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

Special Features of the Report.

Larger number of cases included.

Maternity	1927	826
	1928	1576
	1929	1811

Low Mortality rate.

Tsan Yuk Hospital	·52%
Government Civil Hospital	·5 %

Low Operation rate.

Repair of lacerations excluded.

One operation to every 22. patients, approximately.

Low Caesarean section rate.

Out of a total of 1811 deliveries, Caesarean section was performed once.

In September 1928 the Tsan Yuk Hospital sustained a great loss in the death of Dr. A. D. Hickling to whose energy and foresight the Hospital practically owes its existence. Shortly before her death Dr. Hickling persuaded the Hospital authorities to purchase a new operating table, and a scialytic light for the theatre, so that for Gynaecological work we have one of the best equipped theatres in the Colony. The Chairman of the Hospital Committee, The Hon. Dr. S. W. Tso has since invited us to carry on taking medical charge of the patients, in the same manner as we had been doing in the past, on the invitation of Dr. Hickling.

It is exceedingly fortunate for the University that Dr. Tso has been kind enough to issue this invitation, because otherwise the teaching of midwifery would have suffered considerably. To my mind the University Obstetrical Department and the Tsan Yuk Hospital are dependant on one another, and their union should lead in time to the development of one of the best Midwifery Clinics in the Far East.

The number of our maternity cases has been steadily increasing, but up to the present, the Tsan Yuk Hospital has not had to refuse admission to any patient, however it is only a matter of a short time until our maternity wards will be crowded out, as a glance at the number of admissions during the last six years will show.....

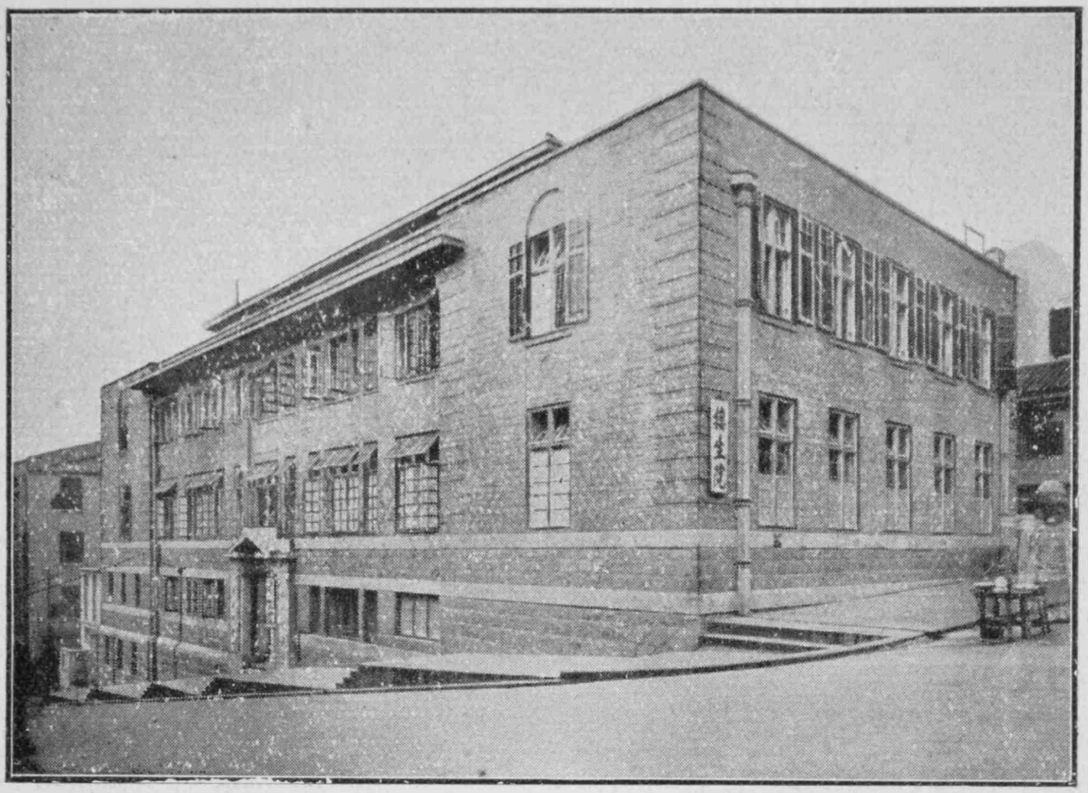
1923	436 patients.	1924	600 patients.
1925	609 ,,	1926	693 ,,
1927	990 ,,	1928	1326 ,,

I hope that funds will some time be available for the building of a new gynaecological block, and nurses quarters, thereby setting free the present building for the sole use of the maternity cases.

During the year ended April 30th, 1929, a total of 1944 cases were admitted to the maternity wards under the care of the University Staff, of these, 1811 were delivered, (inclusive of cases of miscarriage and premature birth), 1727 infants were born alive, and there were 10 maternal deaths.

The causes of death were as follows:—

Typhoid	1
Pneumonia	1
Heart disease	1
Acute tuberculosis	1
Chronic kidney disease	1
Puerperal sepsis	2
Ruptured uterus	2
Concealed accidental Haemorrhage	1



The Tsan Yuk Hospital, from Western Street.

Lawn, Government Civil Hospital; Maternity Bungalow in Background.

Visiting and Resident Staff, students and nurses, at the Tsan Yuk Hospital, 1929.

Thus only five out of these ten deaths are attributable to purely obstetrical causes.

The increased number of cases are of considerable benefit to the students, during the year about 34 students took out their maternity course, each student was able to attend at least 30 confinements, and many of them attended from 40 to 50. Under the New Regulations students are attached to the Obstetrical Department for, a period, of 6 months, during which time they are expected to deliver about 60 cases.

It has been repeatedly remarked that the morbidity rate is a more reliable guide to the health of a maternity hospital than the mortality rate, and as far as I am aware the statement has never been challenged, but I would venture to suggest that in comparing the morbidity rates of different hospitals, the climatic conditions, and prevalence of disease should be taken into consideration. For instance, in Hong Kong such diseases as typhoid, and malaria are constantly occurring; at one season of the year there is usually quite an epidemic of dengue fever, Dysentery, and small-pox we sometimes see. Many patients suffer from hook worm, or other intestinal parasites, a few have beri beri, and although the latter may not be a direct cause of morbidity, the patients resistance is undoubtedly reduced thereby.

The Medical Officer of health was kind enough to give me some information with regard to the comparison between the general death rate in England and Hong Kong.

Poplar was taken as an example of a crowded district, in 1928 its crude death rate per 1,000 was 11.8.

In Hong Kong the latest available figure shows a death rate of 16.5 per thousand, and Dr. Pope, the Medical Officer of Health, regards this as a suspiciously low estimate.

Our treatment has undergone no fundamental change during the year, my Assistant, Dr. Pillai has done some work on the administration of camphor for the purpose of stopping the flow of milk in women who have lost their babies. Ether and olive oil is given per rectum in selected cases, and we believe that it is particularly beneficial in eclampsia, whether further experience will serve to confirm this view remains to be seen, at all events since we have started using it we have had altogether a series of 10 cases without a maternal death (only 6 of these cases appear in the present report).

Forceps.—The forceps were applied 45 times, or in about 2.5% of cases.

All the mothers were alive after delivery, but one patient died on the 6th day from Acute Tuberculosis. Ten infants were born dead, of these 2 were macerated, in one case the death of the infant was due to prolapse of the cord, and in two cases to accidental haemorrhage. In five cases the head was delivered with the occiput posterior. In all straightforward cases the students are taught to apply forceps in the left lateral position, and to use the dorsal cross bed, only in cases in which difficulty is anticipated.

Presentation and prolapse of the cord.—There were three cases of prolapse of the cord, all the mothers recovered, but unfortunately in no case was there a reasonable prospect of saving the child. The cases were:—

C.Y.H. age 35, para. 3.—Presentation transverse, cord prolapsed and pulseless on admission. Delivery by decapitation.

O.M.M. age 19, para. 1.—The case was a twin miscarriage.

L.S. age 30, para. 4.—Lateral placenta praevia, period of pregnancy 28 weeks, weight of child 2 lbs. 8 ozs.

Placenta praevia.—Our routine treatment for this condition is bi-polar version, it is a method of treatment that has a high foetal mortality rate, but the life of the foetus in placenta praevia has not the same value as in a normal case. Out of our list of 14 cases, only four patients carried their babies up to term.

Of these cases, one was a primipara aged 21, with a marginally situated placenta.

The other three patients were multiparae, the placenta being situated marginally in two, and laterally in one.

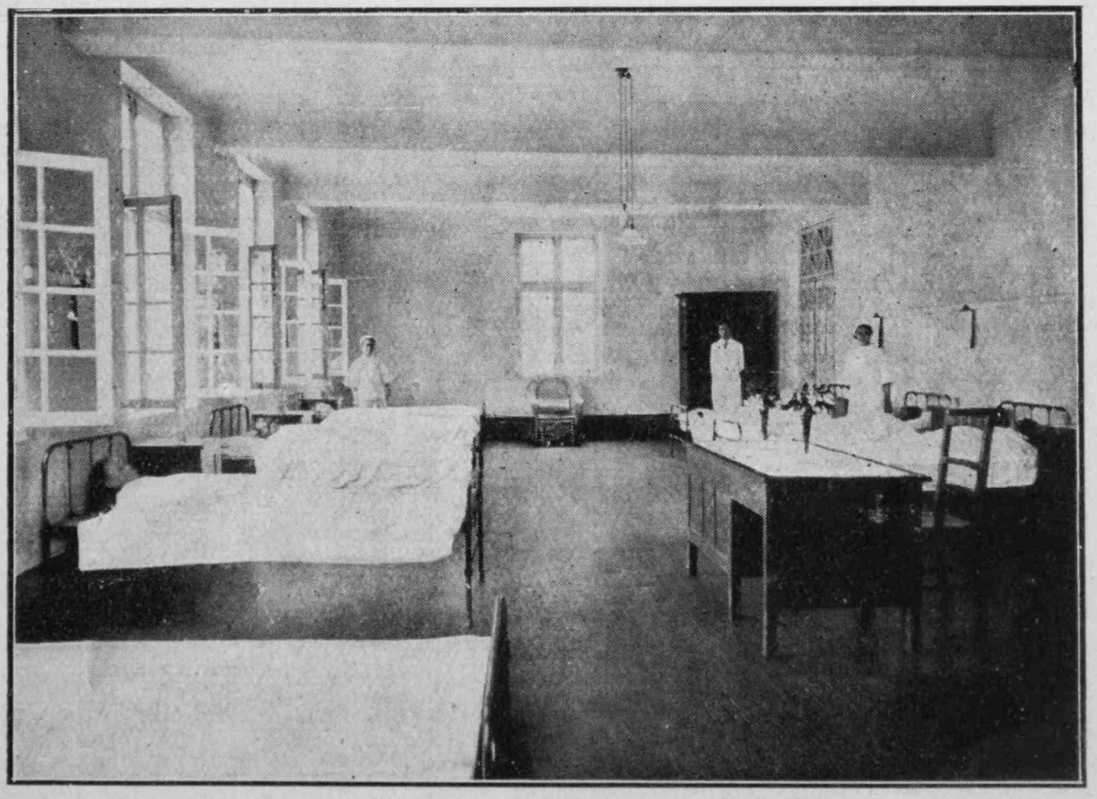
In none of these four cases would I have been prepared to do a caesarean section.

Perhaps the greatest danger in placenta praevia is that of lacerating of the cervix deeply. In one of our cases there was smart post partum haemorrhage from a torn cervix, fortunately we were able to control the haemorrhage by tightly plugging the uterus and vagina.

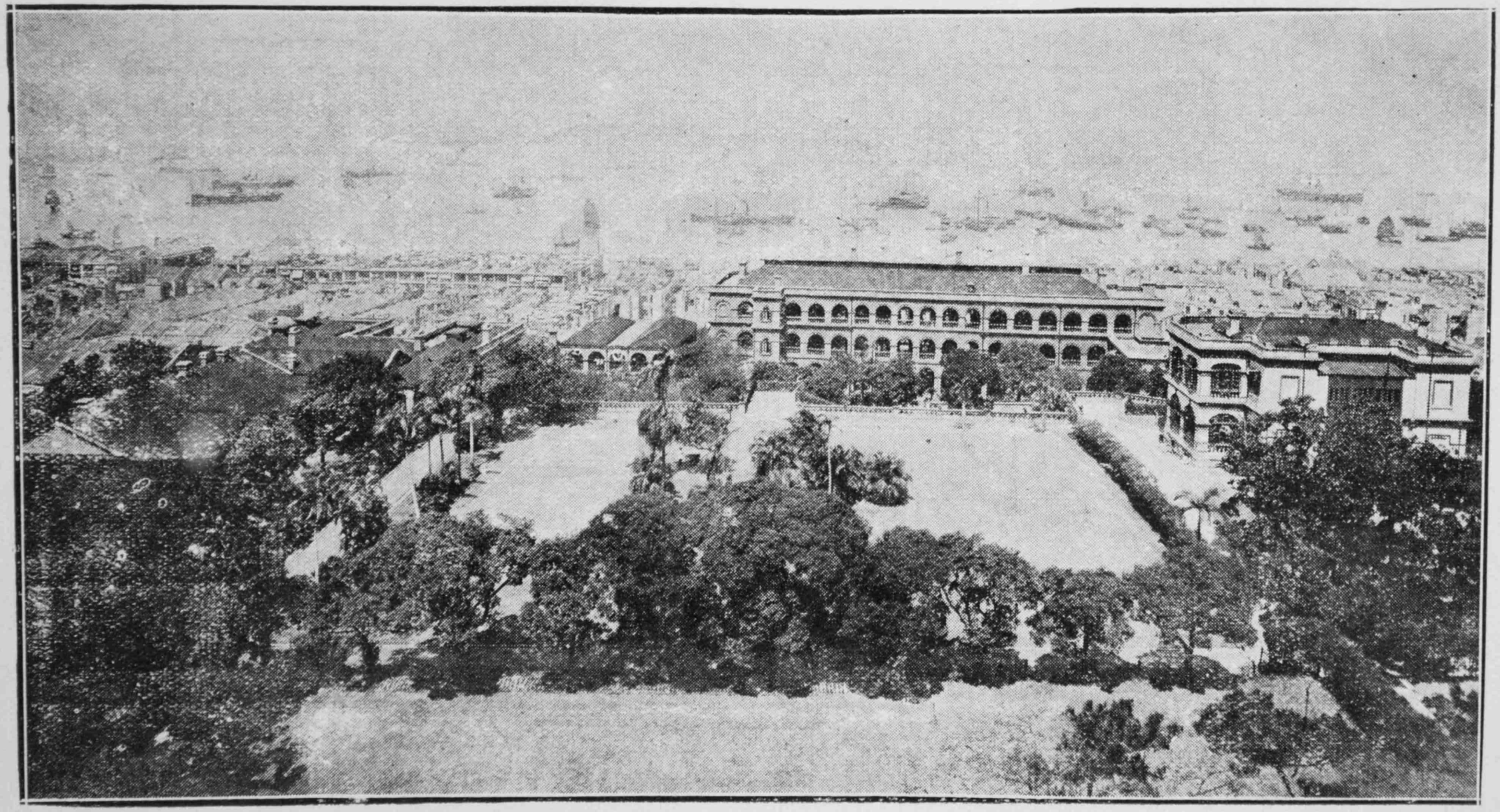
Accidental Haemorrhage.—There were in all 10 cases of Accidental Haemorrhage, 9 of the mothers recovered, and two of the babies were born alive. In five cases the haemorrhage was of the concealed variety, in the remainder it was both concealed and revealed.

Our treatment in most of the cases under consideration has been to rupture the membranes, and give repeated small doses of pituitrin, I think that we can say that in all the cases the bleeding was controlled by these means, had it been necessary we were prepared to plug the vagina. I do not mean to suggest that the vaginal plug has been abandoned, but that we endeavour to avoid its use when possible, it would appear that owing to the use of pituitrin the vaginal plug is not indicated so often as it was some years ago.

Opening of the Tsan Yuk Hospital.



A Gynæcological Ward, Tsan Yuk Hospital.



View of Government Civil Hospital.

W.H. age 42, para. 12.—Full term, on admission the uterus was tense and larger than nomal. Concealed haemorrhage. Membranes ruptured, natural delivery, slight post partum haemorrhage after which patient collapsed suddenly. Albumin.

C.S. aged 38, para. 9, on admission patient was in a very collapsed state, pulse 160, period of pregnancy 38 weeks. Uterus large and tense, tenderness over lower abdomen. Foetal heart not heard, foetal parts not felt. By vaginal examination, head was found to present, os two fingers, no external haemorrhage. Membranes ruptured and tight binder applied. Pituitrin ¼ c.c. every 15 minutes until 1 c.c. had been given. Adrenalin and saline also given, in addition to morphia and usual restorative measures. Pulse dropped to 120 and patient slept for 6 hours. Labour progressed uneventfully, and the head was delivered by low forceps. Baby dead. Brisk post partum haemorrhage, intra uterine douche; large quantity of old blood clot discharged. Patient left hospital on the 17th day.

T.E. aged 40, para. 10, 34 weeks pregnant. History of fainting attacks before admission. Uterus tense, tenderness below umbilicus, foetal parts not felt, foetal heart not heard. On vaginal examination, os was 2 fingers, vertex presenting, no tension on the membranes, Albumin. Membranes were ruptured artificially, pituitrin given in ¼ c.c. doses every 15 minutes up to 1 c.c. tight binder. Foetus still born. Large quantity of old blood clot came away during the 3rd stage.

Three of our cases of concealed haemorrhage had fainting attacks before admission, albumin is nearly always present in the urine, but the amount of albumin is not proporional to the amount of the haemorrhage. Tenderness over the lower abdomen, that is the lower uterine segment was almost the rule, there was little tenderness over the fundus. In many of the cases more than ⅓ of the placenta was covered with old blood clot, a conditions of affairs that is usually incompatible with a living child.

Caesarean section.—This operation was only performed on one occasion out of a total of 1811 deliveries. The lower segment operation was performed, the tecnique of De Lee being largely followed, and the head delivered with forceps through the abdominal wound. We have adapted the old fashioned straight forceps for use in this operation, and find that it is a less clumsy instrument for the purpose than the modern long forceps This operation appears to be destined to largely supplant the classical operation, there appears to be less risk of infection, and it also has the advantage that the uterine scar is extra peritoneal.

W.S. age 30, para. 1.—Indications . . . contracted pelvis, conjugata vera . . 8 cms. Patient had been 8 hours in labour, and the head was not fixed. Mother recovered, child alive.

Destructive operations on the foetus.—A destructive operation had to be performed in five cases, three of these were decapitations in neglected shoulder presentations, and two were perforations of the forecoming head. One of the cases was a ruptured uterus (transverse presentation), and will be described under another heading.

Two of the cases deserve special mention.

T.C.T. age 32, para. 2, on admission there was a history that labour had lasted for some days, the os was the size of two fingers, and owing to the formation of scar tissue it was extremely rigid, the condition suggested that the greater part of the external os had been torn away at the first confinement. Tents were inserted, but little dilatation followed, and the cervix had to be incised.

As the foetus was dead, the head was perforated, and the clavicles divided. The patient later became morbid and had a temperature for several days, she also developed a double white leg, but ultimately recovered. Foetus was macerated. Patient left hospital against advice.

True rigidity of the cervix such as this, is in our experience somewhat rare.

W.Y. age 28, para. 5, period of pregnancy 7 months. Transverse presentation, with prolapse of arm, foetus macerated, uterus tightly contracted down on the child. On examination the os was found to admit only one finger in addition to the childs arm, owing to the tonicity of the uterus a bi-polar version was out of the question. As the child was dead, it was decapitated, the operation was exceedingly difficult owing to the small size of the os.

This was a case in which the small size, and ridigity of the cervix was due to the fact that the patient had not gone to full term, and that the cervix after a preliminary dilation to admit the arm, had retracted again. The cervix at the 7th month not being as soft as at full term, rendered extraction exceedingly difficult.

Ruptured Uterus.—There were two cases of rupture of the uterus their particulars are as follows:—

L.A.S. age 33, para. 8.—Term. On admission the patient gave a history of having been 38 hours in labour, and that she had been seized with a sudden acute pain in the abdomen, followed by a sense of relief. On examination an arm was found prolapsed, and the humerus was broken across, and the ends of the bone exposed. Abdomen tender and foetal parts easily felt, pulse 140. The child was decapitated and extracted, and the rupture plugged with iodoform gauze. Her condition improved considerably, but she had a relapse about ten hours later, and died.

P.M. Finding.—Rupture of the lower segment, extending from right to left across the front of uterus, involving the left uterine artery.

When this patient was admitted her condition was such that a laparotomy was contra indicated.

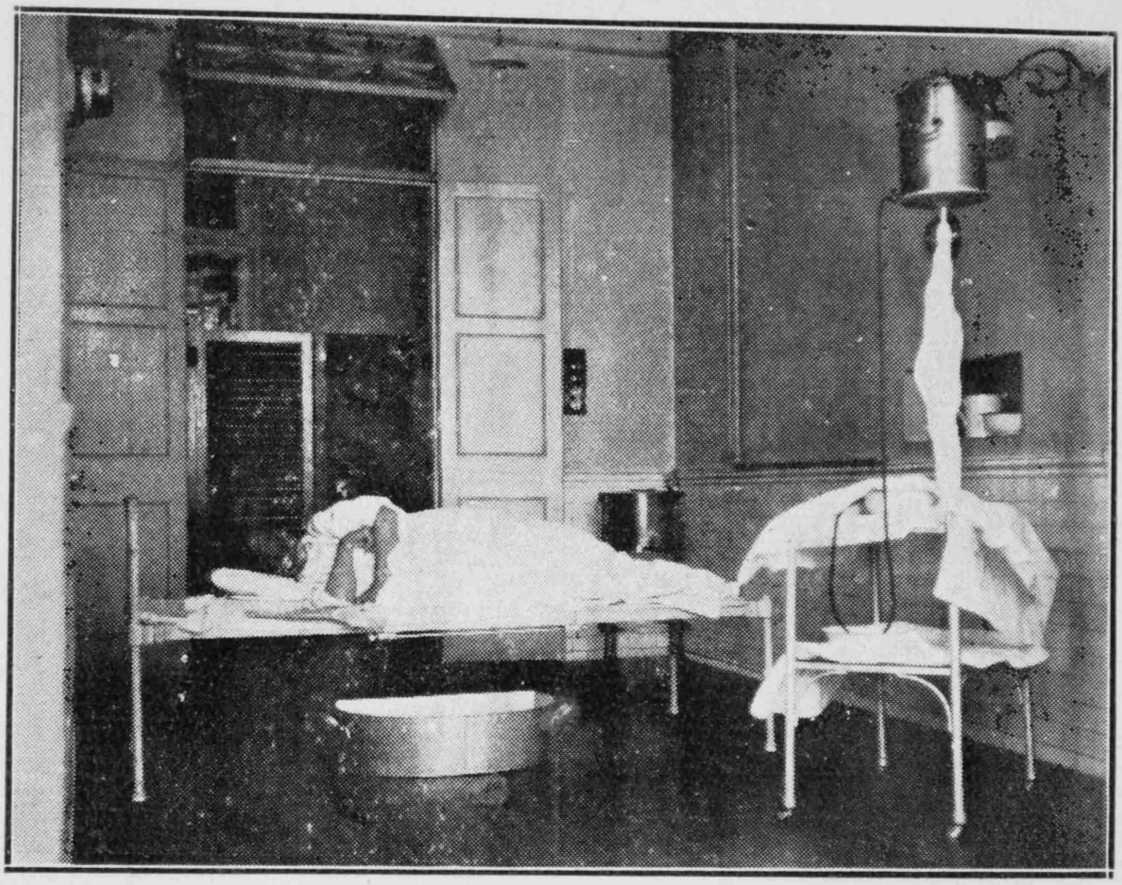
W.S.Y. age 24, para. 3.—Term. Previous labours normal, two children alive. Labour began on March 10th, at 7 a.m. membranes ruptured at 5 p.m. the same day. At 7.30 p.m. the patient complained that something had given way inside, and that the baby had jumped violently. Vomiting occurred, and the pulse rose to 120, blood was found in the urine, and foetal parts were easily felt through the abdomen. The abdomen was opened and the foetus and placenta were found to be free in side the peritoneal cavity, and were removed. A rupture was found extending round the front of the lower uterine segment, and separating the uterus from its anterior attachment to the vagina, the uterine vessels on the left side were torn across, a hysterectomy was performed, but the patient died three hours later.

In such a case I am sure that it would have been more satisfactory to repair the rent, and avoid a hysterectomy had it been practicable to do so. The delay in labour appeared to be due to the large size of the foetal head. The Sub Occipito Bregmatic diameter was 4 inches. and the bi-temporal 3¾ inches.

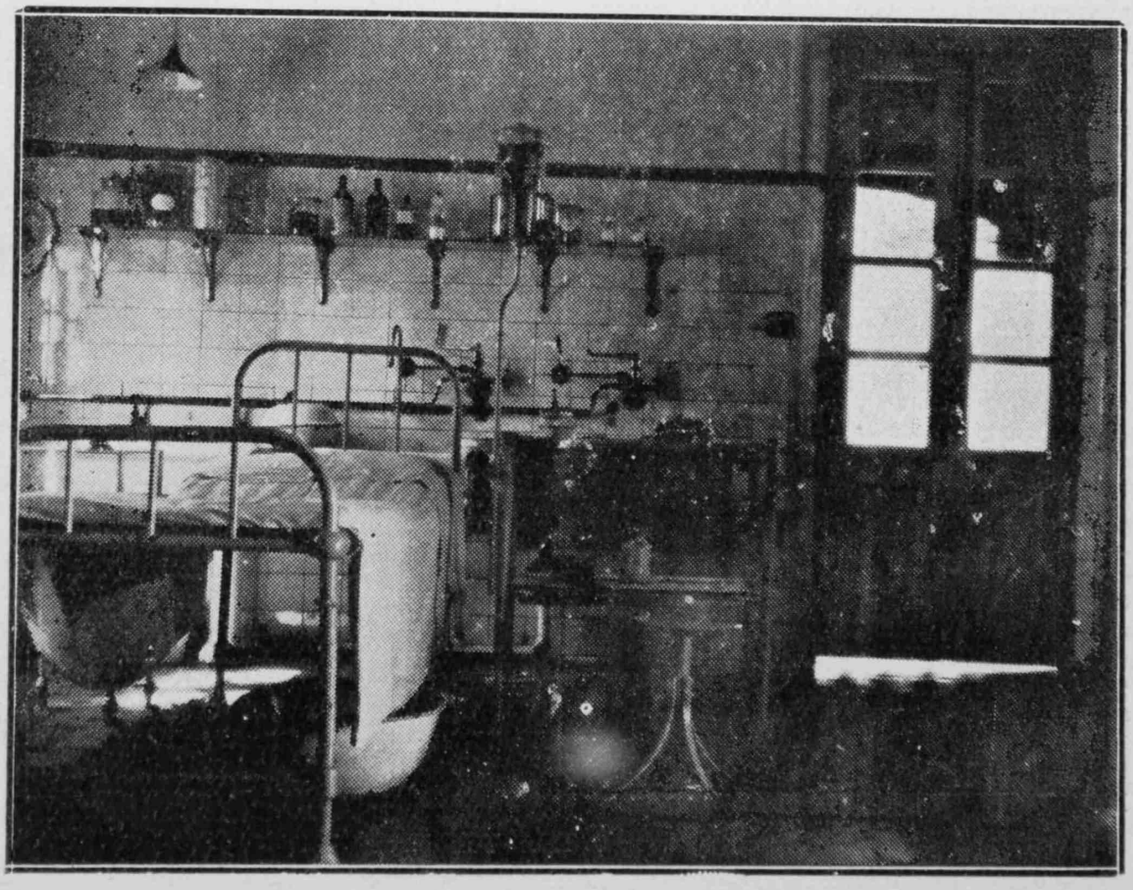
The latter was a case of the so-called quiet rupture of the uterus, shortly before the rupture occurred the patients pulse was under 100.

A Corridor, Tsan Yuk Hospital.

A Maternity Ward, Tsan Yuk Hospital.



Labour Ward, Tsan Yuk Hospital.



Labour Ward, Bungalow, Government Civil Hospital.

It is exceedingly difficult to know what treatment will offer the best hope of saving the mother's life, in the last case the abdomen was opened within a relatively short time of the rupture, and yet the patient died. We have so far always plugged the uterus from below in cases where it was possible to deliver the child and placenta by the vagina, reserving abdominal operation for those cases in which the contents of the uterus had escaped into the peritoneal cavity.

Our opinion at present is rather in favour of opening the abdomen and attempting to sew up the rent, whenever the patient's condition permits, and if this is not practicable to plug the rent with gauze from the abdomen, pushing an end down into the vagina to facilitate removal. Hysterectomy appears to add considerably to the shock and I would like to avoid it when possible.

CASES OF ALBUMIN IN THE URINE.

Albuminuria out of a total of 1811 deliveries there were 579 patients had albumin in the urine of these 14 had a considerable quantity of albumin. These cases are exclusive of 6 Eclampsia patients referred to later. We thought it might be of some interest to try and find out if albumin occurred more frequently among housewives than among women who were engaged in earning their living, by heavy work, unfortunately our results are not very conclusive. Approximately 78% of our patients are housewives and 22% are engaged in such work as the following: Coolie, boat-woman, earth carrier, and general trade.

We have taken two hundred patients who have albumin in the urine, of these 17.7% were women who worked hard and 83% were engaged in the probably less hard duties of a housewife. The quantity of albumin is measured by Esbach's albuminometer and the following table indicates our results.

Occupation		.1% or less	.1%—.25%	.25%—.5%	.5% or more
House wives.	T. Y. H.	55	10	8	6
	G. C. H.	64	14	3	6
Women who work hard.	T. Y. H.	17	3	—	1
	G. C. H.	12	—	—	1

Eclampsia.—There were six cases of eclampsia, all the mothers recovered, and five of the infants were born alive. We have now a sequence of ten cases without a maternal death, so that at the moment I am disinclined to depart in any way from the treatment which we have been carrying out during the past year and a half. The treatment is that first described by Tweedy of Dublin, in which we made one change namely that the morphia is reduced, the dose in most cases being grs. ⅙, given at the time that the stomach and rectum are being washed out, and not usually repeated. I explained in my last report my reasons for reducing the morphia, and so far I have had no reason to regret it If the fits continue and a sedative is required an ounce of ether in olive oil is given per rectum, sometimes a dram of paraldehyde is added to the mixture, the initial dose of rectal ether has been repeated three times. Time will tell whether this method of giving ether is without danger in eclampsia, so far we have given it to ten patients without a maternal death. The following cases may be of interest.

M.T. age 27, para. 1.—On admission very œdematous, albumin††, os half dilated. She had ten fits after the placenta was delivered, morphia grs. ⅙, stomach and rectum washed out, infusion of soda bicarb under the breasts, Ether 1½ ozs. in olive oil per rectum. Mother recovered, child alive.

L.L.C. age 20, para. 1.—Admitted in a fit, Albumin††††, morphia grs. ⅙, stomach and rectum washed out, Soda bicarb infused below the breasts, Ether 1 oz. in olive oil per rectum, repeated three times, patient had three fits, all before labour. Mother recovered, child alive.

Morbidity.—The Morbidity rates of the two Hospitals is as follows:—

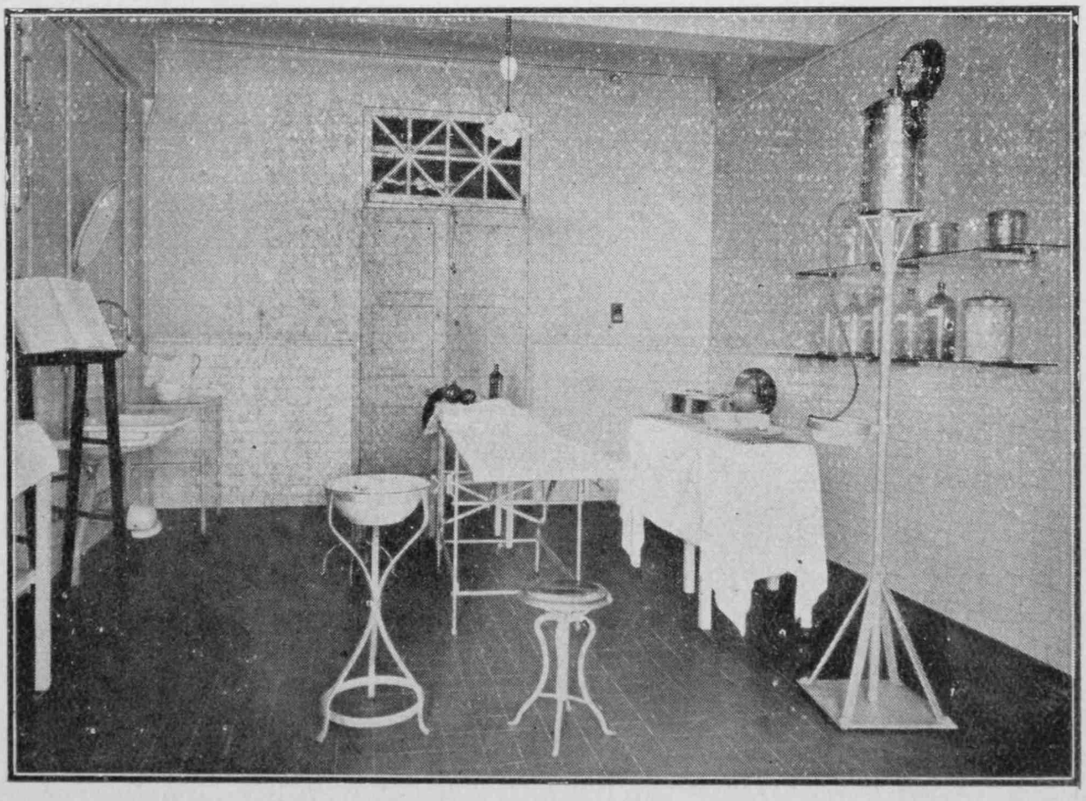
Government Civil Hospital	10.8%
Tsan Yuk Hospital	11.3%

I regard 10% as an average morbidity rate for a country such as this, where in addition to the diseases prevalent in England, there is a whole collection of tropical diseases as well, for instance last year there were 3 cases of malaria diagnosed, and probably several others of recurrent type that escaped diagnosis. There were 2 cases of small-pox, one dysentery, eight typhoids.

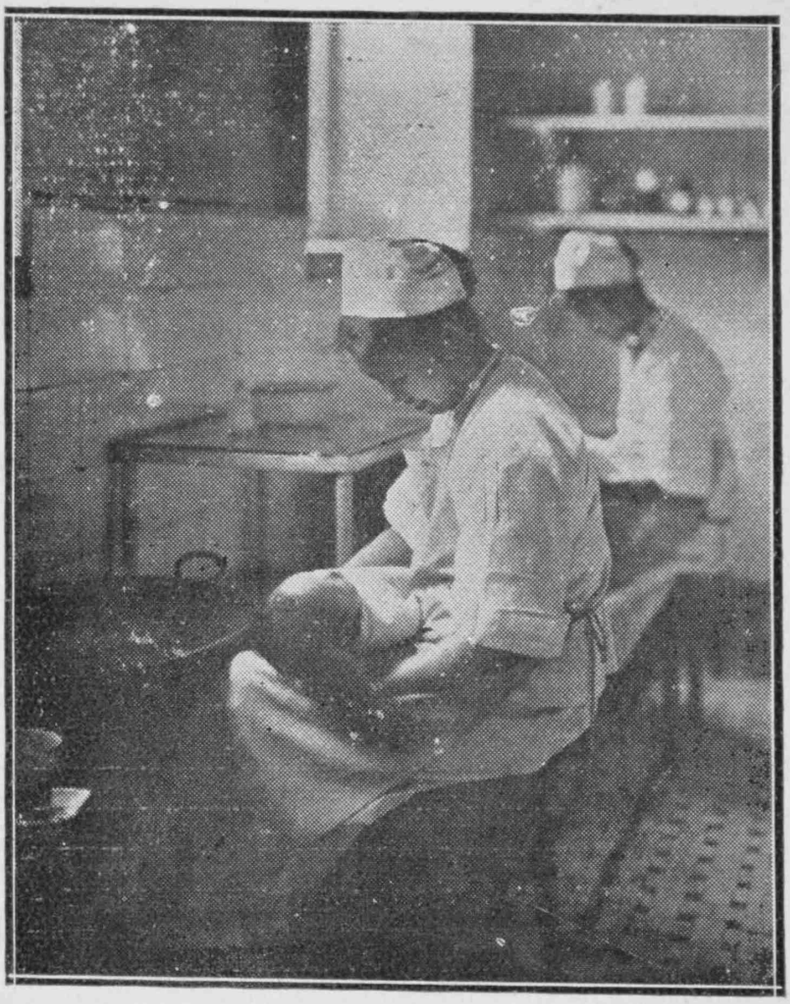
All morbid patients have a red paper disk the size of a shilling gummed on to their charts, these, and disks of other colours are readily obtained, they are sold under the name of "Art Corners," and are used for sticking photographs in albums.

The advantage of having a chart marked in this way, is that it attracts the attention of nurses and students to the fact that the patient has a contagious illness, and further it facilitates sorting of the charts at the end of the year. Disks of other colours are used for operation cases.

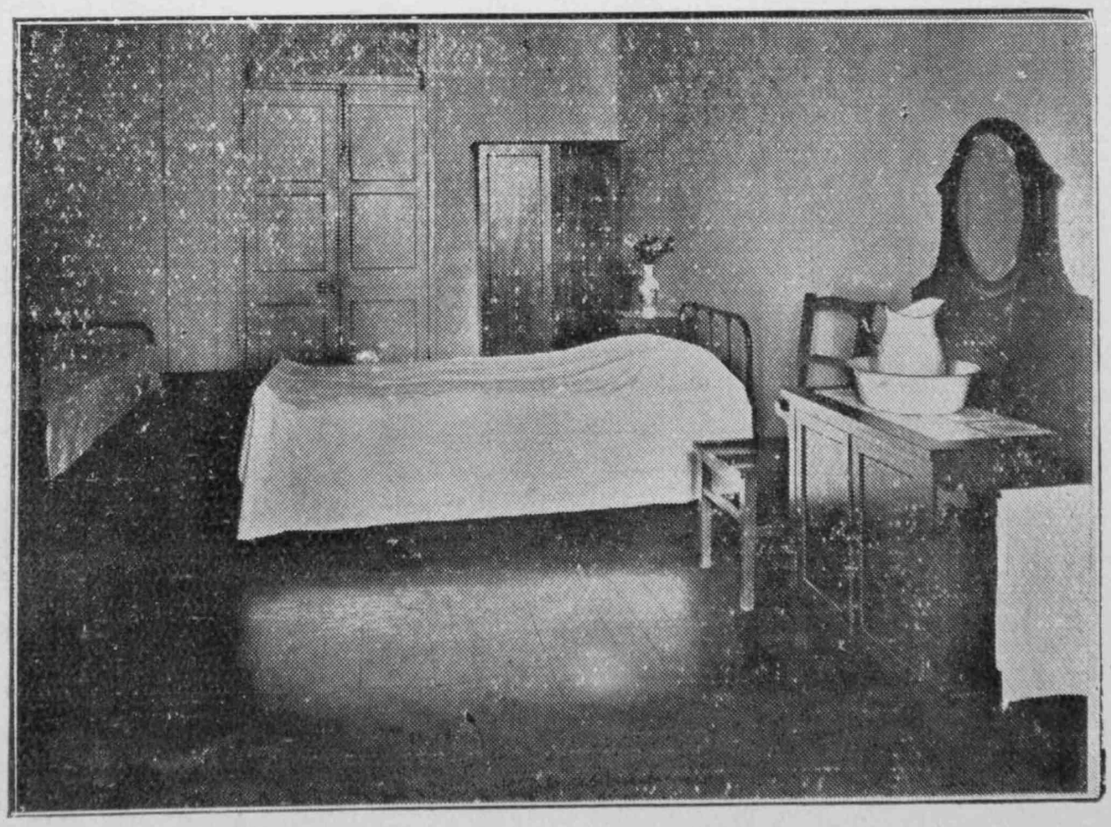
Nurses' Dining Room, Tsan Yuk Hospital.



A view of the Theatre, Tsan Yuk Hospital.



Infant Welfare Clinic, Tsan Yuk Hospital.



Private Ward, Tsan Yuk Hospital.

MORTALITY.

There were altogether 10 deaths, (seven in the Tsan Yuk Hospital, and three in the Government Hospital), giving a mortality rate of .51%.

One patient who was delivered in the Bungalow, was afterwards transferred to the Medical Wards, where she died of Tubercular meningitis, another patient died in the Surgical wards from cellulitis of the leg, these two cases are not included, as death took place some time after confinement from extra genital causes.

Two patients died from puerperal sepsis their particulars are as follows:—

W.K. age 28, para. 1, Patient was examined by a midwife before admission to hospital, there was a history that labour had lasted for 3 days, forceps were applied, and the child delivered as a persistent occipito pisterior, she became acutely septic, the uterus was explored, culture showed streptococci, and gram negative bacilli. She died on the 4th day.

I.L. age 30, para. 2, the patient gave a history of her first labour having lasted 52 hours, delivered by forceps and baby dead. Internal pelvimetry was performed at the 36th week, and the patient was found to have a C.V. of about 4 inches, or perhaps a little less.

In view of her history labour was induced by the stomach tube at the 37th week. Patient delivered herself, but very severe post partum haemorrhage occurred after the expulsion of the placenta, the uterus was douched and plugged with iodoform gauze, on the second evening the temperature rose to 105 and the pulse to 160. Blood transfusion. Uterus explored and culture taken, invading organisms were streptococci diptheroids.

Patient died on the 5th day.

There were five deaths from extra-genital causes, viz:— Pneumonia, Typhoid, Heart disease, Acute tuberculosis, Chronic parenchymatous nephritis, particulars of which will be found in the mortality table. There was one death from accidental haemorrhage, and two from rupture of the uterus, these cases have already been described.

INTERESTING CASE.

A thirty (?) weeks infant was born weighing 4lbs. 4oz., it had a ruptured umbilical hernia, and the greater part of the small intestine was protruding through a rent at the side of the cord. The child was given a general anaesthetic and the intestines washed, and replaced, the abdominal wound had to be enlarged to permit reposition, as the intestines were very distended, the cord was cut close to the abdominal wall and the abdominal wound drained.

The baby was fed with a pipette, and given saline subcutaneously morning and evening. On the 6th day the baby was able to take the breast, and left hospital on the 14th day.

In conclusion I wish to thank the Government Medical Officer in charge of the hospital for his courtesy on all occasions, and my Assistants for the loyal help which they have given me during the year, and for making out the tables in this report.

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

Nature and number of cases treated:	*T.Y.H.*	*G.C.H.*
Total admissions	1323	621
Total deliveries	1222	589
Multiparae	798	418
Primiparae	424	171
Presentations:		
Vertex normal rotation	158	547
V. 1	63.6%	64.7%
V. 2	33.9%	34.2%
V. 3	.6%	.7%
V. 4	1.9%	.4%
Vertex face to pubes	5	6
Face	3	—
Breech	20	10
Transverse	5	4
Twins	7	6
Miscarriage	10	1
Haemorrhages:		
Placenta Praevia	11	3
Post Partum	28	13
Accidental	5	5
Abnormalities:		
Prolapse of cord	2	2
Prolapse of hand	1	3
Vesicular Mole	2	1
Hydramios	1	—
Eclampsia	5	1
Albuminuria:		
Slight to moderate	497	68
Considerable	7	7
X-Ray Diagnosis	1	1
Operations:		
Suture of perineal laceration :—		
Complete	2	—
Incomplete	194	139

	T.Y.H.	*G.C.H.*
Multiparae	35	47
Primiparae	161	92
Suture of Cervical lacerations		4
Forceps	28	17
Destructive Operations on Foetus	3	2
Bipolar version	11	4
Internal ,,	1	—
Manual Removal of Placenta	9	5
Caesarean Section		1
Pubiotomy	—	—
Laparotomy for ruptured uterus (hysterectomy)	1	
Accidental Complications:		
Puerperal Ulcer	9	1
Puerperal Mania	—	1
Malaria	1	3
Dysentery	1	2
Diarrhoea	1	—
Typhoid	2	9
Phthisis	3	—
Asthma	2	—
Septicaemia	1	—
Gastritis	1	—
Bronchitis	6	—
Chronic Parenchymatous Nephritis	1	—
Mastitis	2	—
Pneumonia	1	1
Conjunctivitis	1	—
Scabies	1	—
Small-Pox	2	—
Cystitis	1	—
Toothache and Gingivitis	1	—
Coryza	1	—
Cellulitis of finger	1	—
Ascariasis	3	2
Mitral Stenosis	1	1
Compound fracture of femur	—	1
Pleurisy	—	1
Empyema	—	1
Bacilluria	—	1
Breast Abscess	—	1
Stone in Urethra	—	1
Appendicitis	—	1
Chronic Constipation	—	1
Abscess of back	—	1

	T.Y.H.	*G.C.H.*
Dengue Fever	—	1
Influenza	—	1
Sepsis	—	6
Cracked Nipple	—	1
Toxic Neuritis	—	1
Mitral Regurgitation	—	1
Tonsillitis	—	1
Tuberculosis	—	2
Haemorrhoids	—	1
Gonorrhoeal Arthritis	—	1
Endocarditis	—	1
Hydatidiform Mole	—	1
Phlegmasia alba dolens	—	1
Morbidity, B.M.A. Standard:		
Average, one in	8.8	9.2
Percentage	11.3%	10.8%
Mortality:		
Total	7	3
Average, one in	189	197
Percentage	.52%	.5%
Left Hospital Against Advice	72	7

Table No. II.—*INFANT STATISTICS.*

	T.Y.H.	*G.C.H.*
Total Births	1222	595
Alive	1159	568
Dead:—	63	27
Premature		9
Full term		8
Macerated		10
Children born alive who died in hospital ...	23	8
Abnormalities:		
Blepharitis	1	—
Hare lip and cleft palate	1	1
Hydrocephalus	—	2
Ruptured Umbilical hernia	—	1
Spina Bifida	—	1
Ascites	—	1
Complications.		
Ophthalmia Neonatorum	1	1
Melaena	1	—
Cerebral Haemorrhage	—	1

Table No. III. *Pelvic Presentation.*

Para	Total	Dead Children	Remarks
G. C. H.			
Primiparae	3	Miscarriage 1	Extended legs 2 cases.
Multiparae	7	Miscarriage 1 Premature 1	Forceps applied to breech, in one case with extended legs.
T. Y. H.			
Primiparae	3	Premature 1	Forceps applied to one breech case due to prolonged 2nd stage.
Multiparae..	17	Macerated 1 Premature 3 Full Term 1	

Table No. IV.

Placenta Praevia (G.C.H.)

Name	Age	Para	Variety	Period of Pregnancy	Presentation	Result to Mother	Result to Child	Treatment and Remarks
G. C. H. C. H.	30	3	Central	31½ wks.	Vertex	A.	D.	Haemorrhage 14 days before admission. On admsssion profuse haemorrhage. Anaemic air hunger. Pulse Rapid. Bipolar Version.
L. L.	30	4	Marginal	28 wks.	Transverse	A.	D.	Haemorrhage before admission. Cord and Placenta presenting. Bipolar Version.
W. T.	43	11	Marginal	40 wks.	Vertex	A.	A.	Bipolar Version ½cc. pituitrin.
T. Y. H								
Y. L.	23	2	Marginal	6 months	Vertex	A.	D.	Bipolar Version. Haemorrhage 2 days before admission.
L. L.	37	2	Marginal	8 months	Vertex	A.	D.	Bipolar Version. Os dilated to size of a dollar piece. Before admission had intermittent haemorrhage for 3 days.
M. P. S.	21	1	Marginal	6 months	Vertex	A.	A.	2 fingers Os. Bipolar Version.
H. W. C.	21	1	Lateral	Term	Vertex	A.	D.	Bipolar Version. Os about 2 fingers dilated membranes ruptured artificially.
K. M. Y.	30	4	Marginal	Term	Vertex	A.	D.	Bipolar Version. Os admits two fingers and is rigid. P. P. H. when baby was born, due to tear of cervix. Uterus and Vagina plugged. Breast and rectal saline. Antistreptococcal serum 20c. injected. Pituitrin injected after version.

Placenta Praevia (Continued).

Name	Age	Para	Variety	Period of Pregnancy	Presentation	Result to Mother	Result to Child	Treatment and Remarks
Y. L.	23	3	Central	8 months	Vertex	R.	D.	Os size of a dollar. Bipolar Version.
L. K.	22	1	Marginal	6 m. 5 days	Vertex	A.	A.	Bipolar Version. Os admits 4 fingers. Membranes ruptured.
L. Y.	40	5	Central	7½ months	Transverse	A.	D.	Bipolar Version. 2 finger Os. Pituitrin injected.
L. K. M.	39	12	Marginal	8½ months	Vertex	A.	D.	Os half dilated. Bipolar Version. Pituitrin injected.
M. M.	40	12	Central	8 m. 6 days	Verter	A.	D.	Haemorrhage from Vagina. 2 days before admission. 2 finger Os. Bipolar Version.
C. S. C.	34	4	Lateral	Term	Vertex	A.	D.	Os. admits 2 fingers. Haemorrhage for 2 days. Bipolar Version. Pituitrin injected.

Table No. V. *Accidental Haemorrhage.*

Name	Age	Para	Period	Variety	Result to Mother	Result to Child	Presentation	Treatment and Remarks
T.Y.H.								
L. K.	40	10	8 month	Concealed	A	D	Vertex 1	Patient had fainting fits on the morning of admission. Membranes ruptured artificially. Binder put on. Pituitrin ¼ c.c. half hourly three times. Baby born naturally. - Albumin*.
I. S.	39	2	8 month	Concealed and revealed	A	D	Vertex 1	Slight Ante-partum haemorrhage. Membrance ruptured artificially. Tight binder put on. Baby born naturally. - Albumin*.
L. S.	38	7	9 month	Concealed and revealed	A	D	Vertex 1	Slight Ante-partum haemorrhage. Membrane ruptured artificially. Tight binder put on.—Albumin**.
W. H.	42	12	Term	Concealed	D	D	Vertex 3	On admission the uterus was tense and larger than normal. Membranes ruptured accidentally during a vaginal examination. Baby delivered naturally. After labour slight post-partum haemorrhage. Pituitrinlee injected. Died suddenly soon after.—Albumin*.
C. Y.	24	2	8 month	Concealed and revealed	A	D	Vertex 2	Patient said she was in 6 months pregnant but according to the height of the uterus she was about 8 months pregnant. About half an hour after admission she fainted and there was haemorrhage from vagina. On examination os was found to be closed. 2.30 p.m. pituitrin ½ c.c. injected. 4.20 p.m. morphia gr. injected. Tight binder put on. Membranes ruptured artificially.—Albumin*. Morbid 5 days.

* Signifies one plus.

Table No. V *Accidental Haemorrhage (Continued).*

Name	Age	Para	Periee	Variety	Result to Mother	Result to Child	Presentation	Treatment and Remarks
G.C.H.								
C. S.	38	9	9 month	Concealed	A	D	Vertex 1	Admitted with signs of shock, Albumen---Pulse 160. Membranes ruptured artificially. Binder applied. Pituitrin ¼ c.c. 4 doses every ¼ hr. Adrenalin 2 c.c. intravenuous. Morphia Forceps delivery. Placenta delivered with large blood clots. P.P.H. Pituitrin 1 c.c. intravenous. Saline infusion. Patient treated for collapse.
C. T. S.	41	11	36 Weeks	Concealed and revealed	A	D	Vertex 1	Patient fainted at home three times. Admitted with profuse external haemorrhage. Albumen**. Pulse weak. Membranes artificially ruptured. Pituitrin ¼ c.c. (8 dosed) every ¼ hour. Spontaneous delivery. Large blood clots with delivery of placenta. Treated for Post-partum haemorrhage and collapse.
R. A.	37	3	36 Weeks	Concealed and revealed	A	D	Vertex 1	Admitted with history of haemorrhage. Condition of patient good Albumen** Membranes ruptured artificially. Binder applied. Morphia given. Normal delivery with clots on delivery of placenta.
Y. S.	31	7	9 month	Concealed	A	A	Vertex 2	History of slight bleeding Albumen* Morphia Normal delivery. Large blood clots on delivery of placenta. Post-partum haemorrhage.
C. Y.	45	8	39 Weeks	Concealed	A	A	Vertex 1	Admitted with dyspnoea Rapid pulse, with acute abdomenal pain. Albumen**. Membranes ruptured artifically Pituitrin injected. Binder put on. Forceps applied. Live baby. Post-partum haemorrhage. Manual removal of placenta with old blood clots. Treated for collapse.

* Signifies one plus.

Table No. VI.

Prolapse and Presentation of Cord.

Name	Age	Para.	Weight of Child	Presentation	Treatment	Result to Mother	Result to Child	Remarks
T.Y.H. L.M.H.	35	3	2 lbs.	Transverse	Decapitation	Alive	Dead	Prolapse of hand 12 hrs before admission, cord pulseless
G.C.H. C.Y.M.	19	1	2 lbs.	Vertex with cord presenting.	Spontaneous Delivery	Alive	Dead	Miscarriage twins.
L.S.	30	4	2 lbs.	Transverse with placenta and cord presenting Bipolar Version.	Bipolar Version	Alive	Dead	Placenta Praevia with 4 finger os. no pulsation of cord. Pulse 160 before delivery.

Table No. VII.

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	15	11	15	11	—	—	11	9	4	2	One complete tear of perineum. One impacted breech.
Eclampsia	2	—	2	—	—	—	1	—	1	—	
Concealed Accidental Haemorrhage	—	2	—	2	—	—	—	—	—	2	Macerated Foetus.
P. O. P.	7	1	6	1	1	—	4	1	3	—	Positive Typhoid. Abscess of back. Temp 103.
Maternal Distress	3	3	1	2	2	1	1	1	2	2	One case died of heart disease. One sent in by outside Doctor after failure with forceps. Pulse 144. Patient was very oedematous. Macerated Foetus. Maternal death due to acute tuberculosis on the 6th day of puerperium. (*See Mortality.*)

Table No. VIII.

Number of Pregnancy of Patients in whom Forceps were applied.

PARA.	Number of forceps cases.		
	T.Y.H.	*G.C.H.*	*Grand Total.*
1	20	10	30
2	2	2	4
3	3	0	3
4 and over	3	5	8
	—	—	45
Total	28	17	45

Table No. IX.

Age of Patients in whom Forceps were applied.

AGE.	Number of forcep cases.	
17—25	12	6
26—30	5	7
31—35	5	1
36 and over	6	3
	—	—
Total	28	17

Table No. X.

Destructive Operation on Foetus.

Name	Age	Para	Indication	Operation	Remarks
T. Y. H.					
C. Y. H.	35	3	Prolapse of hand and cord 12 hrs. before admission.	The neck dislocated with Braun's hook. The soft parts cut with scissors.	Body delivered without difficulty. Head delivered with forceps.
T. C. T.	32	2	Os 2 fingers scar on right side of os. Os incised on the anterior and posterior aspect.	Foetal head perforated and clavides cut with scissors.	Patient had been in pain for 5 days. Foetus dead and decomposed. Patient had repeated rigors.
U. M.	25	1	Foetal heart sound not heard.	Perforation done and head crushed.	2nd stage delayed. Forceps failed.
G. C. H.					
W. Y.	28	5	Transverse with prolapsed right hand.	Decapitation Craniotomy of the after coming head.	Bipolar Version unsuccessful. Decapitation was difficult owing to rigid cervix. Macerated foetus.
I. A. S.	33	8	Transverse presentation with prolapsed right hand. In labour for 28 hrs. before admission into Hospital.	Decapitation Manuel removal of placenta. Uterus was found ruptured. Uterus plugged.	Case admitted pulse of 180 and signs of shock. Abdomen tender Prolapse of right arm with compound fracture due to the patient sitting on the arm. It is interesting to note that the patient was on a fishing junk when labour started which accounts for the late admission into Hospital.

Table No. XI.

Morbidity, B.M.A. Standard.

	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	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.	G.C.H.
Total Deliveries..	77	44	97	38	106	47	114	65	121	60	124	50	126	56
Cases Morbid....	7	3	14	3	25	5	15	4	16	9	15	8	15	8

	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	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.	
Total Deliveries..	113	54	104	53	84	42	80	38	71	42	1222	589	1811
Cases Morbid....	11	8	5	3	5	5	10	3	7	5	139	64	203

	T.Y.H.	G.C.H.	GRAND TOTAL
Total number of morbid cases..	139	64	203
Total average morbidity .. .. 1. in	8.8	9.2	8.9
Total percentage morbidity	11.3%	10.8%	11.2%

Table No. XII.

Comparative Morbidity in Primiparae and Multiparae.

Primiparae	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	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.	G.C.H.
Total Deliveries..	25	9	30	6	33	14	35	21	45	17	46	11	48	15
Cases Morbid.....	4	2	8	0	9	2	8	4	7	1	8	3	9	3

Primiparae	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	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.	
Total Deliveries..	51	18	36	18	20	15	32	13	23	14	424	171	595
Cases Morbid.....	7	3	4	2	3	3	7	3	4	3	78	29	107

	T.Y.H.	G.C.H.	GRAND TOTAL
Total average morbidity primiparae .. .. one in	5.4	5.9	5.5
Total percentage morbidity primiparae	15.9%	16.9%	18%

Table No. XII.—*(Cont.)*

Comparative Morbidity in Primiparae and Multiparae.

Multiparae	MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER	
	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.	G.C.H.
Total Deliveries..	52	35	67	32	73	33	79	44	76	43	78	39	78	41
Cases Morbid.....	3	1	6	3	16	3	7	1	8	5	7	7	1	5

Multiparae	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		TOTAL		GRAND TOTAL
	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.	
Total Deliveries.	67	36	68	35	64	27	48	25	48	28	798	418	1216
Cases Morbid....	4	5	1	1	2	2	3	0	3	2	61	35	96

	T.Y.H.	G.C.H.	GRAND TOTAL
Total average morbidity multiparae .. .. one in	11.9%	12	13
Total percentage morbidity multiparae	7.6%	83%	76%

Table No. XIII.

Extra-genital causes of Morbidity.

	T.Y.H.	*G.C.H.*
Malaria	—	3
Small-pox	2	—
Phthisis	3	—
Dysentery	1	—
Dengue	—	1
Hook worm	—	1
Scabies Septic	1	—
Vaccination	1	—
Cellulitis of finger	1	—
Typhoid	2	9
Toothache and Gingivitis	1	—
Endocarditis	—	1
Tuberculosis (pulmonary)	—	2
(meningitis)	—	1
Mastitis	1	—
Influenza	—	3
Haemorrhoids Strangulated	—	1
Gonorrhoeal Arthritis	—	1
Pyaemic Abscess	—	1
Toxic Neuritis	—	1
Pneumonia	1	—
Cracked Nipple	—	1
Bronchitis	8	1
Asthma	1	—
Gastritis	1	—
Conyza	1	—
Appendicitis	—	1
Bacilluria	—	1
Compound fracture of Femur	—	1

Table No. XIV.

Caesarean Section.

Name	Age	Para.	Nature of Operation	Indication	When Performed	Result to Mother	Result to Child	Remarks	Date
G.C.H. W.S.	30	1	Ceasarean section extra-peritoneal	Contracted pelivis. Internal conjugate 8 cm.	During Labour	Alive	Alive	8 hrs in labour, head not fixed.	5-3-29

Table No. XV.

Eclampsia.

Name	Admitted	Age	Para	Condition on Admission	Urine	Number of Fits.			Treatment	Result to Mother	Result to Child	Remarks	Period of Pregnancy
						Before Labour	During Labour	After Labour					
K.Y.	25-5-28	37	2	Normal. Os. admits 2 fingers	+	—	—	1	Morphia $\frac{1}{6}$gr. R ctal wash c sod. Biscarb Mg. Sulph given per rectum.	R.	R.	An eclamptic fit about 3 hrs after Labour.	Term
M.T.	26-5-28	27	1	Very oedematous os fully dilated.	+ +	—	—	10	Morphia $\frac{1}{6}$gr. Rectum washed out 4 ozs of Mg. Sulph put in. Rectal oil ether 1½ ozs. Morphia $\frac{1}{6}$gr. Infusion of Sod. Biscarb. Stomach lavage 3 ozs. Mis talba put in. Morphia $\frac{1}{6}$gr. Mis talba 2 ozs. by mouth. Rectal wash out 4 ozs. of mis talba put into rectum	R.	R.	1st. fit immediately after placenta is delivered. 2nd fit 2 hrs later 3rd ,, 1 ,, 4th ,, 1 ,, At 5.10 a.m. 5 fit. ,, 5.20 ,, 6 ,, ,, 6.40 ,, 7 ,, soon followed by 8th fit. At 8.55 a.m. 9 fit soon followed by 10th fit.	8m. 28d
L.L.M.	22-10-28	20	1	2 fits before admission oedema	+ +	3	—	—	Morphia $\frac{1}{6}$gr. Rectal wash out the following left in. 3 ozs. of Mag. Sulph. Oil ether 1oz and Paraldehyde 1dr. Mag. Sulph ½oz by mouth vomitted, P. Jalap co. gr. 60.	R.	D.	2 ozs of Mag Sulph by mouth. Fit lasts 5 mins. Blood pressure 120-85. Poultice 4 hourly.	8m.
C.K.	14-12-28	43	1	Oedema of feet Os admits one finger.	+	2	—	—	Morphia $\frac{1}{6}$gr. Rectal wash out. Pulva Jalapae Co. by mouth. Rectal ether 1 oz. Paraldehyde drsii Rectal ether repeated.	R.	R.	Restlessness at 12.15 a.m 8 a.m. 1st fit. 3 p.m. 2nd ,, 6 ,, os fully dilated. Forceps applied.	Term
L.L.	24-4-29	27	1	Normal. No. oedema. No. albuminuria.		1	—	1	Morphia $\frac{1}{6}$gr. Mistalba drs. iii by mouth. Rectal ether 2 oz with 1 dr. of paraldehyde.	R.	R.	Two days after admission. Patient became restless. Forceps put on when os was fully dilated	Term

Table No. XV. *Eclampsia (G.C.H.)*

Name	Admitted	Age	Para	Condition on Admission	Urine	Number of Fits			Treatment	Result to Mother	Result to Child	Remarks	Period of Pregnancy
						Before Labour	During Labour	After Labour					
L.S.C.	31-12-28	20	1	Brought in a fit	+ + + +	3 fits	—	—	Morphia 1/6gr. Stomach bowel and lavage. Breast infusion. Rectal Ether 1oz in olive oil repeated 3 times.	R.	R.	2 fits at home, One in Hospital. Blood pressure 154.	Overtime

Table No. XVI. *Operative Cases Showing Morbidity.*

Nature of operation	Number		No. Morbid Cases		Percent Morbid		Average Morbid		REMAKRKS
	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	T.Y.H.	G.C.H.	
Forceps	28	17	11	14	39%	82%	1 in 2·5	1 in 1·2	**T.Y.H.** 2 cases had puerperal ulcer. One case had foetid liquor amnii before delivery. **G.C.H.** 2 cases of concealed accidental haemorrhage. One case of toxic neuritis. One case of Mitral Regurgitation. One case of Breech with extended legs. One case of Typhoid and Pyaemic abscesses.
Suture of Perineal Laceration.	195	139	55	20	27%	14%	1 in 3·5	1 in 6·9	
Bipolar Version.	12	3	3	1	25%	33⅓%	1 in 4	1 in 3	**T.Y.H.** One case of transverse presentation Os size of a dollar. 11 cases of Placenta Praevia. **G.C.H.** Morbid case admitted with prolapse of cord outside vulva and placenta in vagina.
Manual Removal of Placenta.	9	5	4	4	44%	80%	1 in 2·2	1 in 1·2	**T.Y.H.** All had profuse haemorrhage, before delivery of placenta. One case of miscarriage. **G.C.H.** One case of Hour Glass contraction 3 cases of concealed accidental haemorrhage. One case of ruptured uterus.
Destructive Operation on foetus.	3	2	3	1	100%	50%	in	1 in 2	**T.Y.H.** One case had prolapse of cord and hand 12 hrs. before admission. One case had undergone operative interference before admission. **G.C.H.** Morbid case admitted with prolapsed hand and ruptured Uterus. *(see mortality)*
Prolapse of cord.	1	2	1	1	100%	50%	1 in 1	1 in 2	**T.Y.H.** Decapitation.
Induction of Labour.	1	1	1	1	100%	100%	1 in 1	1 in 1	**T.Y.H.** No foetal heart sound heard. Foetid discharge. Rise of temperature. Stomach tube method. **G.C.H.** Contracted pelvis. History of difficult labour.

Table No. XVII.

Duration of Stay in Hospital of Morbid Cases.

	T.Y.H.		G.C.H.	
Less than 10 days	127 cases including	6 deaths.	40 cases including	3 deaths.
10 to 19 days	44 ,, ,,	1 ,,	32 ,, ,,	— ,,
20 to 29 days	2 ,, ,,	— ,,	4 ,, ,,	— ,,
Over 29 days	— ,, ,,	— ,,	— ,, ,,	— ,,
Total	171 cases including	7 deaths.	76 cases including	3 deaths.

Table No. XVIII.

Duration of Temperature.

	T.Y.H.		G.C.H.	
Less than 10 days	141 cases including	4 deaths.	46 cases including	3 deaths.
5 to 9 days	27 ,, ,,	3 ,,	28 ,, ,,	— ,,
10 to 19 days	2 ,, ,,	— ,,	2 ,, ,,	— ,,
Over 19 days	— ,, ,,	,,	— ,, ,,	— ,,
Total	171 cases including	7 deaths.	76 cases including	3 deaths.

Table No. XVIX.

Highest Temperature Charted.

	T.Y.H.		G.C.H.	
Below 100	0 cases including	0 deaths.	0 cases including	1 deaths.
100 to 100.9	65 ,, ,,	0 ,,	13 ,, ,,	0 ,,
101 to 101.9	56 ,, ,,	1 ,,	19 ,, ,,	0 ,,
102 to 102.9	31 ,, ,,	6 ,,	12 ,, ,,	2 ,,
Total	171 cases including	7 deaths.	76 cases including	3 deaths.

Table No. XX.

Mortality (G.C.H.)

Name	Age	Para	Admitted	Delivered	Died	Cause of Death	Remarks
I.L.	30	2	9-12-28	17-12-28	22-12-28	Puerperal Sepsis.	Contracted Pelvis 1st degree. Induction of labour, with stomach tube. Normal delivery. Post Partum Haemorrhage. Bi-manual compression of uterus. 3rd day after delivery Temp. 105.8° pulse 160. Blood transfusion. Died 5th day.
L.A.S.	33	8	27-2-29	27-2-29	27-2-29	Rupture of Uterus and haemorrhage.	In labour 38 hrs. transverse presentation. Prolapse of hand, arm broken. Rupture took place 3 hrs. before admission. Decapitation Manual removal of placenta. Uterus plugged.
P.L.S.	24	2	15-4-29	15-4-29	20-4-29	Acute tuberculosis.	Delayed 2nd stage. Forceps applied. Died on 6th day of puerperium.
W.K.	28	1	6-6-28	6-6-28	T.Y.H. 10-6-28	Septicaemia.	Patient was in labour 3 days. Had vaginal examination by midwife outside. On admission os was fully dilated and mother's pulse 134. Forceps applied. Baby delivered as P.O.P. Culture taken from uterus. I.U.D. Report, a mixed culture of streptococci and granbacilli.
C.H.	28	1	20-6-28	20-6-28	20-6-28	Heart trouble.	On admission restless and thirsty. Pulse 150. Respiration 50 and irregular. Pale and jaundice. Head on Perinaeum, Forceps, applied. Patient died soon after. Uterus not ruptured.

Table No. XX.

Mortality (Cont.)

Name	Age	Para	Admitted	Delivered	Died	Cause of Death	Remarks
L.K C.	27	2	7-7-28	7-7-28	27-7-28	Chronic Parenchymatons Nephritis.	Twins. After delivery mothers pulse was 128. Urine contained hyaline and granular casts. Died 20 days after delivery.
K.C.H.	21	1	28 8 28	28 8-28	3-9-28	Pneumonia.	Widal Test Negative. Injection of digitalin and strychnine. Breast Saline. H. pts.
H.N.	15	10	17-11-28	17-11-28	20-11-28	Typhoid ?	Patient looked toxaemic. Tongue coated. Watery stools. Normal delivery. Died several days after delivery.
W.S.Y.	24	3	10-3-29	—	11-3-29	Ruptured Uterus	Patient vomitted and on passing a catheter blood was found. Pulse 120. Os fully dilated. Fetal parts easily felt through abdomen. Forcep slipped. Uterus found to be torn on the left side from lower uterine segment to the cervix. Fetus outside the rent after delivery of the child the uterus was removed.
W.H.	42	12	10-14-28	11-4-29	11-4-29	Concealed Accidental Haemorrhage.	Uterus tense and larger than usual. Membranes accidentally ruptured during an vaginal exam. Bleeding from vaginal. Complained of abdominal pain and giddiness. Pulse 104. Large blood clots followed delivery of placenta. Collapsed soon after delivery.

Table No. XXI.

Induction of Labour With Stomach Tube.

	T.Y.H.	*G.C.H.*
Number of cases successful	1	2
Total number of cases	1	2

Twilight sleep induced c Rectal ether in olive oil.

Total number of cases	25
Successful	24

In one case there was delay in the second stage. Forceps applied. All cases were primiparae.

Table No. XXII.

Duration of Stay in Hospital.

	T.Y.H.	*G.C.H.*
Total number	1323	592
Less than 3 days	.68%	.55%
From 3 to 5 days	1.95%	3.04%
„ 6 to 8 days	86.47%	85.81%
„ 9 or more days	10.9 %	10.64%

Table No. XXIII.

Wassermann.

	T.Y.H.	*G.C.H.*
Total taken	—	592
Number of positive cases	—	20
Number of negative cases	—	567
Number of doubtful cases	—	5

Chinese Pelvis.

Average external measurements. Inter. Spinous 8.84″.
Inter. Cristal 10.06″.
Exter. Conjug. 7.55″.

Internal measurements of the true pelvis taken at operation.

True inter. Conjugate.

4″	12%.
4¼″	62%.
4½″	26%.

Oblique.

4″	12%.
4¼″	66%.
4½″	22%.

Transverse.

4″	10%.
4¼″	60%.
4½″	30%.

GYNÆCOLOGICAL REPORT.

During the year there were 343 admissions to the Wards, (196 to the Tsan Yuk, and 147 to the Government Hospital). Of these 181 were operated upon.

Prolapse.

Fifteen cases of prolapse of the uterus were treated by operation, in four cases the prolapse was complete.

The type of operation employed depended to some extent on the degree of prolapse, thus, in minor cases, the vagina was repaired, and cervix reconstructed if necessary, with shortening of Mackenrodt's ligaments; in addition the uterus was usually suspended by abdominal operation, [employing sometimes a transverse, and sometimes a mid line incision.]

In cases of procidentia, or marked prolapse the vagina was repaired, and cervix reconstructed with shortening of the ligaments as before, but the uterus was nearly always suspended from the vagina. During the past five years we have followed out this routine with very slight variation, and as far as can be judged we have been justified by results, in no case has a patient come back to me with a return of the prolapse. The operation of vaginal suspension has many advantages over interposition, and we believe that it has a very real place in the treatment of prolapse of the uterus.

In one of our cases we found that a curative operation was out of the question, the prolapse was due to the pressure of two small tumours situated in the neighbourhood of the uterine cornua, the entire pelvis was the seat of old inflammation, and the intestines were so matted down over the uterus and tubes that it was deemed to be inadvisable to attempt to deal with the situation from above.

There was one case of hypertrophy of the Clitoris, the organ being rather bigger than an adult penis, the pathological report described it as being of a chronic inflammatory nature, the patient was a prostitute and gave a history of long standing venereal disease.

Ovarian Cyst.

This condition was found in fifteen cases, one of the patients being in an inoperable state, (papilloma).

In one case S.W. the adhesions were so dense that the cyst could not be removed entire, the cyst which was multilocular, and apparently benign was removed piecemeal and the sac drained, these cases sometimes make quite a good recovery, but naturally it is some months before the wound dries up. One patient died.

M.Y.N. age 50. Tumour was densely adherent to peritoneum, liver, colon, stomach and omentum. As the patient showed signs of collapse, the cystic tumour was resected, and a portion weighing 11 lbs. removed, and the abdominal wound was drained. The patient died 12 hours after operation.

There was no haemorrhage of any consequence, and the cyst was benign.

Large ovarian cysts are relatively common, thus, one tumour contained 28 pints of fluid, another patient had two tumours weighing 11 lbs., and 4 lbs. and there were two cysts the size of a football. We have found that it is often easier to remove these large cysts entire by clamping and dividing the pedicle, before attempting to deliver the cyst out of the abdomen. In cases of benign cysts that are complicated by adhesions, we have found that when the cyst is large, it is easier to separate the adhesion if the cyst is first tapped, and the sac then drawn out gradually through the wound the adhesions being wiped off, or divided as they appear, than to attempt to separate the adhesions while the cyst is intact. Other medical men also who have practised among the poorer Chinese have found this to be the case.

Hysterectomy.

The uterus was removed in seven cases, in four of these by the subtotal operation, once by panhysterectomy, and in two cases by Wertheim's operation.

Two patients died, one from acute enteritis six days after operation, and the other from post operative shock, the particulars of the latter case are as follows:—

N.P. age 40.—Uterus enlarged to the size of an eight month's pregnancy, as the growth appeared to be breaking down, the uterus was removed by pan hysterectomy. unfortunately the patient died of heart failure and shock 36 hours after operation.

Large myomata of the uterus present something of a problem, the patient is often a poor operation risk, if she is kept in hospital for some time with the idea of building up her general health, she is likely to get tired of hospital, and decide to go home. In our experience Chinese of the working classes do not tolerate operations associated with shock as well as Europeans, most of these women work very hard, carrying heavy loads, and many of them have intestinal parasites.

Mortality.

There were altogether 8 deaths, in only three cases was death attributable to operative causes. In two cases already described, death was due to post operative shock, and in one case, a large vesico-vaginal fistula, the patient died from haemorrhage into the bladder.

The causes of death in the other four cases were as follows:— Puerperal sepsis, three cases, all admitted after delivery. Typhoid, complicated by general peritonitis, and acute salpingitis, one case.

Table No. I.

Statistics of Gynaecological Department.

	T.Y.H.	*G.C.H.*
Number of admissions	196	147
Number of operations	81	100

Table No. II.

Nature and Number of Operations.

	T.Y.H.	*G.C.H.*
Vulva :—		
Haematoma of vulva	—	2
Hypertrophy of labia	—	1
Epithelioma of vulva	—	1
Hypertrophy of Clitoris	—	1
Bartholin Cyst.	1	—
Perineum :—		
Laceration	1	1
Perinaeorrhaphy	3	10
Bladder :—		
Cystoscopy	—	2
Removal of Calculus	1	—
Urethra :—		
Caruncle, excision of	1	1
Vagina :—		
Atresia of vagina	—	1
Cyst of Vagina	—	1
Vesico-vaginal fistula	—	2
Anterior Colporrhaphy	—	4
Vaginitis	1	—
Uterus :—		
Curettage	21	15
Prolapse	5	10
Ventro-suspension (abdominal)	18	22
Ventro-suspension (vaginal)	—	5
Hysterectomy (subtotal)	2	2
Hysterectomy (total)	—	3
Abtortion (curettage for)	1	9
Myomectomy	3	—
Cervix :—		
Trachelorrhaphy	1	2
Amputation	5	2
Polypus, removal of	3	—
Tubes and Ovaries :—		
Marsupialization of Cyst.	—	2
Ovariotomy	4	11
Salpingectomy	2	8
Pyosalpinx	—	1

	T.Y.H.	*G.C.H.*
Salpingostomy	—	3
Extra uterine gestation	2	2
Resection of Ovary	1	2
Broad Ligament Cyst.	—	2
Salpingo-oophrectomy	4	—
Par-ovarian Cyst.	1	—
Miscellaneous :—		
Exploratory Laparotomy	1	
Tubercular peritonitis	—	1
Papillomatous ovarian cyst.	—	1
Ascites	—	1
Ovarian cyst undergoing malignancy	—	1
Breast Abscess	—	8
Abscess of back	—	1
Removal of tissue for section	1	—
Appendicular Abscess	1	—
Colpotomy (posterior)	1	—
Vesicular Mole, curettage for	1	—

Table No. III.

Nature and Number of Cases Treated Without Operation.

	T.Y.H.	*G.C.H.*
Refused operation	59	2
Operation contra indicated by general health	6	2
No operation indicated	20	—
Pregnancy with Chronic Constipation	—	2
Pregnancy with Toxaemic Vomiting	—	1
Pregnancy with Heart Disease	2	—
Pregnancy with Insanity	1	—
Pregnancy with Vaginitis	—	1
Pregnancy with Oedema	2	—
Pregnancy with Typhoid Fever	—	1
Pregnancy with Mastitis	—	1
Pregnancy with Leucorrhoea	2	—
Pregnancy with Gonorrhoea	1	—
Bartholinitis	1	2
Vulvitis	5	1
Infantile Uterus	1	1
Subinvolution	—	2
Papilloma of Bladder	—	1
Carcinoma of Cervix	—	1
Threatened Miscarriage	—	3
Miscarriage and Typhoid	—	1
Abortion (complete)	—	5

	T.Y.H.	*G.C.H.*
Ovarian Cyst.	—	1
Papilliferous ovarian cyst.	—	1
Tonsillitis and pregnancy	—	1
Puerperal Sepsis	—	6
Pyosalpinx	—	1
Retroversion (pessary)	—	2
Retroversion and Salpingitis	—	6
Salpingitis	5	6
Bubo	1	—
Haemorrhoids	1	—
Papillomatous growth around Anus	1	—
Gonorrhoea	2	—
Pernicious vomiting	3	—
Cystitis	3	—

Table No. IV. *Hysterectomy.*

No.	Name	Age	Date	Disease	Operation	Result	Remarks
414	G. C. H. M. X.	43	30-10-28	Uterine Fibroid	Subtotal Hysterectomy	Recovery	Uterus irregularly enlarged to a finger's breath below Umbilicus. Tumour growing from anterior wall of uterus Interstitial fibroid also present.
422	C.W. C.	38	13-11-28	Uterine Fibroid	Wertheim's Hysterectomy	Recovery	Tumour springing from cervical portion of uterus. Weight 5 lbs.
466	L. L.	40	5-3-29	Carcinoma of Cervix	Wertheim's Hysterectomy	Recovery	(Section returned as Squamous epithelioma) Patient had incontinence of urine after operation, but this ceased after 3 weeks.
398	N. P.	40	18-9-29	Uterine Fibroid	Wertheim's Hysterectomy	Died	Uterus enlarged to size of an 8 month's pregnancy. Total hysterectomy. Growth undergoing Malignant change. Fair amount of haemorrhage. Patient died 36 hours after operation.
402	L. A. S.	33	2-10-28	Uterine Fibroid	Subtotal Hysterectomy	Recovery	Uterus enlarged to size of foetal head, several small subserous fibroids also present.
278	T. Y. H. M. N.	40	10-5.28	Myoma	Subtotal Hysterectomy	Died	Irregular tumour size of 6 months pregnacy. Patient died of acute enteritis 6 days after operation.
169	A. A.	30	30-4-28	Myoma	Subtotal Hysterectomy	Recovery	Irregular tumour size of 5 months pregnancy.

Table No. V.

Miscellaneous Operations.

No.	Name	Date	Age	Disease	Operation	Result	Remarks
401	G.C.H. L.A.C.	2-10-28	30	Ovarian Cyst. Papilliferous	Laparotomy	Inoperable condition	Secondary deposits in omentum and intestines
435	C.B.	11-12-28	25	Hypertrophy of clitoris	Removal of growth	Recovery	Under local anaesthesia
450	H.Y.L.	22 1-29	26	Vesico-vaginal fistula	Plastic operation	Recovery	
43	T.Y H. W.S.	4 9 28	42	Submucous Myoma	Myomectomy	Recovery	Tumour twisted off its pedicle
65	K.Y.S.	11-10 28	41	Uterus retroverted cervical polypus	Curettage resection of tumour of cervix. Modified Guilliaume	Recovery	Uterus retroverted and enlarged
112	W.N.	15-1-29	47	Myoma of broad ligament Cervical polypus	Removal of Polypus & Myoma	Recovery	Polypus twisted off from cervix, Myoma removed through abdomen

Table No. VI.

Ovariotomy.

No.	Name	Age	Date	Disease	Operation	Result	Remarks
338	G.C.H. L.C.Q.	29	8-5-28	Ovarian Cyst	Ovariotomy (double)	Recovery	Left cyst-size of a football. Omentum adherent. Right cyst-size of foetal head. Secondary deposits on omentum.
390	M.Y.N.	50	4-9-28	Ovarian Cyst	Ovariotomy	Died	Tumour adherent to peritoneum. Adhesions separated but tumour could not be removed as adhesions to liver, colon stomach, omentum, were present. Patient's condition became bad and so tumour was cut off at base of broad ligament. Removed portion weighed 11 lbs. Patient died not recovering from shock and operation.
92	W.T.F.	37	18-9-28	Right Ovarian Cyst	Ovariotomy	Recovery	Cyst at level of Xyphoid Process. Delivered whole. Uterus suspended.
430	C.Y.K.	22	4-12-28	Right Ovarian Cyst	Ovariotomy	Recovery	Cyst size of a fist removed, salpingectomy and Ventroal suspension done.
431	T.K.	36	4-12-28	Left Ovarian Cyst	Ovariotomy	Recovery	Size of foetal head.

Table No. VI.

Ovariotomy—(Cont.)

No.	Name	Age	Date	Disease	Operation	Result	Remarks
462	A.V.	26	26-2-29	Ovarian Cyst	Ovariotomy	Recovered	Unilocular right ovarian Cyst could not be removed whole. Tapped first 28 pints fluid withdrawn and cyst then removed. Left ovary resected due to Cyst change. Ventral suspension of uterus.
463	S.W.	29	26-2-29	Multilocular Ovarian Cyst.	Marsupialization of Cyst	Recovered	Dense adhesions between tumour and peritoneum. Cyst tapped, brown mucus like fluid evacuated. Cyst removed in pieces, and sac drained.
474	C.P.	26	9-4-29	Malignant Adenoma	Ovariotomy	Recovered	Two tumours removed one 11 lbs., the other 4 lbs. in weight, ascites present.
297	**T.Y.H.** H.T.M.	28	29-6 28	Left Ovarian Cyst.	Ovariotomy	Recovered	Tumour size of a football.
84	C.T.H.	47	14-4-28	Ovarian Cyst	Ovariotomy	Recovered	Cyst size of a 7 month Pregnancy, adherent to peritoneum and omentum.
154	L.K.	35	9-4-29	Right Ovarian Cyst	Ovariotomy	Recovered	Small Cystic Ovary.

Table No. VII.

Salpingectomy and Oopherectomy.

No.	Name	Age	Date	Disease	Operation	Rusult	Remarks
386	G.C.H. W.Y.H.	23	27-8-20	Retroversion and Salpingitis.	Right salpingectomy and ventral-suspension	Recovered	
399	C.H.	27	25-9-28	Retroversion and Salpingitis. Lacerated cerviz.	Ventralsuspension Right salpingectomy Resection of overy. Emmet's Trachelorrhaphy.	Recovered	Blood stained fluid in peritoneal cavity—due to ruptured corpus luteum cyst.
492	V.M.Y.	28	28-11-28	Retroversion, Salpingitis.	Right Salpingectomy. Implantation of left tube. Ventral suspension Shortening of round Ligaments.	Recovered	Left tube blocked about 1 in. from cornu of uterus.
430	C.K.Y.	22	4-12-28	Retroversion, Salpingitis and Ovarian Cyst.	Right Salpingectomy. Right Ovariotomy. Ventral-suspension.	Recovered	Right ovary cyst-size of a fist.
432	W.A.Y.	28	11-12-27	Tuberculous Tube.	Double Salpingectomy.	Recovered	Free fluid in abdominal cavity. Tubercles present on intestines.
436	L.A.M.	28	18-12-28	Retroversion. Salpingitis Erosion of cervix.	Left Salpingectomy Left Ovariotomy Ventralsuspension Colpoperineorrhaphy.	Recovered	Left ovary cystian. Right ovary, small cyst, punctured and sutured.

Table No. VII.

Salpingectomy and Oophrectomy.

No.	Name	Age	Date	Disease	Operation	Result	Remarks
473	H.Y.	27	19-3-29	Retroversion Salpingitis. Erosion of Cervix	Double Salpingectomy. Ventralsuspension. Amputation of Cervix	Recovered	
288	N.H.	32	11-6-28	Right Salpingitis. Retroversion	Right Salpingectomy Par-ovarian cyst. Ventral suspension. Modified Guilliaume	Recovered	Fixed retroversion. Par-ovarian cyst size of an apple.
3	P.A.C.	30	18-7-28	Pyosalpinx	Excision of right tube and ovary	Recovered	Bilateral tubal tumour size of a fist Chocolate cyst in ovary. Left tube adherent.
41	L.S.M.	29	3-9-28	Bilateral haematosalpinx	Double Salpingectomy and right ovariotomy	Recovered	Uterus retroverted. Haematoima size of a fist.
120	K.T.M.	31	26-2-29	Salpingitis	Salpingectomy Resection of ovary (left) Ventralsuspension. Modified Guilliaume	Recovered	Fixed retroversion.
129	L.S.	30	5-3-29	Salpingitis	Left Salpingeoophorectomy Ventral suspension Modified Guilliaume	Recovered	The tube and ovary walled off by adhesions not removed.

Table No. XIII.

Extrauterine Pregnancy.

No.	Name	Age	Date	Disease	Operation	Result	Remarks
451	**G.C.H.** H.S.	36	20-1-29	Ruptured right extrauterine gestation	Excision of right tube and sac	Recovered	Intra venous and submammary saline. Amenorrhoea of 6 weeks duration.
465	C.L.Y.	26	28-2-29	Ruptured left Extrauterine gestation	Excision of left tube Removal of right ovary	Recovered	Right ovarian cyst-size of a first present.
123	**T.Y.H.** N.N.	26	26-2-29	Ruptured Extrauterine. Divarication of the recti	Excision of tube. Rectus muscle stitched	Recovered	Uterus deflected to the left by a tumour size of a ping-pong ball.
133	L.L.	37	12-3-29	Pelvic Haematoma	Blood Clots shelled out	Recovered	Tumour size of 6 months pregnancy in left broad ligament.

Table No. IX. *Prolapse.*

No.	Name	Date	Age	Disease	Operation	Result
339	G.C.H. F.K.K.	8-5-28	21	Retroversion and Prolapse	Anterior Colpotomy; Shortening of Mackenrodt's Ligaments, Amputation and reconstruction of Cervix; Vaginal vertral suspension.	Recovery
353	L.A.L.	26-6-28	25	Retroversion and Prolapse	Anterior Colpotomy; Shortening of Mac's Ligaments; Amputation and reconstruction of Cervix; Vaginal ventral suspension. Posterior Colpoperinacorrhaphy.	Recovery
365	F.P.	17-7-28	36	Prolapse	Circular Amputation of cervix; Shortening of Mac's Ligaments; Vaginal ventral suspension. Reconstruction of Cervix; Colpoperinacorrhaphy.	Recovery
372	W.H.	31-7-28	40	Procidentia	Amputation of cervix; Shortening of Mac's Ligaments; Vaginal ventral suspension; Reconstruction of Cervix; Posterior Colpoperinacorrhaphy.	Recovery
384	F.M.S.	4-9-28	50	Procidentia	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Mac's Ligaments; Reconstruction of cervix.	Recovery
407	I.M.	16-16-28	25	Retroversion and Prolapse	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Mac'c Ligaments; Reconstruction of Cervix; Vaginal ventral suspension; Posterior Colpoperinacorrhaphy.	Recovery
409	C.A.S.	23-10-28	53	Procidentia	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Mac's Ligaments; Reconstruction of Cervix; Posterior Colpoperinacorrphaphy.	Recovery

Prolapse—(Cont.)

No.	Name	Date	Age	Disease	Operation	Result
412	C.S.M.	23-10-28	27	Retroversion and Prolapse	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Cervix; Shortening of Mac's Ligaments; Reconstruction of Cervix; Posterior Colpoperinaeorrphaphy.	Recovery
442	L.A.T.	15-1-25	58	Retroversion Prolapse Cystocele	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Cervix; Shortening of Mac's Ligaments; Reconstruction of Cervix; Posterior Colpoperinaeorrhaphy; Abdominal Ventral suspension.	Recovery
479	C.H.	30-4-29	32	Retroversion Prolapse Cystocele	Anterior Colporrhaphy; Amputation of Cervix; Shortening of Mac's Ligaments; Reconstruction of Cervix; Posterior Colpoperinaeorrphaphy.	Recovery
291	T.Y.H. C.M.	18-6-28	44	Complete Prolapse	On laparotomy, bilateral tumour size of an goose's egg found on each cornu of uterus. Dense Adhesions, tumours not removed.	Recovery
35	S.C.K.	27-8-28	24	Prolapse of uterus (complete)	Vaginal repair and suspension.	Recovery
44	K.Y.M.	5-9-28	28	Prolapse, tear of cervix	Shortening of Mac's Ligaments Supravaginal Amputation of cervix; Perinaeorrhaphy; Abdominal Ventral suspension.	Recovery
81	L.L.	14-11-28	32	Prolapse, old tear of cervix	Supra-vaginal Amputation; Shortening of Mac's Ligaments Vaginal suspension Perinaeorrhaphy.	Recovery
83	N.K.	14-11-28	33	Cystocele and Rectocele tear of perineum Uterus Retroverted	Supra-vaginal Amputation; Shortening of Mac's Ligaments; Vaginal suspension; Perinaeorrhaphy.	Recovery

Table No. X.

Mortality of Puerperal Sepsis Cases.

No.	Name	Age	Admitted	Died	Diagnosis	Treatment	Remarks
	G. C. H.						
350	L. S.	26	16-6-28	16-6-28	Puerperal Sepsis and Septic Bronchopneumonia.		Patient admitted in a dying condition. Delivered 12 days previously in a neighbouring Maternity hospital.
392	C. S. H.	26	7-9-28	9-9-28	Puerperal Sepsis organism from uterine culture Diphtheroids.	Intra uterine douche Antistreptococcii serum Quinine.	Admitted in a delirious condition. Delivered 7 days previously in a neighbouring Maternity Hospital.
440	M. H.	21	4-1-28	5-1-29	Puerperal Sepsis with Peritonitis.	Intra uterine douche Antistreptococcii serum	Delivered 6 days previously in a cargo boat admitted in a serous condition with peritonitis.

MORTALITY.

Pueperal Sepsis—Three deaths (all patients admitted after delivery).

Deaths from other causes.

M.K. Age 28. Vesico Vaginal Fistula.
Patient died from haemorrhage into the Bladder.

T.Y. Age 30 Acute Salpingitis and Typhoid.
Cause of death :—(PM. findings).
Generalized penitontis—acute fibrinous, double acute Salpingitis. Typhoid. No operation performed.

M.Y.N. Age 50. Ovarian Cyst intensely adherent to neighbouring Ovarian Cyst.
organs.
Portion removable weighed 11 lbs. Fluid 5 pints.
Cause of death :—Post operative shock.

N.P. Age 40. Uterine Fibroid.
Uterus enlarged to midway between Umbilicus and ensiform. Hysterectomy done. Growth undergoing malignant change. Patient died 36 hours after operation from failing heart.

W.N. Age 40. Myoma.
Subtotal Hysterectomy.
Irregular tumour size of 6 months pregnancy.
Patient died of acute enteritis 6 days after operation.

CLINICAL REPORT OF THE VENEREAL DISEASE CLINIC.

by

Dr. Li.

The Venereal Disease Clinic of the Tsan Yuk Hospital is held every Wednesday at 2 p.m. During the twelve months 172 patients attended the Clinic. In treating Gonorrhoea the patients are douched followed by swabbing the cervix and vagina with 1 in 1,000 augiflavine solution.

In giving N.A.B. injections the method adopted by Dr. Kirkpatrick at Stevens' Hospital is followed :—

Eight weekly injections are given as follows :—

1st week	0.30 gm.	5th week	0.60 gm.
2nd ,,	0.45 gm.	6th ,,	0.45 gm.
3rd ,,	0.60 gm.	7th ,,	0.45 gm.
4th ,,	0.75 gm.	8th ,,	0.45 gm.

Wassermann.

If positive, give patient a month's rest, then give 2nd course as before save that the dose of 0.45 gm. need not be exceeded.

Wasserman.

If positive, give a month to six weeks' rest then a third course as before.

Wassermann.

If still positive no further course of treatment should be given for three months at least.

If the Wassermann is negative after the first course, the blood should be examined every month, and even if it remains negative a short course (4 weekly injections 0.3 gm. 0.45, 0.45) during the latter weeks of pregnancy is advisable.

Sickness or headache is an indication to reduce the dose.

Meals should be taken in the ordinary way.

It is desirable to give an injection of 0.3 gm. a week before doing Wassermann, as it increases the chances of getting a positive result, and hence makes a negative of more value.

Statistics.

Patients suffering from Gonorrhoea	82
Patients suffering from Syphilis	39
Patients suffering from Syphilis & Gonorrhoea	51

50	patients	received	1	injection.	
19	,,	,, ...	2	,,	
8	,,	,, ...	3	,,	
1	,,	,, ...	4	,,	
5	,,	,, ...	5	,,	
4	,,	,, ...	6	,,	
3	,,	,, ...	7	,,	
2	,,	,, ...	8	,,	

Total number of injections	202	
Total number of syphilitic tests taken	132	
Syphilitic tests positive .....(80)		60.6%

Symptoms.	*No. of Patients.*
Aching in bones	20
Ulceration of vulva	16
Pains in the lower limbs	6
Amemorrhoea	16
Abortion	3
Leucorrhoea	51

Hoarseness of voice	5
Irregular menstruation	3
Swelling of vulva	8
Metrorrhagia	9
Dysuria	5
Pain in abdomen	21
Sterility	6
Pain on the left leg and flank	1
Dysmemorrhoea	9
Giddiness	2
Eruption of vulva	5
Palpitation	1
Ulceration of lips	1
Swelling of glands	3
Eruption of the whole body	2
Ulcer of the skin	2
Deafness	1
Headache	3
Ulcer of the foot	1

A SHORT REPORT ON GYNAECOLOGICAL SPECIMENS.

by

M. B. Osman, M.D.

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

As in previous years, examinations of specimens from the Obstetrical and Gynaecological Unit of the University were undertaken by the Reporting Department of the School of Pathology and the following is a summary of the investigations carried out during the last twelve months ending 31st May, 1929:—

Blood for Syphilitic Reaction	748
Blood for Widal Reaction	47
Uterine contents for culture	19
Smears and swabs for examination	6
Preparation of vaccines	17
Tissues for micro-sections	55

This gives a total of 891 specimens as against 580 in 1926-27 and 226 in 1925-26.

Of the 748 samples of blood for syphilitic reaction, 93 were positive, 10 doubtful and 645 negative. The test employed was a modification of the Sschs-Georgi introduced by Professor C. Y. Wand. (Vide Lancet, 1922, Vol. 1, p. 274.)

For the Widal Reaction the microscopic method was used. Of the 47 samples of blood examined 5 were positive and 42 negative.

Out of the 55 specimens of tissue submitted for microscopical diagnosis, 27 were of tumour-growths while the rest were inflammatory conditions.

A summary of all the specimens examined during the period under review is here given in tabular form:—

Blood for Syphilitic Reaction		748
Positive	93	
Negative	645	
Doubtful	10	
Blood for Widal Reaction		47
Positive	5	
Negative	42	
Tumours		27
Carcinoma of Cervix	2	
Carcinoma of Uterus	1	
Carcinoma of Vulva	1	
Carcinoma of Ovary	1	
Sarcoma of Uterus	1	
Fibro-myoma of Uterus	7	
Adenoma of Cervix	1	
Papillary cystic-adenoma of Ovary	2	
Simple cysts of Ovary	7	
Chocolate cysts of Ovary	3	
Cyst of Vaginal wall	1	
Inflammatory lesions		22
Inflammatory lesions of Vulva	2	
,, ,, ,, Tubes	4	
,, ,, ,, Ovary	4	
,, ,, ,, Cervix	6	
,, ,, ,, Uterus	3	
,, ,, ,, Urethra	1	
,, ,, ,, Lymph gland	1	
Tuberculosis of Peritoneum	2	
,, ,, Ovary	2	
Placental scrapings	3	
Preparation of vaccines	17	
Smears and swabs for examination	6	
Uterine contents for culture	19	

SCIENCE AND SANITY.

by

Hugh A. Fawcett.

Medical Officer of Health.

Hong Kong.

We have, it seems, reached again that periodic crisis in human history wherein there is a general feeling of dissatisfaction with existing conditions, when most seriously-minded people pause to review the situation and take stock, as it were, in the light of the past, present and future.

That state which we call our Western civilisation has evolved so rapidly that we have had little time to review it. While human nature having changed so little has not really adapted itself to this artificial environment.

The Great War with its reversion to more Primitive conditions and fundamental suggestions arrested us; we were held up on what had seemed a safe road—like travellers at a fallen bridge. That chasm has been crossed, at a great sacrifice, and the road runs on as before, but with a great difference. The shock has made us think. Above all it has shaken that foolish conceit in the perfection of our own endeavours and of so-called "progress" in general. It has, at least, shown us that civilisation is not, *per se*, a road to happiness.

All things have a price—and much of life's philosophy depends on whether that price is worth paying or not. We can get most things if we are prepared to sacrifice enough for them.

Modern civilisation is no exception, and, daily, it becomes more apparent that its price is stupendous; so that it has now taken the place of religion—and even of war—as the most expensive occupation of mankind. It is debatable as to whether it is worth it; the price seeming to exceed the benefits purchased.

For these, among other reasons, therefore, thinking people are alarmed; modern literature is full of warnings; the finest brains are devising remedies and prophets arise, as of old, to predict the collapse of an artificial structure of society based, as it is, on so few natural laws. There are still, however, many who hope that it can be saved, even its present tottering condition.

Only a few with the peculiar mentality of nihilists could wish to destroy *all* that these ages have given us, the good with the bad, and strip the world of the environment of decency, comfort and culture in which the present majority have lived.

On the other hand, equally few could really consider the present state of affairs satisfactory—if tolerable even. The poor or lower classes certainly do not; neither do the rich, worried or jaded as they are; while, between the two, the middle classes are taxed and restricted to support the idle members of each. Men of intellect see folly and wasted energy on all sides; whilst honest politicians and reformers are struggling against the rising tides of over-population, bred from an unfit stock. The Arts are driven into corners by Commerce, Materialism and the wholesale destruction of natural beauty; Science and Medicine can scarce cope with the problems that they themselves have created; the church is losing its hold and the justification of its own faiths; the sexes are tending to forfeit their significance: woman, the charm and influence of her feminity, and man his respect for her and himself. The Labourer has found an empty cause and lost his dignity and his work. Even children, the one refreshing hope, feel the burden of this vast machine and youth fills its once golden hour with a frenzied search after perverted, brainless pleasures—masking their futility in a cynical disrespect for all that is noble and fine. Lastly, Nature herself—her wild creatures and her vegetation are slowly but surely being driven from the populated areas of the earth.

Man seems to stand alone, harassed and faced by the troubles of his own manufacture—hated or feared by all other living things.

This is, I know, a gloomy picture—but not so very exaggerated, after all. Only the evil mind or the the self-satisfaction of fools could be content with such prospects.

Assuming one is not of the invertebrate type which lets itself drift, or of the extremist variety that would, like Samson, pull down the Temple on his own head, wherein lies the remedy?

Now, although individually our influence is small yet it all counts—like the grains of sand on the seashore—and leads to that general idea or *Common Will* which sways and guards all mankind. In fact, a Frenchman has defined God as "the collective desire, projected and personified." We can, at least, view the problem broadly —and deal with it in a sane manner. We can formulate a working philosophy which will influence our actions—a thought which is father to the deed.

"Try to teach us common sense,
Truth and God's own common sense,
Which is more than knowledge"

or as Confucius has said: "Knowledge without thought is useless and thought without knowledge is dangerous"—the one produces mere machines, the other, cranks.

In other words, it is sound knowledge tempered by sane thought that the world needs—and that ideal has but one approach—the path of Truth. There are many gates into this path—and one is *Science;* truth is, in fact, its chief aim. Let us consider this science as it stands to-day.

Science is defined as systematised knowledge of any one department of mind or matter—knowledge, that is, built upon a basis of observation, induction and experiment—the data thus obtained giving laws and truths. But, in a wider sense, that which I wish to emphasise here, it means far more. More and more it becomes *the* study of the Universe, linking up phenomena into an ordered scheme of unity—and extending to every action and reaction of what we call Life, Mind and Matter.

The term is too often restricted and leads to misunderstanding and controversy between what are, in reality, branches of different aspects only of the same thing. The pure Scientist in his unemotional search for truth is apt to concentrate on this *too* much—and "to ignore all the wealth of existence which gives meaning and value to mere fact." The Philosopher is often too remote from realities, the Scientist overburdened with them. The aim should be a much wider view—a kind of Scientific Philosophy—endeavouring to interpret that Great Reality of the Universe which as yet escapes our comprehension and which may furnish the key to our problems.

It is here that Science, Religion and Philosophy should be complementary instead of antagonistic. There are many ways of arriving, as I suggested, at truth and understanding—but provided they are thorough and universal in application, they are Science—the approah may be intellectual, æsthetic, poetic, or practical—I doubt if any succeed without the others. For example, the pursuit of Beauty leads to truth—but by intuition and emotion rather than by cautious investigation. And this always appeals more to human nature—for creation, rather than discovery, gives the spirit of man glimpses of that all pervading Reality, as Sir Oliver Lodge calls it, of which I shall speak again.

Meanwhile, we must have some idea of the scientific mind. In addition to a love of facts and accuracy, there must be an impersonal outlook, a scepticism and cautiousness in coming to conclusions, impartial justice, clarity and, above all, a sense of the inter-relations of the whole universe.

The power and prospects of such a mind are tremendous and because of these three noble qualities of Truth, justice and vision, it seems right that such a Science should wield some power over mankind, and influence the destiny of the whole world. That it has already revolutionised the life of mankind and is changing the face

of Nature, is sufficient evidence of its importance—while its prospects for good or evil are immeasurable and will affect every one, those here and those to come—and, who knows, even those who have gone. So far it is very doubtful which way the balance swings. Sir Henry Wood recently remarked that "the Progress of Science during the last few years has succeeded in offsetting the benefits it has conferred on mankind during the past century, by becoming the instrument of more concentrated human agony than the world has ever know since history began."

Moreover, there is in all study the danger of *specialisation;* idea-tight compartments; self-reflection, with its concomitant bias and narrowness of mind. In addition the student may become lost in theory or swamped by symbols—and drift away from the realities of life. There is always that incalculable factor we call human nature; for "the introduction of free will shatters the completeness of every purely mechanical scheme." Further, we have the impossibility of conceiving anything which is not relative to ourselves.

This brings us then to the *limitations of Science:* which I have based on Sir Arthur Thompson's headings.

(1) It applies itself to abstracted aspects of things—that is to say not relative to their environment but in an ideal state—a fish out of the sea for example. This must lead to fallacies since the factor of environment is all important.

(2) It makes use of symbols or "concepts" as the mathematician would use letters for unknown quantities in Algebra. Symbols, such as figures, are useful servants but very misleading masters. They are like the stock of a conjurer—full of tricks and false to reality. They are abstracts dealing with concrete things.

(3) There is an assumption of sequence and casual events—based on experience but not always on knowledge of the factors that produce them.

(4) There is the mystery of origins—a gap in the chain of evolution at the very beginning of things and a loss of date in the past.

(5) There is, next, the limitation of our sense organs—we cannot go further than that which we can see, touch, hear, etc. in our experience or experiment. Even then, are those five senses all? Certain animals or even some human beings seem to have others or a much higher development of one or more.

(6) Complete changes of laws due to some new and startling discovery further upsets matters and may, like Darwin's Evolution, recreate the whole world for us and shake the philosophy of the earth.

Radio activity is equally revolutionary, so is the Relativity Theory of Einstein. But what appears at first to be coontradiction often ends in strengthening the argument.

(7) Lastly, each age has its own particular theories—even an exact and impartial Science reflects the social outlook of the age—and there is supply to meet the demand. The forced growth of Psycho-analysis and Spiritualism is an example of the dissatisfaction and morbidity of this post-war period.

In all cases, it is difficult to avoid the vicious cycle and keep a sense of proportion. *It is, however, just this sense of proportion, retained under all conditions, which constitutes Sanity.*

Life, as Prof. Thompson expresses it, is like a prism—three sided in aspect: Doing, Feeling and Knowing and each is as a doorway *out* of ourselves into contact with the rest of the Universe—and a way *in* for the enrichment of our mind and knowledge. Each reflects the types of human nature in the form of Materialism, Emotionalism and Intellectualism which again express themselves in Action; Art, Music, Religion, Literature, Science and Thought. These are the fundamentals that govern the destinies of men—and the *ideal mind* would be one which could maintain a perfect balance of these types. The possessor could, indeed, claim sanity; given such a will, multiplied throughout the community, and humanity would solve most of its problem.

The study of the Universe also resolves itself into three groups of facts relating to: (1) matter or things; (2) living organisms (vegetable and animal); and (3) that specialised animal, man. It must not, however, be supposed that they are separate entities, each with its own laws. That is where the mistake is so often made. One cannot be studied, to any purpose, without the others and *all* obey the same fundamental laws. Any differences existing are more apparent than real. In fact, one group has evolved from another.

First there was matter moved by physical forces and chemical action; then "life" appeared (first in the water, then on land), in which, ages later, was evolved complicated instinctive behaviour. Still later, somewhere in the series, intelligence usurped instinct or modified it in unexpected circumstances. Till, finally, human reason appeared with all its powers of thought, language and higher processes.

Although, therefore, we must, for convenience, divide our study into branches of Science—they must overlap and be interdependent. I wish to emphasise this point. Like Hydra it is one creature with several heals. Sociology, for example, deals with groups of men; Psychology and Biology are merely two aspects of that mysterious

activity called "life." And, for the proper study of these, we must call in the aid of those inseparable sciences,—Physics and Chemistry which deal with the reactions and inter-actions of matter.

But all these are as dry bones and lose their value without the animating spirit of the applied Sciences—the Arts and Crafts, Music, Philosophy and Literature—wherein man rises to his noblest efforts and perhaps gets nearer the Truth than in any other way.

"Beauty is Truth, truth beauty, that is all
Ye know on earth, and all ye need to know."

Now, before coming to any conclusions, let us get a rough idea what this Science has found out—what is the point we have reached in our knowledge of the Cosmos:

It is a vast universe of unbounded space containing spherical masses of matter, in countless numbers, some of inconceivable size, some hot and luminous, others dark and cool. They are distributed at great distances but all obedient to law and order with motions that can be formulated and positions that can be foretold. One, at least, insignificant among the others, supports what we know as life. Matter itself consists of minute atoms of known size, arrangement and behaviour but which are not ultimate, being in turn composed of electric units (or electrons), specks in rapid motion, regular and ordered, like the atoms themselves. The intermediate region, although apparently empty space, contains something which binds all the separate particles or larger masses together into a whole cosmic system and transmits vibrations and forces one to the other.

Moreover, this applies to all things on this spinning sphere we call the Earth. Air, water, rock, plants, animals and ourselves are all obedient to the same laws of "ether" and matter.

What, then, is this thing called "life"—which leads us to divide this world into the organic (product of life) and the inorganic or mineral? All we can say at present is that *life* has the power to control and utilise the sun's energy in order to build up substances which cannot yet be produced by Physics or Chemistry. It has, moreover, the power of true growth, reproduction of its kind, and although handing on its life to others, it must itself lose it, die and decay. Another difference lies in the fact that "dead" matter is set in motion by pressure from outside; it is not master of its own movements. An intelligent creature resents being pushed. I do!

Then, out of this new activity of life—as a later result it would seem—we get self-will and that still deeper mystery we know under the term of *Mind;* of which the essence is *Design* and *Purpose*. It

is this mind, as yet half controlled, that directs and upsets the ordered scheme of Nature—that is responsible for the evil of this world and yet is capable of such noble achievements.

Man entirely beast or entirely divine need have few of our present problems. It is the transition stage that causes the conflict and trouble. Mind is quite a new attribute of life compared with the natural scheme of the wild which has evolved through ages of trial and experiment. New power is always open to abuse—misunderstanding and especially the ignorance of half-knowledge are the oldest obstructions to Progress. I will go further and suggest that instinctive behaviour, in itself, cannot be evil or harmful—but when modified and perverted by the higher faculties and placed in an *artificial environment* mischief is sure to result. Similarly, knowledge, if incomplete or narrow, is usually misapplied and becomes far more of a danger to the community than instinctive and natural behaviour. It is, in short, a question of *Perversion* rather then Conversion. Evil is not natural to Life—it is self-created and, like most mischief, is often a projection onto others of our own faults and failings.

Modern thought and research furnish many clues to this mystery of life and open up fascinating views of that eternal and all pervading Reality of things. The views themselves are very old—as old as the thoughts of man; they came out in ancient Eastern Religions, especially the Vedic Philosophies of India; in many myths and legends; in the teachings of Buddha and Zoroaster, but Science has opened the windows wider and theory is being strengthened towards fact.

The new discoveries of radio activity and the electrical composition of the atom have thrown a new light on the whole subject. They seem to point to a *unity of things* hitherto only suspected; to show that not only is the universe a definite unified system, but that the outward differences of things are unimportant compared to the startling fact that, on ultimate analysis, they are all structurally and actively the same. Spherical masses in rapid, orderly motion, driven by unknown forces. The different forms of matter, in fact, are merely different phases of the same thing—capable even of transmutation.

Further, there seems to be an all pervading "Something," directing these forces, which applies, not only to the living, but to so-called "dead" matter. The line between organic and inorganic, as between plant and animal, gets thinner and thinner. Man, himself, may be regarded as a comparatively new part in the scheme but endowed with so great a share of this "directing power" that he could be regarded as the *incarnate expression of it*. He is still chiefly animal, scientifically definable, but in part something far beyond—intangible yet persistent. Let us call it Divine—and here we come in contact with Religion; one of the oldest necessities of Man.

Julian Huxley, one of the new generation of scientists, defines *Religion as:* "the reaction between man as a personality on the one side and, on the other, all of the universe with which he comes in contact" and God as: "the sum of the forces acting in the Cosmos as perceived and grasped by the human mind," which is somewhat the idea I have tried to express above; but it does not explain what these forces are or from where they come.

There is, of course, the purely material idea—that life and all the complicated reactions of the universe are the natural outcome of the nature of things themselves and the forces acting on them—that we are all helpless units evolving on predestined lines with no alternative and no outside guiding power. But most of us *feel* that is unsatisfactory—that the theory is feeble and purposeless. Materialism contains much truth but it must not go too far—and fails to account for all the æsthetic joy of life and that "aura" of personality which is even impressed on inanimate things. Even a lonely moorland track is a material expression of something human.

All the scepticism in the world would not shake my feeling that there *is* something about old things: houses, furniture, pictures; music; stones even, of those who used or created them—a Romance, a Tragedy, perhaps, lingering on long after those lives and minds have left them. A museum or an antique shop exhales life to those who are *sensitive* to such impressions. Children and, I'm sure, animals have this sensitiveness. The very young are more in touch with nature and the Reality beyond than we are—life has only just reached them as it were from the unknown. There is a wonderful wisdom of immaturity.

Disrespect or wanton destruction of old or beautiful things is a kind of murder—fratricide even. Who knows, we may be outraging a mind or being which has, for awhile, dwelt therein, given its share of life and passed on—even into ourselves? Imagination? Yes, perhaps, but then what is imagination? We know it is akin to genius and a great creative force—why not a great Reality as well?

Sir Oliver Lodge says: "Life may be the Real and Basal form of existence and, therefore, persistent—it arrives and leaves matter, animating it for awhile, just as I see dew appearing and disappearing on a plate." A solid surface is necessary for us to see it and give it form but we know that it is always present, intangible and all around us. This sounds a hopeful note of immortality. And that is the oldest of all ideas (it is no more at present), in a more probable, saner conception. Do not let us, however, confuse this with Spiritualism —to my mind, that is something quite different—even antagonistic to the above. Reincarnation is not a persistence after death of trivial personal attributes or material characteristics.

Death and Time need not be dominant, therefore, and the beauty of a sunset or the light of dawn on the mountain need not be spoiled by our scientific knowledge. Truthfully, they are the result of chemical and physical action of material forces, but there is more—a kindred reality that stirs us, a glimpse perhaps of that dominating "Mind" partially incarnate in ourselves and in all.

Now where does all this lead us? Well, it would seem to me that certain things are essential to an understanding; absolute insistence on Truth in the form of Material Science, tempered by Sane Thought and Imagination and a greater respect for the ways of Nature. "We cannot fathom the mystery of a single flower. Nor is it intended that we should, but that the pursuit of science should constantly be stayed by the love of beauty and accuracy of knowledge by tenderness of emotion." (Ruskin).

To deal with the problems of humanity we must always bear in mind certain things:

(1) Humanity and Nature have changed far less than their environment. The veneer of civilised behavious is very thin and primitive instincts very deep, so that we live artificially, driven further and further from Nature and the rest of the universe. We are unprepared for the strain put upon us and suffer accordingly. Nature's method of dealing with the problems of existence, by the laws of the wild, has been frustrated. We now create our own troubles and have to deal with them ourselves. So far it has been a ghastly failure. Always, in the end, Nature wins.

(2) There is always action and reaction, a swing of the pendulum to extremes. Also there is a price for all things. If we want these un-natural benefits and luxuries we must pay for them in suffering or at least fresh difficulties.

(3) Every mind and intellect is different. No two are quite alike—all things must be graded. There must always be leaders—a directing genius and a less intelligent mass to carry out the work of that scheme. Raw material needs mind to give it form: ordinary humanity needs an intellect to lead it to success. If we wish to be no better than a hive of bees—without progress—then Communistic theory is tenable—but there is really no such thing as *levelling-up* —it must always be *down*, usually to the standard of the lowest and most degraded unit.

(4) Most of our troubles are *preventable*—this applies to disease especially. We have the knowledge and the means—it needs but a common effort to apply them.

(5) We must decide where we are going and for what we are aiming: for ourselves, for humanity in general or for nothing, helpless parts of a predestined scheme, like driftwood in a stream whose course or flow we cannot alter. I think it should be *through ourselves for humanity*—which, after all, is for ourselves again. In our own health and happiness, through the sanity of our own outlook, we influence all around us—like mirrors we get reflection and counter-reflection "ad infinitum." At present we spend most of our time in *preparing* to live and the rest in repairing the damage wrought in so doing.

The first thing, therefore, is to realise we are *part of Nature* and not arrayed against Her—for no scheme can work if one of its essential parts is always on strike. Man is too much a kind of malignant growth in the stomach of Nature. We don't give Her a chance. We shall achieve nothing by struggling against what I will call the "fitness of things;" gain no progress till we become *more natural,* till we can realise our ridiculous position in trying to be that which we are not—a sort of superior being licenced to break all the rules, *on our side only*. Till, in fact, humbug and pretence, the curses of all human society, are exposed in all their silliness.

This unhealthy or morbid outlook of modern times, this worry, pettiness and jealousy are all forms of insanity—and most unscientific. Let us think in terms of Health and live up to it. Above all let us be frank with ourselves and all things—hypocrisy is far more vile than the sins it attempts to hide.

The modern world is full of liars—they are bred and encouraged, it seems, by the artificial life we lead. Everywhere lies and clever torsion of facts seem to gain their temporary reward; from the quack remedy for all ills to the politician and his worn-out Utopias. Every advertisement looks us in the face with that meanest of all lies—"the almost true;" many a child, even, I meet, lies more glibly than it tells the truth, often quite without purpose; every building we put up is an architectural lie; the shops are full of artificial substitutes; half our food is rubbish and even the faces of our young women are "made up" and false. And boasts of prosperity and progress will be equally untrue until based on the only sound foundation—that of fearless Truth.

Must we, like Walt Whitman, turn to Nature—to Animals—to find something clean, and placid and genuine? If there is anything, any creature of Nature vile it is because of its contamination by man.

Yes, it is Nature we must turn to for example. Natural Science points the road to Sanity and Salvation, and, with it, all the beauty,

simplicity, delight and mystery of the open field. Sky and earth have a cleansing influence.—"Light, air and Labour, these are the medicines not of the body only but of the soul."

Man is at his best on the good soil that mothered him in the cradle of time; gardeners, farmers, ploughmen even, are among the sanest of mortals, content and honest; they are in their *natural element,* and in a slow, naive way get nearer Truth and the Divine Purpose than all the professors of the world. Man's ideal story of himself begins in a Garden and his greatest punishment was ejection therefrom. And, to-day he has lost his garden and is prostituting his right to happiness and health in the filthy, crowded mockery of industrial cities.

He is not yet specialised enough for modern towns and their hectic life. He is still a child at heart and needs sunshine.

Whether a new being will evolve—capable of perfecting body and soul among bricks and mortar, iron and machinery, I know not. Whether the scientist will find a way to evolve a new human type —born and bred in the laboratory, apart from Nature—cold, sexless, mechanical—whether, in centuries to come, such things as make life worth while now—Natural Beauty of Sky and Earth and Water, Love, Romance, Motherhood, Art, personal Freedom, Work, Laughter —will be obsolete, I know not. If so, I, for one, am glad that I am mortal—and shall have before then returned to the good soil from whence I came.

THE BACTERIOLOGY OF BERI-BERI.*

by

Alexander Cannon.

Teacher of Morbid Anatomy, University of Hong Kong.

Government Medical Officer in Charge of Pathological Examinations, and Prisons, Hong Kong.

It must be borne in mind that the Bacillus Asthenogenes of Bernard (1919), which I am about to describe, may live in the intestines as a saprophyte and only becomes pathogenic when there is absence of vitamin B in the diet, when it changes from ærobic and saprophytic life, to that of an anærobe and pathogenic organism.

The *organism* can be most easily studied in three sections:—

1. a general survey of the organism;
2. its special characters;
3. (*a*) its pathogenic activities; (*b*) its toxins.

1. *General Survey.*—This Bacillus belongs to the enteric group, and is found in ærobic form. It approaches the B. Perfringens in aerobic culture, being both aerobic, and anaerobic. It is only pathogenic in the anaerobic form. The B. Cohaerens of Gottheil has similar morphological and cultural characteristics. The sera of these bacilli do not agglutinate the B. Asthenogenes, as it is specific to a fine degree, and the toxin effects are not neutralized. The most suitable culture media is beef meat or pork 25 grammes and saline solution 0.5% to 100 c.c. This suspension is sterilized to 120 deg. C. and 15 c.c., of milk are added, and afterwards 10 c.c. of a fresh culture of about 12 hours duration is added and heated to 37 deg. C. The organism is examined after 12 hours incubation.

To obtain the *toxin,* filter through a Pasteur-Chamberland filter candle No. 4. This filtrate will kill a rabbit of average 1,800 grammes weight, using a 1 c.c. dose, injected into the vein of the ear. For research purposes Bernard concentrates this toxin and has obtained a product which kills, using a strength of as yet undermined value, but a definite constant dose of 1/20th c.c., indicating that the strength must be constant.

" * i Some Observations on Beri-Beri.

B.M.J., November 9th, 1929, pp. 852—855.

ii The Pathology of Beri-Beri.

Transactions of the Royal Society of Tropical Medicine and Hygiene, Vol. XXIII, No. 3. November 1929, pp. 263—269."

The *bacillus* is obtained by taking some of the same culture of 12 hours growth, and centrifuging. Dilute the bottom of the centrifuge with saline to 0.5% strength, which will serve for the various serological researches.

Bernard's "fixation of complement and agglutination" is carried out with the same culture. It is necessary to make an emulsion of the microbe in saline of 0.5% strength, and then adjusting it to pH. 6.5 and heating to 45 deg. C. Agglutination is obtained after five hours, but only above 1—150 is certain for diagnosis whereas normal serums are satisfactory at 1—50 to 1—100.

Bernard's Bacillus Asthenogenes is isolated from human blood for anaerobic culture in the medium indicated above, in a medium of bouillon and milk in equal parts. It is only at irregular periods that the germ passes through the peripheral circulation, and if there are gastric symptoms. To date, it has not been found in cases of confirmed paralysis, but always in the acute forms at the commencement of the disease; but is always found in the spleen. The mesenteric glands are always hypertrophied during the period of gastric irritation when the germ is found therein. If comparison were possible, it might be said that the paralysis in beri-beri as in diphtheria, is a late phenomenon. This late phenomenon may never take place, and then one concentrates on the diagnosis of gastric disturbance with fever, when the symptomatology of beri-beri is clear and the Bacillus is found. When the paralysis appears in diphtheria, the Klebb-Loffler bacillus disappears; and it is this factor which makes the question so difficult do deal with, as also in beri-beri.

The normal habitat is the alimentary tract where it is saprophytic and is found in spore formation. In Indo-China, it appeared first in the form of a bacillus with anaerobic qualities, and only when it is isolated from the vessels in the alimentary tract, are we able to cultivate it, as here it appears to have greater vitality. The cultivation of the organism from the patient's blood commences always at the bottom of the culture tube, making an homogeneous turbidity, and producing very delicate pellicle formation. The second culture, however, is produced in 24 hours, by the formation of a pellicle on a very slightly turbid liquid, which gradually becomes clearer and clearer, and seen the aerobic and saprophytic form of the B. Asthenogenes developes and continues. It is as an anaerobic microbe *only*, that it secretes a toxin, and is then pathogenic.

2. *Special Characters.*—The aerobic and anaerobic media cultivation, may now be considered.

Aerobic: a delicate pellicle which does not wrinkle is produced in bouillon. Slope agar agar produces a creamy, thick, whitish growth

with pellicle on water condensation. Plate agar agar cultivates rounded colonies with raised edges and a filamentous tract. A red colouration without gas is produced in glucose agar agar. Neutral red is not affected. Agar agar is not blackened with lead stab, but gelatin is liquified. Oval central spores 2.5 long and 1 wide are produced, which determines the form, and which will withstand a temperature of 100 deg. C.

Anaerobic.—The optimum temperature is 35 to 38 deg. C. Microscopy shews slightly rounded body (4.5 μ by 1.5 μ), with 8 to 16 wavy flagella of fine consistency, about 9 μ long. No sporulation occurs. It is Gram positive and stains with the usual aniline dyes. An homogeneous turbidity is produced in broth with wavy outline and no pellicle. The growth is poor on slope agar agar, and gas bubbles are produced at the bottom. On milk the growth is in three layers (1) surface . . spongy.

(2) middle . . liquid of lemon colour.

(3) bottom . . penacious.

Sugar turns red with gas production, . . . glucose, maltose, lactose, and saccharose agar-agar acting similarly. Neutral red becomes a canary yellow colour. Coagulated serum is liquified. Coagulated white of egg allows a slight amount of growth. Protein substances shew trypic digestion as far as the tryptophane stage. Indol is not produced. A transient acidity is produced with rice flour, due to proprionic acid with traces of acetic and butyric acid.

The bacteriological characteristics can therefore be summed up as: the B. Asthenogenes of Bernard has two distinct features, anaerobic and aerobic, which Vincent had obtained in 1898, when he caused to appear, through cultivation without air, signs of a pathogenic nature in the B. Megatherium and the B. Mesentericus Vulgatus, which are aerobic non-pathogenic organisms.

3. *Pathogeny.*—In South China, and Indo-China, the B. Asthenogenes is normally saprophytic in the alimentary tract of some animals and men, and is a facultative anaerobe becoming pathogenic in this latter form. History relates that it was first isolated in 1919 by Noel Bernard in the blood and alimentary canals of patients showing symptoms of a feverish gastric obstruction, characterized by a coated tongue, marked dental fissures, constipation, lumbago, myalgia, asthenia, intractable insomnia, headache, at times faintness and prostration. Inoculation into the guinea pig in amounts from 5 to 10 kgr. by the stomach gives an experimentally produced illness which shows the essential features of human beri-beri. The observed symptoms are dependent on stomatic asthenia, accompanied with dilatation, delayed digestion, fermentation, leading to a volatile

The Bacteriology of Beri-Beri.
The Bacillus Asthenogene of Bernard.

Bouillon Culture
12 hours old.
(anaeribic and aerobic.)

hyperacidity with hypochlorhydria, due to multiplication of the microbe in a food bowl of which rice is the dominating element. The animal recovers completely occasionally from this mild infection. The ingestion of the infecting agent can provoke graver forms of the disease; some forms advancing to paralysis of limbs leading to death from the 6th to the 20th day; a chronic form with cachexia and persistence of paralysis; sudden appearance of paralysis in a subject where the initial infection has passed unperceived and where the general state of health seems normal. The paralysis is accompanied by progressive muscular atrophies. Of course, all these latter may be purely starvation phenomena, and nothing more. Clinical researches undertaken in the light of these experimental facts have shown in man, the same aspects of the disease in the guinea pig, from the milder forms up to death by acute disease or to survival with or without cachexia, but with the same persistence of paralysis and muscular atrophies. Now, in the case of man, the mild form is considered as a gastric inhibition, the fatal disease as acute beri-beri, the paralysis and muscular dystrophies. The clinical pathology of the stomach is the same in the experimental disease of the guinea pig, and in the human beri-beri: fermentation characterized by hyperacidity due to acetic volatile acids, butyric, proprionic and to lactic acid, and alteration of normal secretion ending in hypochlorhydria or even hypopepsia.

It is interesting to compare Bernard's observations on Annimites, with my own on Chinese and Chinese-Annimites, shewing the strikingly similar results. The macroscopic lesions of the organs of the guinea pigs and of beri-beries examined immediately after death are interchangeable. The stomach is distended, containing alimentary matter, 12 to 18 hours after food, and strongly impregnated with bile. Congestion extending to the mucous membrane of the stomach with blood stained effusions, haemorrhagic erosions and sometimes ulcerations, especially pronounced at the lower part of the greater curature, and this is also seen in parts of the jejunum. The large intestine is normal. The kidney and the adrenal organs are more or less congested. The heart is dilated, soft, engorged with blood with a delayed coagulation time. The bacillus is abundant in the stomach of diseased guinea pigs. It is found to a lesser degree, and sometimes in small numbers in the stomachs of beri-beries, who have not been eating food. But in cases where one examines these latter portions of the alimentary tract the ingestion of the stomach contents is made evident. Hence the guinea pigs which are experimentally infected with the disease, and those which have acquired it are identical in pathology. The toxin of the germ shows marked characteristics: maximum toxicity after 10 hours of culture; violent re-action without incubation, recalling the suddenness of acute beri-beri attacks; eliminating the stomachic and duodenal mucous membranes producing

the lesions of the experimentally produced disease in guinea pigs, and of beri-berics, a phenomena which recalls the electivity of the dysenteric toxin for the large intestine; affinity for certain nervous elements as for example paralysis of limbs, when temporary or perhaps even permanently. Rapid elimination out of the organism occurs, and difficult access to the well protected nervous system which recalls the natural defence of man against beri-beri intoxication (length of disease, and number of relapses followed by momentary recoveries), under the action of slow and continuous impregnation by daily sublethal injections, with production of paralysis, muscular atrophies, trophic troubles, analogous to the lesions of the so-called "chronic beri-beri." Although the whole of the facts stated require to be interpreted with the greatest circumspection in the study of human beri-beri, it permits however of a clear review of the possibility of the pathogenic role played by the B. Asthenogenes in the evolution of this infection.

The results of experimentation with the *toxin* might well be tabulated as follows:—

1. The *toxin* violently reacts, immediately, or almost so, without any incubation period, and produces locally a humid eschar on the skin.

2. The toxin affects especially the stomach, small intestine, kidneys, often causing grave lesions.

3. The toxin has definite affinity for certain nervous elements.

4. The animal does not succumb quickly in some cases: then the animal defends itself by a rapid total elimination of the toxin, and by the natural resistance of the nervous system, which however, gives way to continued impregnation of the toxin by sub-lethal doses.

5. The toxin causes in the horse the formation of an anti-toxin, which neutralizes its action altogether.

It is therefore certain, that beri-beri does not occur without this specific organism, although it is evident that in order to make it pathogenic (and anaerobic), certain other factors are essential, such as vitamin B deficiency, and endocrine organ disturbance, which cause the inert aerobic germ, whether existing already in the person, or in the food partaken of, to use its facultative powers and become perhaps by force of circumstances anaerobic, and hence pathogenic, and producing a definite disease, which has a definite syndrome, and is known by the name of "beri-beri," which means "swelling."

Editorial.

This issue not only completes another year's work but it marks the end of the third decade of this century, and affords an excellent opportunity for looking back over those ten well stocked years.

One cannot help wondering what medical historians in the future will have to say about this decade, but even at this stage one feels that medical science can justly and proudly endorse the words "well stocked."

Surgeons have seen the consolidations of the great gains made during the war years, and have witnessed the laying of the solid foundation of brain surgery as well as numerous improvements in technique of many long-established and common operations. The Anaesthetist has not been inactive in his persuit of the perfect anaesthetic, and the last year or two has seen the introduction of Avertin, which at any rate can lay claim to being a first class sub-anaesthetic.

The Physicians have at least two major victories to their credit, the one being that of insulin over Diabetes and the other the now well-established liver treatment of Addison's Anaemia. Therapeutics has benefitted perhaps more than any other branch by the tremendous advances of electrical science, and to-day we can see (or rather any modern hospital can show) the wonders of X-ray and light therapy, an advance whose value is threatened to be passed only by the contribution of X-rays to diagnosis.

The research workers of the laboratories pathological and bacteriological, pharmacological and physiological have developed many improved methods of diagnosis, and although the aetiology of for instance cancer still baffles them, their contribution to surgical, deep X-ray and radium treatment of this dread disease has greatly changed the prognosis of many of its forms.

Tropical medicine too can show its advance in Leprosy treatment, while many other diseases such as Sprue are beginning to yield up their secrets; and let us not forget the less spectacular yet the none the less successful—and perhaps the more economically valuable—work done by the workers in Public Health. . . . . .

Yes, much has been done, but it is good for our pride to glance also at the other side of the ledger. What of cancer and of tuberculosis, of rheumatic fever and of nervous disorders? At the sound of these and the thought of many more, we refurl our pride, legitimately aired for a short space, and return to the task.

So much for the medical world at large. Now what about our own part in this tale? The Medical School of the Hong Kong University, what contribution has it made to the general advance?

Youth it is true, is the time of children's complaints, but surely an university that will soon be of age should be immune from growing pains!

Adolescence marks the beginning of the creative period. Perhaps it is better not to labour the point, but a word to those who are responsible for our existance—the war taught us amongst many other things that restricted rations wrought its greatest havoc on the young, and no amount of lavish treatment later on is able to repair this permanent damage.

Our private account luckily has also a credit side to its ledger; from time to time some of our number have published original articles which are minature specimens of what could be done here had we the facilities. Just this last year the University of Sydney has conferred their M.D. degree on one of our number for work done on the Cerebral Circulation and our Society congratulates Professor Shellshear on this distinction and on the Gold Medal which he received too as a special award.

We can also look with pride on the graduates who have passed through our school. Some have gone back to China whence come very pleasing and encouraging reports of their work; others have been fortunate enough to have the opportunity of post-graduate work in England, and their attainments reflect great credit on them themselves and not a little on the school which can give them such a thorough grounding in spite of existing difficulties.

The years in the immediate future will be critical ones in our existance. Would it not be just as well for us, and also those responsible for the Medical School as a part of the University, to consider occasionally whether we are living up to the high standard set us by the Hong Kong College of Medicine, and by its greatest member, Patrick Manson?

Therapeutical Notes.

ANTIPHLOGISTINE:—

With regard to the use of Antiphlogistine in rectal and anal inflammations, the value of this produce of the Denver Chemical Mfg., Co., in such conditions is likely to be entirely overlooked by the average practitioner unless his attention is directed to it.

The highly favourable reports which have been received during the past few years from proctologists and general practitioners are convincing proofs of its efficiency.

In hemorrhoids, applied externally, and if necessary by tampon in the rectum, its palliative effect is remarkable, and in a great many cases its depletive action renders an operation unnecessary. For softening induration, and otherwise getting the parts in good condition for operation, where such is necessary, there is nothing which will do the work as well as Antiphlogistine.

Antiphlogistine given the greatest possible relief from the pain, soreness, and irritation following distention of the anal muscles, or stretching the anal spincters. For inflammation due to fistula, prolapsus, etc., Antiphlogistine is of special value. To relieve the intense irritation, itching and discomfort of pruritis ani, a dressing of hot Antiphlogistine will be found most effective.

This product of the Denver Chemical Mfg. Co. is extensively used by the leading practitioners throughout the United States as well as in the more and up-to-date hospitals. Dr. C. of Johnstown, Pa., a rectal specialist, recommends that Antiphlogistine is unexcelled as a remedial and palliative application in hemorrhoids, fistula and inflamed conditions of the rectum. Another, Dr. P., of Los Angeles, Calif., cites some remarkable results with the use of Antiphlogistine in inflammation of the lower colon and rectum. (Advt.)

Review of Books.

"*Bainbridge and Henzies'—Essentials of Physiology,*" 6th Edition. Edited and Revised by H. Hartridge, M.A., M.D., D.SC., F.R.S., 14/- net. Longmans, Green & Co.

The revision of this book twice in the last four years is sufficient evidence that the editors have attempted to keep abreast of the rapid strides Physiology has made in recent years. But besides the new work which this revision has introduced one is especially pleased to see one chapter set aside for Basic Principles which are really *The Essentials* of Physiology. Teaching rapidly convinces one of the importance of a thorough grounding in the basic principles and an intimate acquaintance with the Biophysics and Biochemistry of the cell makes most of the rest of Physiology common sense.

The paragraph on osmotic pressure, H ion concentration and pH, are explained concisely and clearly with the result that the following chapters on the blood, and respiration should be assimulated by the average student without any great difficulty.

The muscle chapters enriched with a small account of chronaxie and the new diagrams in the chapter on the vascular system are a definite advance. In fact the new diagrams throughout the book, especially in the chapter mentioned above and in that on the nervous system, form one of the most striking and valuable changes in the old edition.

In mentioning the above addition to the book, one has just picked out a few examples of the new matter; a complete list is impossible in a short review such as this but even these references serve to explain why this book should enhance its reputation as an admirable text book from which medical students can obtain a firm basis for their physiological studies.

Laboratory Manual Division of Bacteriology.
Peking Union Medical College.

Dr. C. E. Lim is to be congratulated on the production of this excellent little manual. It is full of useful information and practically everything the laboratory man needs is given in a very convenient form. There is, however, a suggestion of an assumption that all laboratories have special clerks devoted solely to registering and indexing of specimens as well as a goodly number of trained assistants.

The chapter on the care of animals is most useful and the hints given here are of great value. We note that of the various precipitin tests, only the Khan technique is given; and of the complement—fixation tests for syphilis, only the Kolmer modification is included. The book ends with some sections on the various somewhat elusive colorimetric tests.

On the whole the book is beautifully got up and we heartily recommend it to our own students.

A Glossary of Bacteriological Terms.

(English—German—Chinese)

This is perhaps, a unique publication and should prove a useful contribution to scientific literature in this part of the world. An authoritative translation of terms is much needed and we believe this little volume has succeeded in filling this long felt want.

Notes and Comments.

At a recent meeting, the Society extended a hearty welcome to the new Professor of Medicine, Dr. W. I. Gerrard, M.D., M.R.C.P. (Lond.), D.P.H., and we should now like to place on record our pleasure at being able to count among our number one who has worked with so much distinction in the senior service.

We also desire to offer our hearty congratulations to the Assistant to the Professor of Pathology on his recent success in the M.D. examination. Dr. Osman is one of our own graduates, and an M.D. well earned is a fitting climax to the good course he has done here and, we feel sure, but a fore-runner of future distinctions he will gain for himself and his university.

Professor Tottenham is about to sail for Europe on 12 months leave, during which time he hopes to visit many of the famous schools of obstetrics and gynaecology. We sincerely hope that his leave will be a very enjoyable one for both himself and his wife, and we feel sure that the reputation of Hongkong University will be enhanced in both the tennis courts and hospitals of Vienna and Dublin. During his absence the Department of Obstetrics and Gynaecology is in the hands of his Assistant, Dr. Samy.

We are pleased to learn of the appointment of Dr. R. A. de Castro Basto to the post of Honorary Ophthalmic Surgeon to the Kwong Wah Hospital. Dr. Basto is one of our own graduates who after serving as H.S. at the G.C.H. left to pursue further studies abroad. He was at one time Resident Surgical Officer at St. James's Hospital, Balham, London, and later took up the subjects of Ophthalmology and Oto-Rhino-Laryngology as his specialities, studying in London, Edinburgh and Paris. He is M.B., B.S. (Hongkong), M.R.C.S. (Eng.), L.R.C.P. (London), D.O.M.S. (Eng.), and "Membre de la Société Française d'Ophtalmologie."

Acknowledgments.

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Bulletin of the New-York Academy of Medicine.

Bulletin of the School of Medicine, University of Maryland.

Bulletin of the Medical College of Virginia State Institution.

Report of the Public Health Committee, New-York Academy of Medicine, 1928.

Cornell University Medical College Publications.

The Birmingham Medical Review.

The Bristol Medico-Chirurgical Journal.

The Middlesex Hospital Journal.

The Journal of the Ceylon Branch of the B.M.A.

The Journal of Bone & Joint Surgery.

The Medical Journal of Australia.

The National Medical Journal of China.

Bureau of International Exchange, National Research Institute.

The Japanese Journal of Experimental Medicine.

The Japan Medical World.

The Moukden Medical College Journal.

Acta Medicinalia in Keijo.

The Journal of the Chosen Medical Association.

Fukuoka-Ikwadaigaku-Zasshi, Acta Medica.

Okayama-Igakkai-Zasshi.

University College Hospital Magazine.

Kings College Hospital Gazette.

St. Mary's Hospital Gazette.

The Hospital Gazette.

David Gregg Hospital Bulletin.

Health and Empire.

Porto Rico Review of Public Health and Tropical Medicine.

El Salvador Medico.

Arquivos de Clinica Medica.

Acta Psychiatrica et Neurologica.

Chinesische Zeitschrift fur Die Gesamte Medizin.