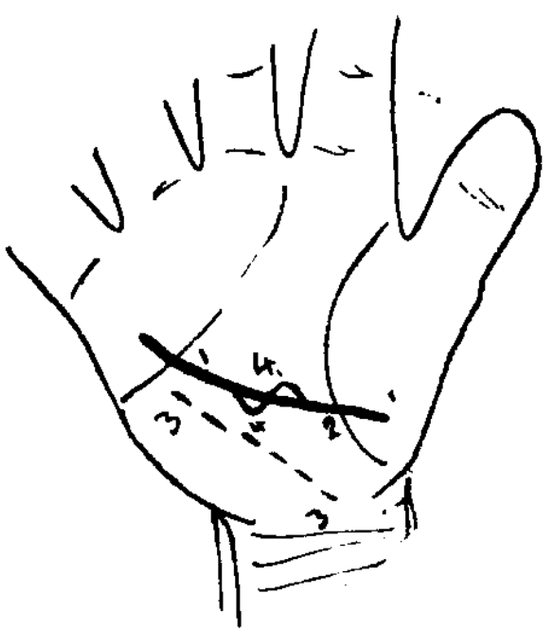
3. Calm but deep affection.

4. Selfish in affections.

5—5. "A law unto himself" he knows everything (he thinks he does and usually does not know).

6. Imagination will run away with itself where jealousy is concerned.

HEALTH LINE VARIATIONS.



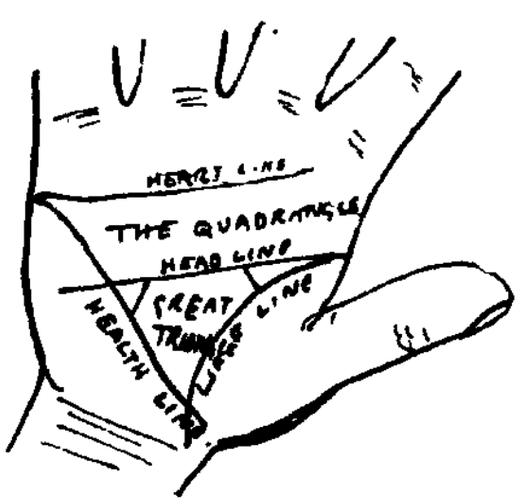
1—1. Moderate health.

2. If line joins Life Line indicates climax of illness, for good or bad.

3. Good health.

4—4. (S line) Phthisis (Tuberculosis of the Lungs).

THE QUADRANGLE & THE GREAT TRIANGLE.



THE QUADRANGLE when so-shaped and well marked denotes level-headedness in all things.

If Narrow: Narrowness of mind.

If Very Wide: Lack of judgment, and views of life too loose.

THE GREAT TRIANGLE: The larger the trangle, the better the health. More health, more life, more freedom. The more acute the angle between the Head and Life lines, the more nervous is the owner.

A dual line indicates recuperative power. The distance between the head and heart lines shews:—

(a) when wide: broad mindedness.

(b) when narrow: narrow mindedness.

(c) when narrowed, but tending to widen towards Mars, the ideals and interests are capable of developing.

No heart line means a hardened nature (in every sense of the word) although by aid of his selfishness, the owner of that hand is usually successful.

The *line of fate*. By this line life's events are portrayed, with its ups and downs and possibilities. This line may commence from the wrist, life-line, luna, or the plain of Mars, or may be absent. Absence indicates a very uneventful life. From Luna and and proceeding in the direction of Saturn, the powerful influence of others is revealed, and in a woman's hand, may be an indication of marriage where the man controls her. From Luna to Jupiter points to improvement of social position, by someone outside the family. The stopping of the line of fate, and then a branch rising from it shows change of career, and the direction points to the kinds of change as indicated by the mount to which it goes. When this line starts from the life line, the person is a "home bird." A wide separation between the fate and life lines indicates independence or early responsibility. Should the line only commence on Mar's mount, success will occur *very* late in life, after great struggles for existence. Uncertainty of career is indicated by a wavy line. Lines running across the fate line represents obstacles in the path. If these lines come from the radial side of the life line, deaths of relatives are likely. A doubled fate line speaks of improved position: when two lines are close together, the change will be in the same career, and when farther apart, usually a change of career. When chained, trouble is indicated. If it ceases at the head line, the career will be badly affected by misjudgment.

Branches from the fateline in the direction of the wrist indicate reverses, and when towards the fingers new interests in life. Towards Jupiter, great social position acquired, and if pointing to Apollo, fame or riches; in Mercury's direction success in science or commerce.

Time is measured in two ways:—

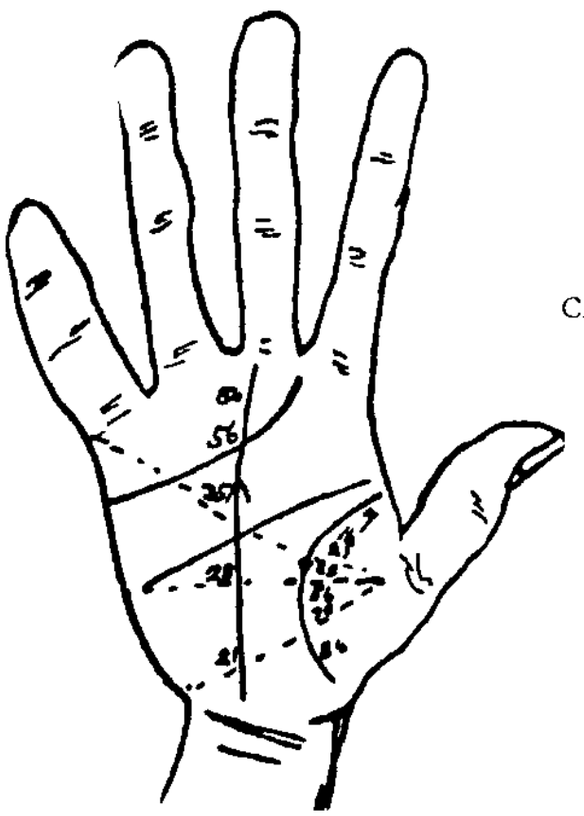
(1) An imaginary line across the centre of the palm is reckoned as 30 years of age. Ten years stated to be indicated at the level of the base of the thenar eminence: and 50 years of age at the level of the pads or mounts on the hand.

(2) The hand is divided into its periods of *seven* years (as the body completely changes every seven years). This is the only scientific and accurate method.

It should be clearly understood that this study is intended purely as a medical science, all data having been carefully founded on fact and deductions as a result of years of careful and detailed study of this subject, by many of the best physicians and alienists of our day, and preceeding generation.

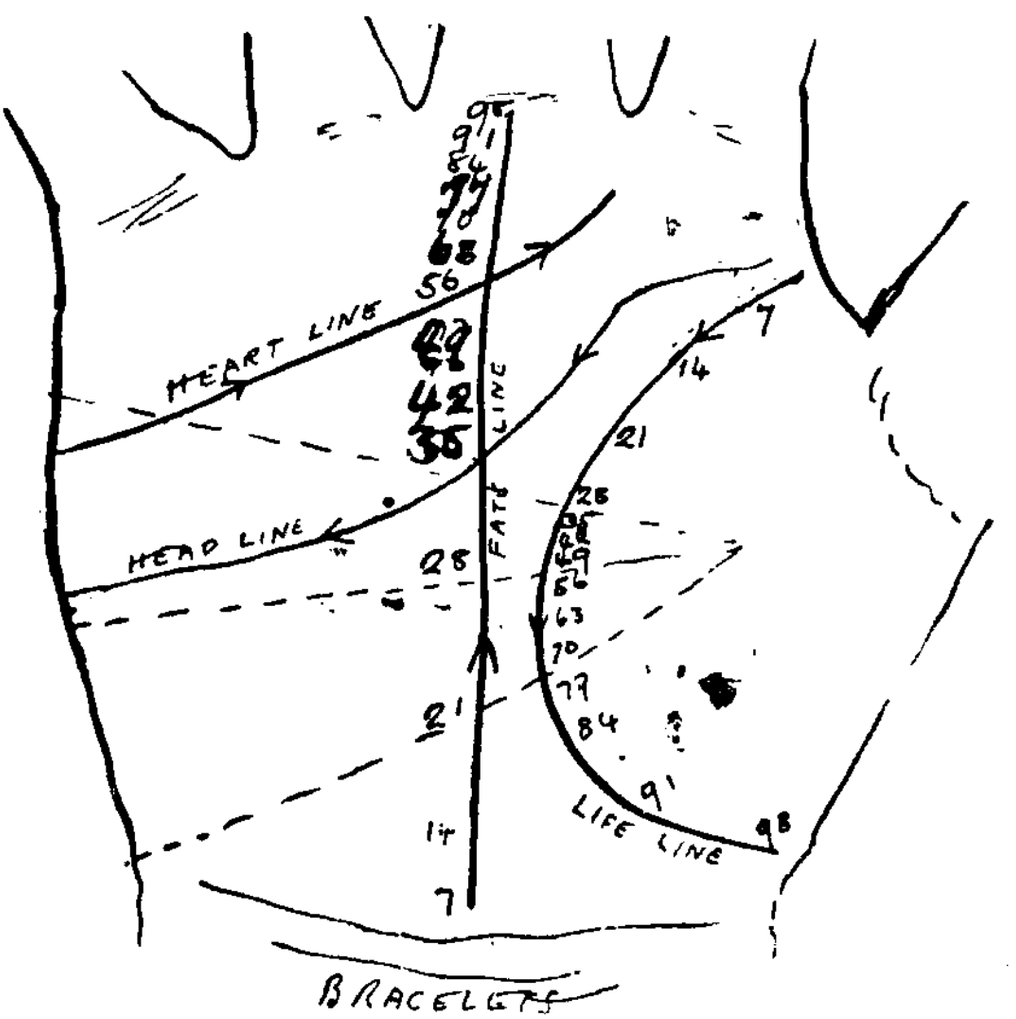
It is perfectly correct to state that a careful examination of the patients hand will enable very doctor to "read" his patient "like a book," and so frequently obtain information about a patient which he could not find out by other known means. Above all we should study our own hands, and so learn of our own faults, and correct them.

Nature never made anything that was unnecessary (even the much abused appendix vermiformis, which has been proved to be of use in infection, and dealing with carbohydrate assimulation: a vegetarian having usually a long appendix, and a carniverous or meat eating individual, a short one). So the contour of each hand and the lines



CALCULATION OF AGE & TIME.

PALM OF RIGHT HAND.



Marked out in seven year periodicity according to the method of science.
(The numbers denote years)

thereon come as a challenge to us, direct from mysterious Nature..... call it what we will..... as even the Creator Himself challenges us saying, "Man..... Know thyself."

I have laid myself open to much criticism in writing on a subject which has been so much abused by "quacks," "Palmists" and "Fortune Tellers" ..... but someone must come forth as a pioneer in bringing an important subject like this into its worthy scientific position, as a recognised study of medicine, and therefore criticism does not worry me in the least, as a man who is certain of his ground, and stands by his convictions, will always weather the storm.

The day will come when Chirology, was well as Psychology and Psycho-therapeusis, will be foremost in the studies of medicine, the handmaidens of which will be anatomy, physiology, pathology, and Surgery (living pathology), and Medicine itself.

Every Criminologist, Medical Practitioner, Educationalist, and Employer of Labour, should master this subject which has been almost buried in the dust as a lost branch of Medicine, a knowledge of which assisted the great civilization of the great Egyptian and Grecian peoples in the now dim ages of the past, to reach a stage of advanced civilization which we have not yet reached, nor will we, unless we use our brains to gain a knowledge of the everyday facts of life, and know how to deal with persons and things, an insight of which can only be gained by a masterly study of this very ancient Science of Chirology, of which I have only given you an introductory outline. It is by a mastery of the study of man's hand, that we shall find the key to the mastery of man's mind. The master hand speaks to us of a master mind.

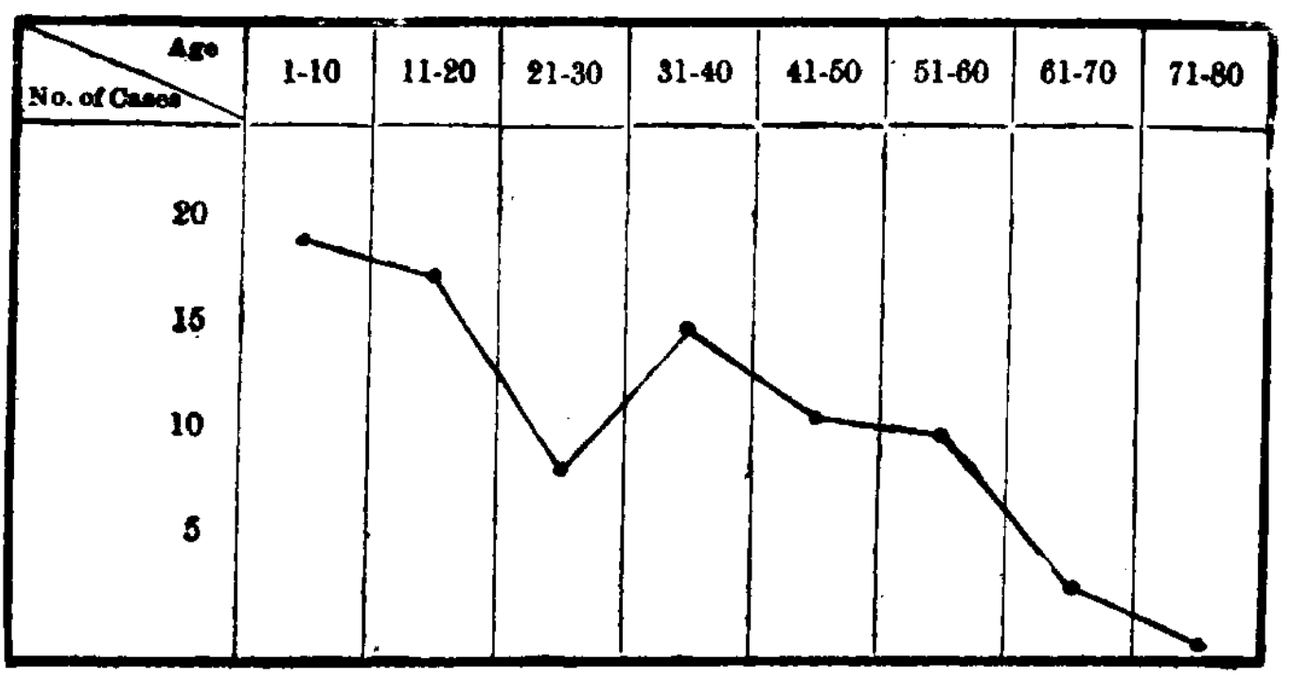
VESICAL CALCULUS.

by

C. H. Chee,

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

Vesical Calculus is not an uncommon occurrence in this part of the world. It is comparatively rare among women probably due to shortness and large size of urethra allowing small calculi to pass much more readily. In this collection of 88 Chinese cases * operated by one surgeon in the Hong Kong University Surgical Clinic during the past 12 years, three cases were females and 85 males giving a proportion of 1 in 28. The youngest patient in our collection was 2 years old whereas the oldest was 72 years of age. The condition was commonest in the first and second decades of life. The frequency at different ages is shown in the chart below.



Symptoms. The patients usually present themselves with Chronic urinary symptoms except in those cases where the stone is impacted and is blocking the urethral channel (we are not including any of these cases of urethral calculi). In our statistics of 88 cases 59% had a history over 1 year; 11% between 6 months and 1 year 21% between 1 and 6 months and 9% between 12 hours and 16 days.

The following symptoms were recorded in order of frequency but these frequencies are perhaps underestimated as in some cases the ward clerks may have omitted to elicit them when present.

* These 88 comprise 61 cases previously recorded by Dr. T. Y. Li and 27 fresh cases now detailed.

(a) Pain is recorded in 88% of cases. The pain is usually referred to the perineum, neck of bladder or glans penis but seldom radiates to the back and down the thighs. It is usually at the end of micturition.

(b) Difficulty of micturition is recorded in 63% of cases. The patient may complain of difficulty in making a start, or the urine comes out in small streams or in drops or the flow may be suddenly stopped and continue only after some change of position.

(c) Haematuria is recorded in 49% of the cases at one time or another during the course of the disease. It may either be at the end of micturition or uniform but is usually not profuse.

(d) Frequency of micturition is recorded in 28% of the cases The frequency is usually diurnal.

(e) Passage of gravel is recorded in 16% of our cases.

(f) Renal colic is recorded in none of our cases.

Complication. Albuminurea is recorded in 61% of our cases. Slight irregular temperature is recorded in 41%. Incontinence of urine in 2%.

Enlargement of prostate. This is only found in elderly male and is less common in Chinese than in European. It is recorded in 1% of our cases.

Retention of Urine and Herina. Each is recorded in 1% of our cases.

Diagnosis. The most convenient method of making a diagnosis is perhaps by means of radiogram. It avoids discomfort to the patient and also enables the surgeon to be sure of the presence, the number, shape and size of the stone. Unfortunately some stones cast no shadow with the X-rays though this is very exceptional. As an example we quote the following case.

Case No. 217/28 C.M.W. M 46 admitted on 4th July, 1928 for pain during and after micturition. He was sent for X-rays on three separate occasions but there was no shadow of stone in the radiogram. On sounding under local anaesthetic a characteristic metallic click was felt and heard; and a cystoscopy the stone was seen about the size of hen's egg. Suprapubic cystosomy was decided upon and the stone taken out.

I wish to thank Dr. S. Y. Wong of the physiological department for the analysis of the stones which turn out to be the following :—

Translucent stone.	*Opague stone.*
48·7% Uric acid	20% Ammonium Urate
50 % Xanthine	80% Calcium phosphate

Treatment. As far a treatment is concerned, litholapaxy, whenever possible, should be performed. This operation undoubtedly takes a longer time in comparison with suprapubic cystostomy but the average stay in the hospital is shorter, and, what is especially esteemed by the Chinese patients, it leaves no scar. The time taken for operation varies with the size of stone usually being between 45 minutes and 2¾ hours and may involve in the long cases as many as 600 crushes. The length of time is a distinct drawback to the surgeon and the long general anaesthetic is a serious matter to those who have constitutional disturbance.

For the latter, however, we have recently been successful in perperforming litholapoxy under local anaesthesia. The Professor of Surgery of Hong Kong University initiated the method of dissolving the anaesthesia in the lubricant: thus with every instrument passed more anaesthetic is applied. This anaesthetic consists of 2% solution of novocaine in glycerin with 2% of pot. sulph. added as an adjuvant. Pot. Sulph., however, is not soluble in pure glycerin but glycerin absorbs water from the atmosphere. Whether it is possible or not to make 2% solution of pot. sulph. depends on the amount of water contained in it. The anaesthesia is boiled before use. A drachm of the solution is injected into the urethral opening by means of asepto-syringe, 5 minutes being allowed for the local anaesthetic to act; care being taken not to let the solution flow out. At the end of this time a medium size sound is passed into the bladder in order to dilate the recesses (Lacunae) and also to ensure that the solution reaches the posterior part of the urethra. This process is repeated three times and the last injection being into the bladder itself. In the case mentioned the stone measured 2½ x 1¾ inches, the operation lasted 2 hours and 10 minutes with 600 crashes. This patient did not feel any discomfort beyond some distention of the bladder. Nine days later patient was again cystoscoped by means of the same local anaesthetic so as to ensure that there were no fragments in the bladder.

As regards the technique of Litholapoxy and the comparison with supropubic cystostomy and perineal lithotomy we beg to refer our readers to an article by Professor K. H. Digby and Dr. T. Y. Li in the *Caduceus* (vol. 4, No. 1) where the first 61 cases of our series were recorded.

Result after operation:—

Litholapaxy.

Temperature is recorded in 70% of cases

Average duration 3 days.

In 70% of cases, the temperature was not more than 100° F. and in only 5% between 102-103°.

Haematurea is recorded in 25% of cases. The urine is tinged with blood with an average duration of 2 days.

Pain is usually slight referred to the suprapubic region. It is recorded in 10% of cases with an average duration of 3 days.

Days of stay in hospital after operation. The minimum stay was 1 day and the maximum 18 days giving an average of 9.51 days. In most of the cases we keep patients in hospital longer than necessary for the purpose of observation and recystoscopy.

Mortality. The mortality was nil in 43 cases performed by one surgeon.

Suprapubic cystostomy.

Temperature is recorded in 74% of cases.

Average duration 3 days.

In 50% of cases the temperature was not more than 100° F. and 8% between 102° F. - 103° F.

Days of stay in hospital after operation.

The minimum stay was 16 days and the maximum 76 days giving an average of 32.4 days.

Mortality. There were 3 deaths in 45 cases performed by one surgeon i.e. a mortality of 6.66%.

We do not think any of our cases in either series have come back to us with recurrence. Doubtless there have been recurrences which went to other hospitals.

Analysis of three deaths.

I. Case No. 318/17 L.N. M.17 admitted on 22/10/27 for recurrent vesical calculus. On admission there were extreme emaciation, stricture of urethra, multiple fistulae through which the urine dribbled, pelvic cellulites and bilateral hydronephrosis. The suprapubic fistula was enlarged and the stone extracted. Patient died 33 days after operation due to renal insufficiency.

II. Case No. 191/27 C.W. M.66, admitted on 29/4/28, for incontinence of urine. Besides a vesical calculus patient had enlarged prostate, mitral regurgitation and chronic bronchitis. Suprapubic cystostomy was decided upon and the stone extracted. Three further operations were performed by another surgeon. The patient died 151 days after the first operation.

III. Case No. 209/28 C.H.K. M.60, admitted on 11/6/28, for recurrent vesical calculus. Urine was being passed partly per rectum. Suprapubic cystostomy under local anaesthesia was performed and it was found that the sone ulcerating into the bladder. Faecal matter was continuously discharged from the suprapubic wound and patient died 73 days after operation.

* Result of operation of other authorities.
Litholapaxy.

* The above statistics were taken from "The operation of Surgery" by R. P. Rowlands and P. Turner.

Cases of Vesical Calculus.

Case No.	Age	Operation	Time	Stay in hospital after operation	Result
311-25	M 8	Litholapaxy	$2\frac{3}{4}$ hours	8 days	Recovered
153-26	M11	,,	$2\frac{1}{2}$ hours	6 days	,,
167-26	M 8	,,	—	——	—
—	—	1st operation	36 minutes	——	—
—	—	2nd ,,	55 minutes	8 days after 2nd operation	Recovered
211-27	M34	Litholapaxy	1 hr. 10 min.	8 days	,,
225-27	M33	,,	55 minutes	6 days	,,
247-27	M65	,,	1 hr. 10 min.	13 days	,,
505-27	M28	,,	1 hr. 30 min.	6 days (1 day after recystoscopy)	,,
4-27	M27	,,	1 hr. 10 min.	8 days	,,
6-27	M50	,,	1 hr. 30 min.	18 days (1 day after recystoscopy)	,,
8-27	M45	,,	2 hrs. 15 min.	19 days (,, ,,)	,,
35-27	M39	,,	1 hr. 15 min.	17 days (,, ,,)	,,
78-28	M48	,,	1 hour	8 days	,,
81-28	M 4	,,	2 hrs. 45 min.	15 days (3 days after recystoscopy)	,,
106-28	M38	,,	55 minutes	8 days	,,
117-28	M56	,,	1 hr. 40 min.	10 days	,,
181-28	M70	,,	1 hour	17 days (1 day after recystoscopy)	,,
251-28	M54	,,	2 hrs. 10 min.	9 days (2 days after recystoscopy	,,

Mr. Keegan's result of 500 litholapaxies in boys—the average stay after operation amounted to 4 days and mortality 2.2%.

Sir P. J. Freyer per formed 796 litholapaxies in adult with 23 deaths or 2.88% and 190 litholapaxies in children from 1½ to 16 years with 2 deaths or 1.05% i.e. the grand total of 986 litholapaxies with 25 deaths or grand average of 2.53%.

Sir Gilbert Barling found in 59 litholapaxies in male under 20 years of age was 5%.

Suprapubic Lithotomy.

Southam performed 46 suprapubic lithotomies for cases unsuited for litholapaxies and found the mortality of 24%.

Sir P. T. Freyer in 149 suprapubic lithotomies had a mortality of only 12.75% although prostatectomy was performed at the same time in 110 of these cases.

I am very much indebted to Professor K. H. Digby for his kind assistance and permission to record his cases.

Case No.	Age			
105-26	M 4	Suprapubic exploration.	49 days	Wound healed
463-26	M66	Suprapubic cystostomy.	151 days	Died
47-27	M14	Suprapubic cystostomy. (after unsuccessful Litholapaxy)	26 days	Wound healed
92-27	M14	Suprapubic cystostomy. (after unsuccessful Litholapaxy)	27 days	Wound healed
82-28	M 9	Suprapubic cystostomy. (after unsuccessfnl Litholapaxy)	52 days	Wound healed
154-28	M 7	Suprapubic cystostomy. (with stricture of urethra)	39 days	Wound healed
217-28	M46	Suprapubic cystostomy. (stone not shown in radiogram)	24 days	Wound healed
93-26	M 4	No operation done.	—	—
93-28	M31	" " "	—	—
209-28	M60	Supra pubic cystostomy. (stone ulcerating into the rectum)	73 days	Died

Editorial.

"Since Life is strife, and strife means knife,
From Howrah to the Bay,"

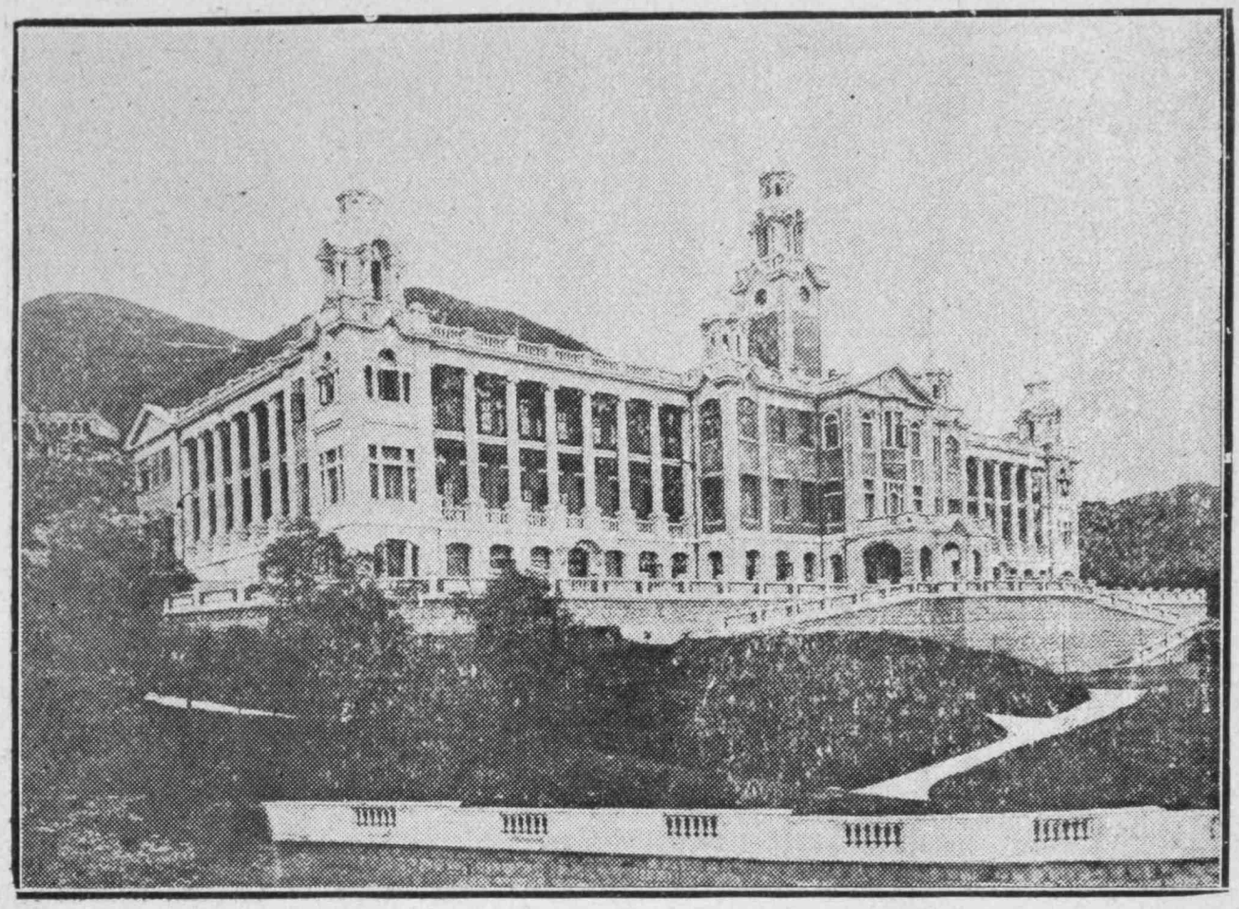
(Kipling).

It may be a stretch of imagination to say that life means knife, but at all events many lives are saved each year by the judicious employment of the surgeon's art. But it should not be forgotten that Surgery is an art, and requires constant practice and reading to reach a high standard of perfection. Indeed it is often more valuable to know when not to operate, than to possess the rudimentary knowledge of surgery required in order to remove an appendix without killing the patient. Since the war the increase in the number of operations performed must be enormous, many practitioners now-a-days possessing a confidence in their operative skill, entirely unwarranted by their knowledge of the Art of Surgery. This inevitably leads us back to the teaching of Surgery, the present endeavour is to give students a sufficient ground of operative surgery so that they can in an emergency perform a necessary operation. But a young graduate will require some years' experience on the staff of a hospital before he is justified in embarking on the routine practice of Surgery.

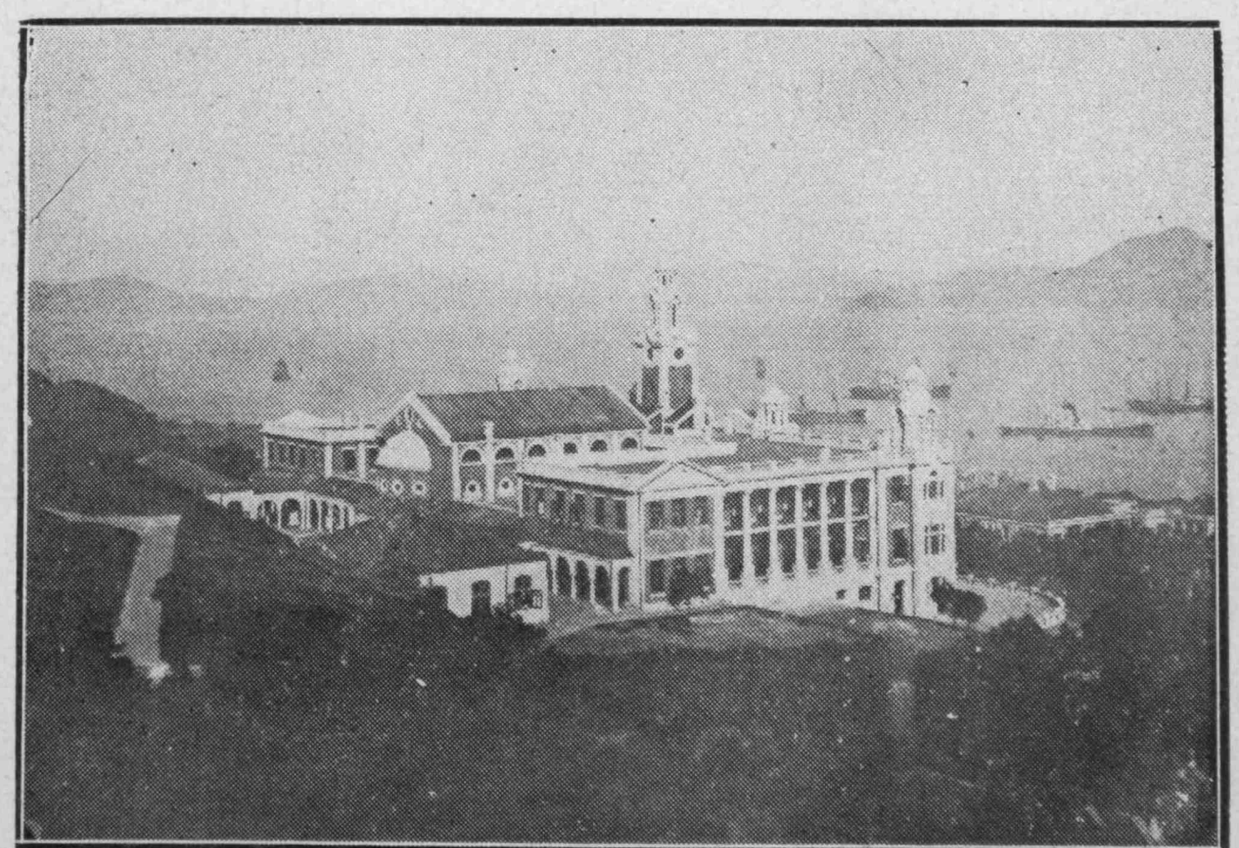
Our Medical Faculty needs many things, principally money. When the new hospital is built, some of the more serious needs of the Surgical Unit will have been met, in that the operating theatres will be large enough to accommodate the students and there will be adequate space for bedside lecturing. But in the Medical School, new buildings are even now required, such as an additional lecture theatre, and an annex to the anatomical department to allow more space for the teaching of operative surgery.

Surgery is an important subject, more important than medicine in many ways, for one thing, it is a more difficult art. A surgeon is more often proved right or wrong in his diagnosis, if he tells a patient that he has gall-stones, the stones have to be produced after operation, a physician on the other hand can look wise and tell a patient he has bronchiectasis, and there is no one to prove him right or wrong till the post-mortem is made.

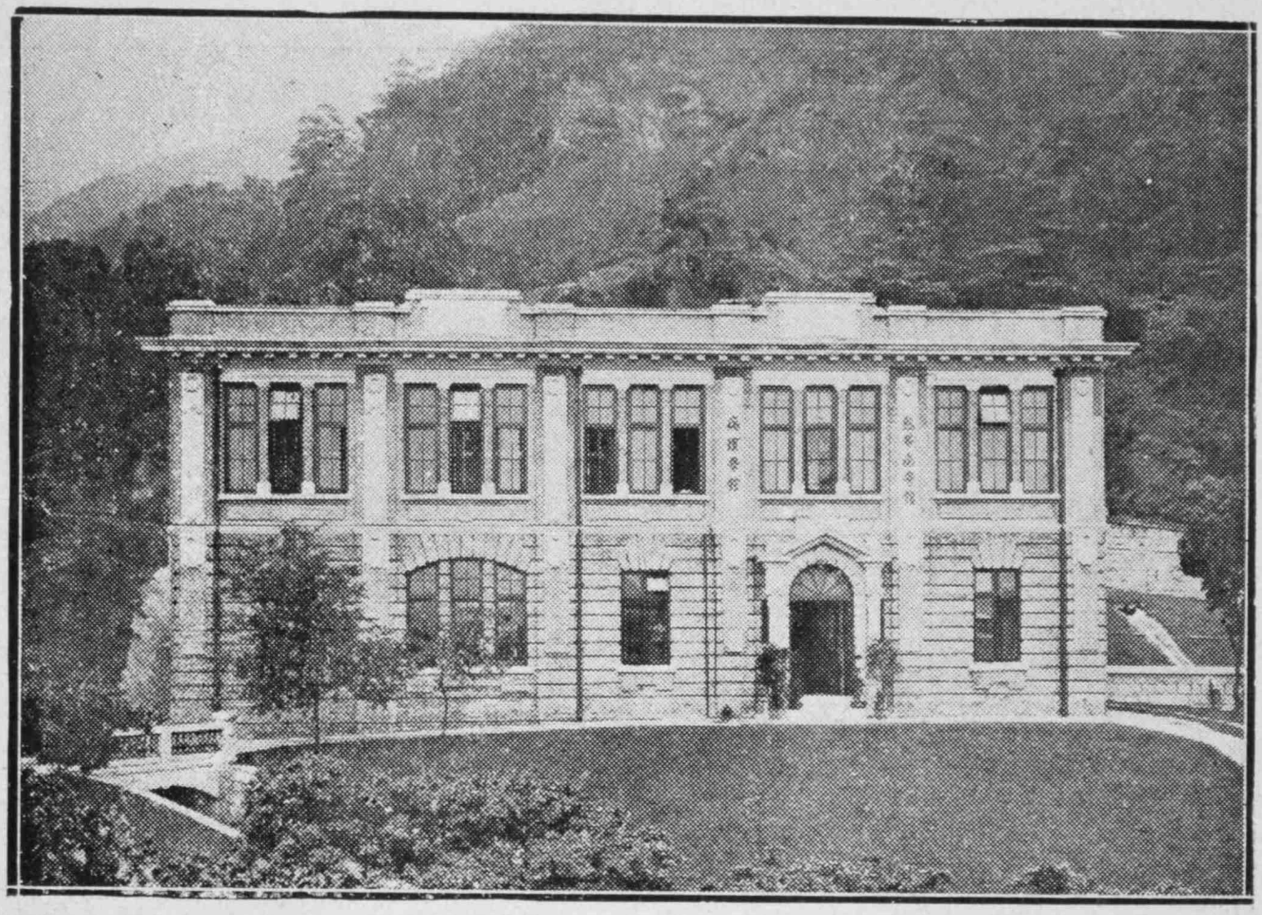
Surgery is an immense subject, and a man may well find his life's occupation in the study of one of its special branches.



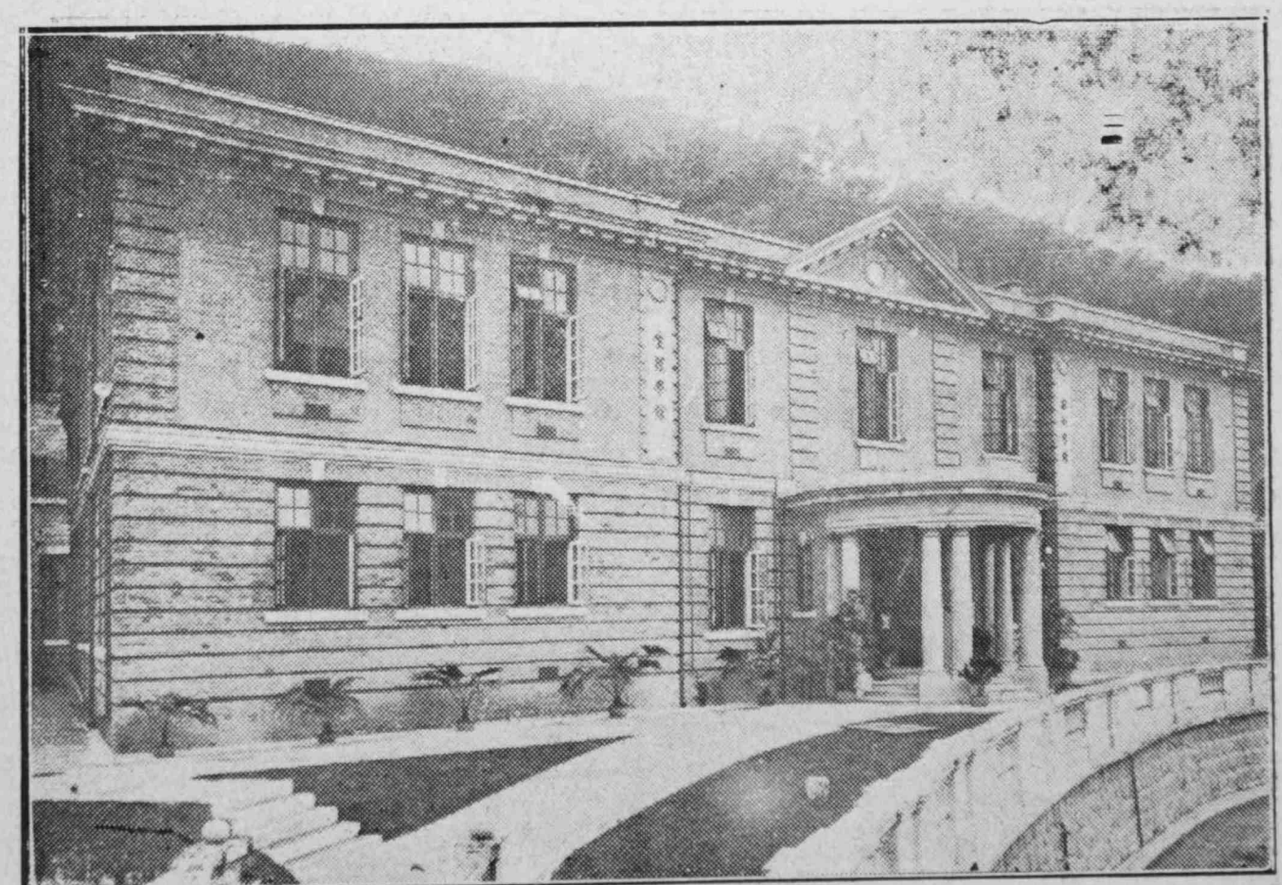
University of Hong Kong (front view, with main entrance).



University of Hong Kong (side view overlooking harbour).



Chan Kai Ming School of Pathology and Ho Kom Tong School of Tropical Medicine (University of Hong Kong).



Ng Li Hing School of Anatomy (right) and Ho Fook School of Physiology (left) University of Hong Kong.

Department of Biochemistry, University of Hong Kong.

Physiological Laboratory, University of Hong Kong.

Correspondence.

RAPID METHOD FOR BLOOD COUNT.

The Editor,

The Caduceus,

Dear Mr. Editor,

It may be convenient for some to insert for ready reference in *The Caduceus* the following abstract of Professor Gulland's rapid method of enumeration of red and white blood corpuscles.

Reds:—Blood drawn to 0.5 and diluting to 100 i.e. dilution 1 in 200. Count cells in 5 sets of 16 squares on the Thoma slide, i.e. 80 squares, so that the total must be divided by 80 to give number in each square. To find the number per cubic millimetre we multiply this average number per square by 400 (the area of each square being 1/400 mm.) and by 10 (the depth of each square being 1/10 mm.) and by 200 (the dilution).

E. G. Suppose the numbers counted are as follows:—

1st set of 16 squares	108
2nd	96
3rd	98
4th	120
5th	121
in 80 squares	543

$$\frac{543 \times 400 \times 10 \times 200}{80} = 5{,}430{,}000 \text{ per c. mm.}$$

In other words if dilution be 200 and 5 sets of 16 squares be counted the enumeration is made by simply adding four cyphers to the total.

Whites:—In this case the dilution should be 1 in 10.
Suppose that the total count be 70 the formula will be

$$\frac{70 \times 400 \times 10 \times 10}{400} = 7{,}000 \text{ per c.m.}$$

That is to say equal to the count 70 plus 2 cyphers.

Yours truly,
E. W. KIRK,
M.O. Chinese Hospitals,
Hong Kong.

29th October, 1928.

Review of Books.

A Short History of Medicine: By Charles Singer, M.A., M.D., D.LITT., (Oxford). Oxford: At the Clarendon Press, 1928, pp. xxiv. + 368; 142 illustrations. Price 7s. 6d. net.

As stated in the preface of the book the subject, as dealt with, is essentially one of a history of ideas, and the personal element has been kept completely in the background. Treated along this line no discussion is therefore made of the status and even the training of medical men, and only those who were remarkable for the advances in knowledge which they initiated find commemoration there.

The book is divided into six chapters. In the first chapter the author deals with the medical history in Ancient Greece to about 300 B.C. Chapter II is concerned with what he calls The Heirs of Greece (300 B.C. to 200 A.D.) including the Alexandrian School and Medical Equipments in the Roman Empire, while in Chapter III the subject in The Middle Ages (200 A.D. to 1500 A.D.) is mentioned. Chapter IV discusses The Rebirth of Science from about 1500 to about 1700, and the remaining two chapters occuping more than half the book are devoted to modern medicine which is presented as a natural outgrowth of an ancient tradition.

The book is well illustrated and together with the History of Medicine by Garrison and that by Compton can be confidently recommended to all who are interested in the subject.

C. Y. W.

An Introduction to the Technique of Section-Cutting: Edited by Frances M. Ballantyne, M.A. Edinburgh: E. & S. Livingstone, 1928, pp. 80; 10 figures. Price 3s. net.

This little volume contains instructions on the technique of section-cutting purported to be based on the procedure customary in the department of zoology in the University of Glasgow. The teaching, though clear, is quite elementary, and some of the methods discussed cannot be recommended for general practice by students of medicine. Thus, in page 43, the description of staining with Haematoxylin is inadequate and lacking in many essential particulars, while in page 49, such a statement as "This (*formalin*) is sometimes used as a fixing agent, but it is not satisfactory except for such objects as the eggs of frogs and newts" will find no support in authoritative quarters.

The omission of any reference to frozen section-cutting robs it much of any value, which the book may possess, and it is unlikely that the senior medical students will find much use in it.

C. Y. W.

(*Phrenology*: The Science of the Mind..... The Student's Enchyridion..... by J. B. Blackford, F.B.P.S., Edited by A. G. Millott Severn, M.A., M.D., D.P.H., F.C.S., F.R.S.M., F.R.I.P.H., Member of the Inner Temple, etc., and J. Millott Severn, Past President and Fellow of the British Phrenological Society, and Associate of the Institute of Journalists. Printed by the Westbourne Press, Hove, and Published by J. M. Severn, 68, West Street, Brighton).

This is a book which is well worth reading by all students of humanity, and by anyone who is willing to spend three solid hours during which time their concentration is fully centred on the subject in question. Otherwise the best that is in this little book of 188 pages will be missed.

The Joint Editors have written quite a clear exposition of this subject, and so far as the Reviewer knows, it is the only book of its kind on Phrenology. Ancient and Modern Views of man are first given, followed by interesting facts upon the discovery of Phrenology, and as to what it is, substantiating their statements with principles and proofs. Then follow the more detailed studies of head variations, innate human faculties, regional developments, the so-called "temperaments," with full explanation as to their basis and classifactions, functions, and influences. Next we are given a brief but sufficient study for this purpose, of the brain, then the skull, followed by cerebral topography (the location of the convolutions and fissures on the living head).

Now we diverge from the matter of fact proved knowledge of the brain, to that which has not been proved, but concerning which there is no doubt a good deal of hidden and undiscovered truth, namely the brain location of the "phrenological organs," which Dr. Millott Severn describes with some sense of assurity.

A further strain is brought to bear upon the reasoning faculties in describing the intellectual faculties as the "perceptives Nos. 1 & 2," the "reflectives," and the "expressives." Moral powers are described, which in many circles will carry much weight; the "selfish-sentiments," and "selfish-propensities," the social instincts, and the "attributes" of the "faculties," and their nature, are dealt with.

The book closes with an outline of what qualifications a phrenologist should hold, and a delineation of character.

A portrait of the Author, faces the Title page, and there are four diagrams which greatly assist the text.

On the whole Dr. Millett Severn is to be congratulated upon his acknowledged mastery of this subject, which is made evident by certain references he has made, and by the capable way in which he, together with Mr. J. Millott Severn have arranged this work.

There are a few printers errors, and they appear on pages 43, (last line), 73, 94 where (K) should read (J), and (L) should read (K), and 95, where the reference (L) is omitted, and also (O), but (M) and (N) are correctly placed. Page 110, the eleventh line down, "divine" should read "divide," P. 143 six lines from the bottom "but maintain it all costs" should of course read "but maintain it at all costs," and P. 179, third line up "obtained of" will read "obtained from."

It might be well worth quoting some of the closing remarks, "The utmost that any Phrenologist can do by its means, is to tell the extent of a man's capacity in any direction by gauging the size of his phrenological organs in the head. He can tell that some organs are large, others small, and yet others of medium development. He can say which head is intense in its various activities, and which (is) dull; but, phrenologically, he can go no further than this. Any further statement he is responsible for, and not Phrenology..... Primarily, he guages a man's capacity, and forms a judgment as to its possible manifestations."

(A.C.)

Acknowledgments.

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

The Post-Graduate Medical Journal, London.
The Hospital Gazette, London.
The Charing Cross Hospital Gadette, London.
The St. George's Hospital Gazette, London.
The St. Mary's Hospital Gazette, London.
The London Hospital Gazette, London.
The King's College Hospital Gazette, London.
The University College Hospital Magazine, London.
The Prescriber, Edinburgh.
Health and Empire, London.
The Birmingham Medical Review, Birmingham.
Publications from the League of Nations, Health Organization, Geneva.

Monthly Epidemiological Report.

Bulletins et Memoires de la Societe des Chirurgiens de Paris.
Bulletin de la Societe des Sciences Medicales et Biologiques de Montpellier.
The University of Toronto Medical Journal.
Bulletin of the School of Medicine, University of Maryland, Baltimore, MD.
Anales de la Universidad Central, Quito, S.A.
The Malayan Medical Journal, Singapore.
Japanese Journal of Medical Sciences (National Research Council of Japan), Tokyo.
Kyoto Ikadaigaku Zasshi, Kyoto.
Okayama Igakkai Zasshi, Die Universitat Okayama, Japan.
The Taiwan Igakkai Zasshi, Government Medical College Formosa.
Chinesische Zeitschrift fur die Gesamte Medizin, Monkden.
Index Universalis, Moukden.
Dr. Huang's Mediccal Journal, Shanghai.
Health, Shanghai.
Opium, Shanghai.
The Tsinan Medical Review, Tsinanfu.
The Moukden Medical College Journal, Moukden.
The Australian Journal of Experimental Biology and Medical Science, Adelaide.
The Medical Journal of Australia, Sydney.
Acta Psychiatrica et Neurologica (Karolinska Institutets Bibliotck), Stockholm.

The Tohoku Journal of Experimental Medicine, Sendai, Japan.
University of Durham College of Medicine Gazette, Newcastle-on-Tyne.
The Bristol Medico-Chirurgical Journal, Bristol.
Das System der Hygiene, Universitat Bratislava.
The Journal of Bone and Joint Surgery, Boston.
Porto Rico Review of Public Health and Tropical Medicine, San Juan.
Boletin de la Universidad Nacional de la Plata, Argentina, S.A.
Archives of Medical Hydrology, London.
Fukuoka-Ikwadaigaku-Zashi, Kukuoka, Japan.
Middlesex Hospital Gazette, London.
Endokrinologie, Leipzig.
Transactions of the Japanese Pathological Society, Tokyo.
Bulletin of the New York Academy of Medicine.
Mededeelingen Van Den Dienst Der Volksgezonheid in Nederlanded-Indie.
Polyclinica Dairen.
Medical Conference Addresses in Commemoration of the Opening of the New Dairen Hospital, 1927.
Revista del Instituto Medico Sucre, Bolivia.
Bulletin of the Medical Department of the University of Georgia, Augusta, GA., U.S.A.
Cornell University Medical Bulletin, New York.
Actas Y Trabajos, Buenos Aires, Argentina.

Notes and Comments.

OUR STAFF AND MEMBERS:

Professor H. G. Earle:—The Medical Faculty has lost one of its oldest Professors, in the person of Dr. H. G. Earle, Professor of Physiology. Professor Earle has resigned to join the Henry Lester Institute at Shanghai, as its Advisory Director. Since taking up this appointment, Professor Earle has travelled to a great extent, visiting Australia, India and Europe. He is at present in London, and we look forward to meeting him again when he next passes through the Colony on his way to Shanghai.

Professor John Anderson:—We wish also to record the loss of Dr. John Anderson, Professor of Medicine, who has also resigned to take up an appointment with the Henry Lester Institute at Shanghai. During his stay of five years in the Colony, Professor Anderson had made many friends, and was very popular with the patients and members of the medical profession. His genial personality has won a name for him and his absence will be greatly missed by all.

Professor L. T. Ride:—We welcome the arrival of Dr. L. T. Ride who has been appointed to the Chair of Physiology, vacated by the resignation of Professor Earle. He took his medical course at Guy's Hospital, and was for some time on the teaching staff there.

Dr. G. A. C. Herklots:—We are glad to learn of the appointment of a Reader in Biology, in the person of Dr. G. A. C. Herklots. With the appointment of Dr. Herklots, the department of Biology will be greatly strengthened, as the department, since the resignation of Mr. Barney, has been run on restricted lines. Dr. Herklots is a graduate of Leeds University and has also done some work at Cambridge.

Dr. K. C. Yeo:—We have received advice that Dr. Yeo Kok Cheang has passed with distinction part two of the D.P.H. Examination of the University of Cambridge. We congratulate Dr. Yeo on his success in qualifying for the Diploma of Public Health. Some time ago, Dr. Yeo was also successful in obtaining the D.T.M. & H. at London. Dr. Yeo as a student here has had a brilliant career and we are proud of his recent successes.

Dr. Francis Clark:—We understand that Dr. Francis Clark, who has acted, for the past four years, as Chief Officer to the Government of Wei-hai-wei, will leave China for good next Spring on reaching the age of 65.

Dr. Clark was associated, as a Lecturer, with the Hong Kong College of Medicine from the time of his arrival in the Colony in 1895.

The College was founded in 1887 with the late Sir Patrick Manson as its first Dean; he was succeeded in 1891 by the late Sir James Cantlie, and in 1897 Dr. Clark was elected Dean and held that office for fifteen years (until 1912) when the College of Medicine became the Faculty of Medicine of the University. Dr. Clark was the first Dean of that faculty and was also Warden of the first hall of residence, now known as Lugard Hall; he also held the teaching appointment of Professor of Medical Jurisprudence.

During the War and post-war period, Dr. Clark had medical charge of officers, and later of men, who developed pulmonary tuberculosis on active service. He returned to China early in 1922.

In an article by Sir Ronald Ross in "The Times" of July 24th, 1920, apropos the death of Col. Gorgas of Panama fame, it is stated that the British pioneers in the modern methods of prevention of malaria were Malcolm Watson of Klang 1901), Francis Clark of Hong Kong (1901) and Andrew Balfour of Khartoum (1903). Those who were resident in the University buildings during 1912-15 will remember how keen Dr. Clark was in keeping the University grounds free of mosquitoes, to the great comfort of the students and staff. As this can only be secured by constant supervision and inspection of all possible breeding places, it was no light task.

We are quite sure that Dr. Clark's many friends and former students of the College and University will wish him every happiness and long life to enjoy the rest which he has so fully earned.

THE HENRY LESTER INSTITUTE.

The formation of the Henry Lester Institute for Medical Research, Shanghai, to which Professors Earle and Anderson have gone, completes the scheme of model institutions necessary for the advance of Western Medicine in China. The demand for such institutes has been recently recognised all over the world, and their creation, in many cases due to the assistance of the Rockefeller Foundation, constitutes one of the most characteristic and important advances of modern medical science. The work of the Institute will be run on similar lines at the London School of Tropical Medicine and Hygiene, with various departments in addition to the libarary and musuem.

The University of Hong Kong was approached with reference to the question of affiliation, to which the University agreed. We hope that before long, it will be possbile for this University to grant the Diplomas of Public Health and Tropical Medicine and Hygiene.

The Lester Institute also runs the old Shantung Road Hospital for Chinese, at Shanghai. The hospital is conducted entirely by British interests and under British management, solely for the benefit of the Chinese people. The hospital is over eighty years old, and during the period of its existence it has carried on its work uninterruptedly. This

hospital is now being rebuilt, and it is hoped by 1930 to have a first-class hospital which will be a centre for British medical activities in China. The rebuilding of the hospital was made possible by Mr. Henry Lester, who bequeathed the sum of one million taels.

SCIENCE CONFERENCE AT CANTON :

The opening of the Willard Straight Science Hall of the Lingnam University, Canton, on 19th October, 1928, was also the day of the opening of a Science Conference. Men and women from centres of learning throughout China and from Japan were present. There were about twenty Universities represented, and the University of Hong Kong was represented by Professor C. A. Middleton Smith. Professor J. L. Shellshear gave an address in the Swasey Hall, and Professor C. Y. Wang and Dr. S. Y. Wong contributed papers to the conference. The Hong Kong and China Branch of the British Medical Association and the Hong Kong University Medical Society were also represented.

Donations by Mrs. Willard Straight and the China Medical Board of the Rockefeller Foundation have made the Hall possible. It took more than a year to build and cost about $200,000, including equipment. In this Hall, the premedical subjects of Chemistry, Physics and Biology are being taught. The Hall is a four storey building, and a subject is allotted for each floor.

From opinions gathered, it is generally agreed that the Willard Science Hall is the largest building in South China exclusively devoted to science, and this new building will be much appreciated by the student body in Kwangtung.

OBITUARY :

Miss Tso Shuk Kei :—It is with deepest regret that we record the death of Miss Tso Shuk Kei, eldest daughter of Dr. S. W. Tso, O.B.E., LL.D.

Miss Tso was a final year student in the Faculty of Medicine and she was preparing for her final examinations when it was found that she had cellulitis of the neck. She was operated upon, but her condition was too far advanced to expect recovery.

She possessed a very quiet disposition and had earned the greatest respects from her fellow students. She was the first girl to apply for admission to this University, perhaps it may be said that she was instrumental in getting the University to agree to admit women students. We had looked forward to Miss Tso having a promising career, and her early demise had shattered the hopes of many.

As a token of respect, the flag at the University was flown half-mast. The Vice Chancellor, the Dean and members of the teaching staff, and students of the Medical Faculty were present at her funeral to pay their last respects to her. To Dr. Tso and family, we extend our deepest sympathy.

Dr. Alice Deborah Hickling, M.B.E. :—In the death of Dr. A. D. Hickling, the Government Medical Service lost one of its most able officers. Of recent years Dr. Hickling's work has been the education of Midwives, and the supervision of the Chinese Hospitals and Dispensaries. At the last Final examinations for Medical Students she was our External Examiner. Our recent graduates, and present students, have seen much of Dr. Hickling's work in the Tsan Yuk Hospital, an institution for whose very existence she is mainly responsible; and it is due to her kindness, and consideration, that the Obstetrical Clinic of this University has been able to develope to its present size. Dr. Hickling had the great gift of being able to get things done, a quality that is particularly rare in this Colony.

It was once suggested to her that a V.D. Clinic was urgently needed, although in a simple form, that Clinic was in existence within one week. There was never any fuss, or unnecessary trouble made, Dr. Hickling was only concerned with results, and these were always good.

As a member of the Midwives Board, she took the keenest interest in the Education of Probationer Nurses, and endeavoured in every way to protect the interests of these girls, who have, when qualified to compete against unqualified Midwives throughout the country.

During the War, Dr. Hickling acted in the capacity of Medical Officer of Health to the Colony, and received the M.B.E. for her services as Medical Officer to the Victoria Nursing Division.

Dr. Hickling died on September 22nd, 1928, in her fifty-second year, she was educated at Oxford, and the Royal Free Hospital, and held the qualification of L.R.C.P., L.R.C.S. Ed., L.R.F.P.S. Glas.