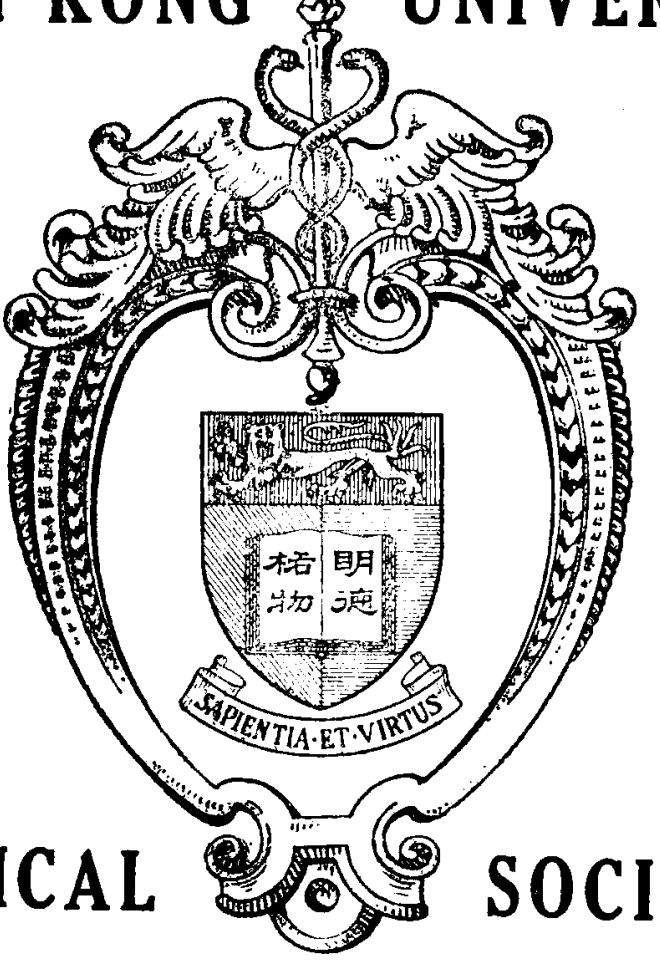
THE

CADUCEUS

JOURNAL

OF THE

HONG KONG UNIVERSITY



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JOURNAL OF THE HONG KONG UNIVERSITY MEDICAL SOCIETY.

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CLINICAL REPORT OF THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY OF THE UNIVERSITY OF HONG KONG FOR THE YEAR 1939.

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ABBREVIATIONS.

A.R.M.	Artificial rupture of membranes.
B.B.A.	Born before arrival.
B.P.	Blood pressure.
C.	Child.
D.	Died.
D.A.A.	Discharged against advice.
E.C.	External conjugate.
G.	Good.
H.S.	Haemolytic streptococcus.
I.C.	Inter-cristal.
I.S.	Inter-spinous.
I.D.I.	Induction-delivery interval.
M.	Mother.
N.I.L.	Not in labour.
P.P.H.	Post-partum haemorrhage.
Q.M.H.	Queen Mary Hospital.
S.B.	Still-born.
T.	Transferred.
T.O.	Transverse outlet.
W.R.	Wassermann reaction.

INTRODUCTION.

The outstanding feature of the work for the year 1939 was the large number of total admissions to the Tsan Yuk Maternity Hospital. During the year there were no fewer than 3,328 admissions and 3,161 deliveries, figures which stand out above these reported in any previous year since the time that a detailed Departmental Report was first issued in 1926. This state of affairs is undoubtedly the result of the abnormal conditions at present reigning in the Colony, since there has been an influx of about a million people into Hong Kong during the last two troublous years. The following table shows at a glance the number of admissions to the Maternity Wards, together with the morbidity and mortality rates, for each year of the period 1926-1939.

ADMISSIONS TO THE MATERNITY WARDS, 1926-1939.

Year	*Total Admissions*	*Deliveries*	*Morbidity Rate*	*Mortality Rate*
1926	465	463	7·7%	1.08%
1927	865	826	10.1%	1.72%
1928	1,646	1,576	8.4%	·51%
1929	1,944	1,811	11.0%	·51%
1930	1,778	1,616	5·3%	·45%
1931	1,974	1,841	3·9%	·32%
1932	1,927	1,809	7·4%	·55%
1933	2,018	1,893	6.5%	.40%
1934	2,121	1,985	6.15%	.25%
1935	2,408	2,351	6.4%	·43%
1936	2,367	2,245	7.1%	.76%
1937	2,359	2,227	5.75%	·34%
1938	2,397	2,264	5.11%	·58%
1939	3,328	3,161	4.1%	·51%

The Tsan Yuk Hospital has a bed capacity of 60 beds and a nursing staff which consists of the matron, Miss Leung, an assistant matron, six nursing sisters and sixteen pupil midwives. In addition to the Professor and his two Assistants, the medical staff consists of two House Obstetricians and a non-resident Clinical Assistant. Students of the 5th and 6th years attend the practice of the Hospital in groups of five or six for a period of three months, approximately one month of which time is spent in residence. Students have unrivalled facilities for gaining experience in Obstetrics during their three months of association with the Hospital, for, although it is only necessary (for signing-up purposes) to attend 30 confinements, it is easily possible for a keen

student personally to conduct as many as 100 deliveries, and many have availed themselves to the full of this opportunity.

The congested state of the wards during the year under review has imposed a considerable extra strain upon the relatively slender staff of resident doctors and nurses, who have, however, risen to the occasion with remarkably fine spirit. The problem of isolation has been an ever present anxiety in the midst of constant and unavoidable overcrowding, and the low morbidity rate of 4.1% in a Hospital where over 90% of the admissions are Emergency cases is in itself a tribute to the part which every member of the Hospital staff has played in an endeavour to secure the best results under difficult conditions.

A perusal of the tables which follow in the Report of the Obstetrical Department will probably raise some questions in the mind of the reader, and comment will now be made on certain details.

BOOKED VERSUS EMERGENCY CASES. The small total of slightly less than 8% of Booked Cases as against the preponderating majority of 92% of Emergency Cases will immediately strike the eye of the casual observer. Patients have been very slow to take advantage of the facilities offered by the antenatal clinic, but it has been shown elsewhere in China that, once they can be convinced of the benefits to be obtained, the antenatal clinic grows rapidly. A crusade in favour of antenatal care was launched during the latter part of the year, and already attendances have been about doubled. It is hoped that some of the fruit of the campaign will be shown in next year's report.

THE TOXAEMIAS OF PREGNANCY. The previous classification of the toxaemias of the latter months of pregnancy into "Albuminuria" and "Eclampsia" has now been expanded to include the following groups of cases:—Pre-eclampsia (of mild and severe grades), Eclampsia, Nephritic Toxaemia and Essential Hypertension. In making the classification the following arbitrary criteria have been used:—

Pre-eclampsia, Grade I (Mild).

The appearance during the latter half of pregnancy and disappearance by 6th week post-partum of two or more of the following:—

(*a*) Systolic B.P. of 130 or higher for 2 days or longer.
(*b*) Albuminuria on more than 1 occasion.
(*c*) Oedema of legs and ankles which has no other obvious cause.

Pre-eclampsia, Grade II (Severe).

The appearance during the latter half of pregnancy and disappearance by 6th week post-partum of the signs noted above with the addition of one or more of the following:—

(*a*) Systolic B.P. over 150 for 2 days or longer.

(*b*) Albuminuria with granular casts or albumin in excess of 2 gm. per litre.

(*c*) Excessive oedema.

(*d*) Any of the danger signals of impending eclampsia such as headache, tinnitus, visual disturbance, epigastric pain, vomiting, jaundice, suppression of urine, etc.

Eclampsia.

The appearance of typical convulsions in a case showing some or all of the signs noted above.

Nephritic Toxaemia.

The presence before pregnancy or appearance before the 30th week of pregnancy and persistence for longer than 6 weeks post-partum of 2 or more of the following :—

(*a*) Hypertension.

(*b*) Oedema.

(*c*) Albuminuria.

(*d*) Impaired renal function.

(*e*) Albuminuric retinitis.

Essential Hypertension.

A Systolic B.P. persistently above 130 is found, either present before pregnancy or appearing during pregnancy, and persisting longer than 6 weeks post-partum. There may be slight *albuminuria* and *oedema* as term approaches, but the height of the B.P. is out of proportion to these signs.

The renal function is normal and the retina is normal or may show slight narrowing of the vessels.

The classification is at present only being adopted tentatively, and its successful application depends very largely on facilities for adequate antenatal and postnatal examination.

AVITAMINOSIS B_1. The existence of Avitaminosis B_1 or Beri-beri, is a complicating factor which is always to be reckoned with in obstetrical practice in Hong Kong. A fresh table is added to this year's report in which certain details are given of 43 clinically obvious cases of avitaminosis. It will be noticed that in two cases avitaminosis B_1 was the immediate cause of death, and that in four other cases it was a contributory cause. Avitaminosis B_1 therefore ranks very high as a cause of maternal death in Hong Kong, being present as a primary or secondary cause in 6 out of the 17 deaths for the year.

Poverty, improper dietary habits and the additional strain imposed by pregnancy are all potent factors in producing vitamin deficiency. Clinical beri-beri is the result in only a minority of cases, but what may be termed sub-clinical beri-beri is present in a large number of patients. These patients live on a dangerous border-line, and many factors, of little serious consequence in themselves, may suffice to precipitate the patient into a condition of clinically developed Avitaminosis. It will be noticed that Pregnancy Toxaemia, in one form or another, is a complicating factor in a number of cases of Avitaminosis B_1. The line of demarcation is one that is difficult to draw and it may still prove that deficiency of vitamin B_1, is a causative factor in the production of the toxaemias. The amount of pyruvic acid in the blood has been used as an index of Vitamin B_1 deficiency, and investigations are proceeding along this line in the hope that this relatively simple biochemical determination may shed light upon the relationship between the Toxaemias of Pregnancy and Vitamin B_1 deficiency.

An investigation into the clinical significance of oedema during pregnancy was commenced by my predecessor Professor W. C. W. Nixon, and may throw further light upon the problem just mentioned. During 1939 a special record was kept of all cases showing oedema and it is found that they may be classified into three main groups:—

(*a*) those associated with pregnancy toxaemia,
(*b*) those associated with Avitaminosis B_1, and
(*c*) those not accompanied by signs of either pregnancy toxaemia or Avitaminosis B_1.

In this latter group there were 271 cases. In the vast majority of these the oedema was limited to the legs, and the duration varied from a week to 9 months, the average duration being 44.5 days. The oedema was, therefore, by no means a transient symptom.

In some patients pressure was undoubtedly a factor in producing the oedema, as evidenced by the fact that there were no fewer than 9 twin pregnancies among the 271 cases. In other cases, however, it could not be claimed that pressure was a specially significant factor. In view of the frequency of the toxaemias of pregnancy (6.0% of all admissions for 1939) and of Avitaminosis B_1 (1.3% of all admissions for 1939), in both of which conditions the presence of oedema is almost invariable, it is hard to resist the conclusion that, in many cases, the appearance of simple oedema may be only a preliminary to the development of the full manifestations of toxaemia on the one hand or of avitaminosis B_1 on the other, and that it is not beyond the realm of possibility that all three are bound up in a common aetiology.

ADOPTION OF METRIC SYSTEM. Weights and measurements have been expressed in terms of the metric system this year. The change has been made because of the greater ease with which the metric system

lends itself to the collection of comparative statistics as to maternal pelvic measurements, weight of baby etc. An additional reason is that, almost without exception, the metric system is used for such purposes in other teaching institutions in China, and uniformity in this matter is greatly to be desired.

GYNAECOLOGICAL WARDS. The Gynaecological Wards at the Queen Mary Hospital have been consistently filled throughout the year, and there has been no lack of interesting cases.

GYNAECOLOGICAL LABORATORY. With the approval of the Director of Medical Services a room has now been set aside in the Queen Mary Hospital as a Department Laboratory. The room is adjacent to the University Gynaecological Ward, and has already proved to be of the utmost value to Staff and Students alike. Space is also available in the Laboratory for the collection of Pathological Slides which is being built up, and for the storage of the Gynaecological Records, which are now being filed according to a new system.

STERILITY CLINIC. A special clinic for the investigation of female sterility has been started and is held once weekly. There have been 129 attendances and utero-tubal insufflation by the kymographic method has been carried out in all cases.

RADIO-THERAPY. The Queen Mary Hospital is fortunate in possessing a new and powerful machine for the administration of deep X-Ray therapy, and since the recent installation of the 400,000 volts shock-proof apparatus 14 cases of carcinoma of the cervix have been given full courses of treatment. The immediate results have been encouraging. Towards the end of the year the hospital's supply of radium returned from England after being redistributed and re-mounted in the form of 7 needles, each containing 7.5 mg. of radium. A number of applicators for intra-uterine and vaginal use is available, and all suitable cases of carcinoma of the cervix now receive a combined course of radium and deep X-Ray therapy. The Stockholm Technique of radium therapy is followed.

The University, as in previous years, is once more indebted to the Government Medical Department for the clinical facilities which have been made available, and the writer would like to express his sincere thanks to the Honourable Director of Medical Services, the Deputy Director and all other members of the Medical Department who have rendered their cooperation. In addition he would like to express his appreciation of the unfailing services of the members of his own staff, whose support has rendered the compilation of this report possible.

GORDON KING.

REPORT OF THE OBSTETRICAL UNIT.

During the year 1939 the following numbers of cases were treated in the Tsan Yuk Hospital:—

		BOOKED	EMERGENCY	TOTAL
1.	Delivered in Hospital:			
	(*a*) discharged well	221	2,919	3,140
	(*b*) transferred	1	5	6
2.	Admitted after delivery	—	9	9
3.	Discharged undelivered	13	133	146
4.	Died:			
	(*a*) after delivery	—	15	15
	(*b*) undelivered	—	2	2
5.	Abortions	1	9	10
	Totals	236	3,092	3,328

Of the 236 Booked Cases, 85 were primigravidae and 151 were multigravidae.

Of the 3,092 Emergency Cases, 976 were primigravidae and 2,116 were multigravidae.

Total number of deliveries:

Booked	222
Emergency	2,939
	3,161

NUMERICAL SUMMARY OF CASES DELIVERED IN HOSPITAL, ADMITTED FOR TREATMENT OR ADMITTED AFTER DELIVERY.

		BOOKED	EMERGENCY	TOTAL
PRESENTATIONS (EXCLUDING TWINS):—				
Anterior Position of Occiput		205	2,734	2,939
Posterior Position of Occiput		6	91	97
Breech		9	74	83
Face		—	3	3
Brow		—	2	2
Shoulder		—	7	7
TWIN PRESENTATIONS:—				
Occiput Anterior	37			
Occiput Posterior	6			
Breech	13	2	28	30
Shoulder	3			
B.B.A.	1			
PATIENTS DELIVERED IN HOSPITAL		222	2,939	3,161
ANTE-PARTUM HAEMORRHAGE:				
(*a*) Accidental Haemorrhage		—	6	6
(*b*) Placenta Praevia		1	16	17
PREGNANCY TOXAEMIA:				
(*a*) Pre-eclampsia, Grade I		6	106	112
(*b*) Pre-eclampsia, Grade II		5	59	64
(*c*) Eclampsia		1	7	8
(*d*) Nephritic Toxaemia		—	4	4
(*e*) Essential Hypertension		—	13	13
PRESENTATION AND PROLAPSE OF CORD		—	11	11
OPERATIVE DELIVERY:				
(*a*) Forceps		9	55	64
(*b*) Internal Version		—	13	13
(*c*) Embryotomy		—	1	1
(*d*) Caesarean Section		—	7	7
(*e*) Caesarean Hysterectomy		—	2	2
POST-PARTUM HAEMORRHAGE		5	39	44
MANUAL REMOVAL OF PLACENTA		—	11	11

MATERNAL MORBIDITY:			
(*a*) Cases	12	118	130
(*b*) Percentage	5.4%	4.0%	4.1%
MATERNAL MORTALITY:			
(*a*) Cases	—	17	17
(*b*) Percentage	—	0.55%	0.51%
INTERCURRENT DISEASE:—			
Cardiac Disease	1	3	4
Avitaminosis B_1	3	40	43
Syphilis	6	30	36
Condylomata acuminata of vulva	—	1	1
Acute Bronchitis	2	11	13
Broncho-pneumonia	—	1	1
Lobar Pneumonia	—	2	2
Influenza	1	1	2
Pulmonary Tuberculosis	—	1	1
Cystitis	—	1	1
Pyelitis	—	11	11
Pyelo-nephritis	—	2	2
Polycystic Kidneys	—	1	1
Malaria	1	1	2
Malarial Splenomegaly	—	1	1
Typhoid	—	2	2
Mumps	—	1	1
Cerebro-spinal Meningitis	—	1	1
Dysentery, Amoebic	—	1	1
Dysentery, Bacillary	—	1	1
Enteritis	—	5	5
Ankylostomiasis	—	1	1
Banti's Syndrome	—	1	1
Tuberculous Hip Joint	—	1	1
Vaginal Cyst	—	1	1
Bicornuate Uterus with Septate Vagina	—	1	1
Cervical polyp	—	1	1

CASES TREATED IN THE HOSPITAL BEFORE LABOUR.

The following table lists the number of cases treated in Hospital for a period of 2 days or longer before delivery or discharge. Cases admitted on a false alarm of the onset of labour are not included.

Condition for Which Admitted	*No. of Cases*	*No. Delivered in Hospital*	*Died Undelivered*	*Discharged and did not return*
Pregnancy Toxaemia and Allied Conditions:				
(*a*) Pre-eclampsia (Grade I)	10	5	—	5
(*b*) Pre-eclampsia (Grade II)	20	15	—	5
(*c*) Eclampsia	3	2	1	—
Avitaminosis B_1 (Beri-beri)	13	9	1	3
Oedema (without other signs of Toxaemia or Avitaminosis)	28	18	—	10
Mitral Stenosis	3	2	—	1
Mucous Colitis	1	—	—	1
Exophthalmic Goitre	1	1	—	—
Procidentia	1	—	—	1
Chronic endocervicitis	1	—	—	1
Total:—	81	52	2	27

(Details of the cases of Pregnancy Toxaemia, Avitaminosis B_1 and Mitral Stenosis are given under separate Tables).

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(a) Pre-eclampsia (Grade I).

112 cases.

1 mother died, a mortality of 0.9%.

5 babies were stillborn and 5 died, a mortality of 8.6%

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedema*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before labour or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
BOOKED															
1042	31	2	40	Nil	†	Clear	Legs	Nil	Nil	144/90	In labour	Normal	G.	G.	
1830	23	1	38	Nil	Trace	Clear	Legs	Nil	Nil	163/98	In labour	Normal	G.	D.	
1929	25	1	40	Nil	Trace	Clear	Legs	Giddiness	Nil	160/91	1	Normal	G.	G.	
2104	24	1	38	Nil	Trace	Clear	Legs	Nil	Nil	112/74	1	Normal	G.	G.	
2421	28	1	39	Nil	Clear	Clear	Legs	Nil	Nil	116/90	In labour	Normal	G.	G.	D.A.A.
3077	24	3	40	Nil	Trace	Clear	Legs	Nil	Nil	124/86	3	Normal	G.	G.	
EMERGENCY															
147	38	5	40	Nil	Trace	Clear	Legs	Nil	Nil	148/90	1	Normal	G.	G.	Medical induction. D.A.A.
177	28	4	35	Nil	Trace	Clear	Legs	Nil	Nil	146/86	In labour	Normal	G.	G.	
191	19	1	41	Nil	††	Clear	Legs. Vulva ...	Nil	Nil	115/95	In labour	Normal	G.	G.	Induction of labour.
603	20	1	43	Nil	Trace	Clear	Legs	Nil	Nil	146/106	In labour	Forceps	G.	G.	P.O.P. A.R.M.
716	45	11	43	Nil	Trace	Clear	Legs	Nil	Nil	116/88	In labour	Forceps	G.	G.	P.O.P. Manual Rotation.
718	19	1	39	Nil	Trace	Clear	Legs	Nil	Nil	140/100	In labour	Normal	G.	G.	
733	32	1	39	Nil	Clear	Clear	Legs	Nil	Nil	142/108	In labour	Normal	G.	G.	
734	38	1	37	Nil	†	Clear	Legs	Nil	Nil	160/105	In labour	Normal	G.	D.	
808	24	1	38	Nil	Clear	Clear	Legs	Nil	Nil	150/84	In labour	Normal	G.	G.	
901	44	9	39	Nil	†	Clear	Legs	Nil	Nil	150/96	In labour	Normal	G.	G.	
909	24	1	38	Nil	Clear	Clear	Legs	Nil	Nil	160/100	In labour	Normal	G.	G.	
916	25	1	38	Nil	Clear	Clear	Legs	Nil	Nil	156/88	In labour	Normal	G.	G.	
932	36	5	40	Nil	Clear	Clear	Legs	Nil	Nil	160/100	In labour	Normal	G.	G.	
950	32	1	40	Nil	Trace	Clear	Legs	Nil	Nil	152/96	In labour	Normal	G.	G.	
948	25	1	44	Nil	†	Clear	Legs	Yes	Nil	136/84	In labour	Normal	G.	G.	
1000	24	1	40	Nil	Trace	Clear	Legs	Nil	Nil	158/106	In labour	Normal	G.	G.	
1022	45	17	34	Nil	Trace	Clear	Legs	Nil	Nil	112/68	In labour	Normal	G.	G.	
1038	21	1	39	Nil	Clear	Clear	Legs	Nil	Nil	116/90	In labour	Normal	G.	G.	D.A.A.
1108	29	1	40	Nil	Trace	—	Legs	Nil	Nil	116/102	In labour	Perforation	D.	S.B.	Failed forceps. Perforation of aftercoming head. Obstetric Shock.
1178	19	1	37	Nil	Trace	Clear	Legs	Nil	Nil	144/106	In labour	Normal	G.	G.	

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(a) Pre-eclampsia (Grade I).—*(Continued 1).*

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedema*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before labour or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
EMERGENCY															
1184	31	3	39	Nil	Clear	Clear	Legs	Nil	Nil	151/100	In labour	Normal	G.	G.	
1214	34	2	34	Nil	Clear	Clear	Legs	Nil	Nil	161/98	In labour	Normal	G.	G.	D.A.A.
1244	29	6	36	Nil	††	Clear	Legs	Nil	Nil	118/90	In labour	Normal	G.	G.	
1249	36	8	38	Nil	†	Clear	Legs. Abdomen	Nil	Nil	140/92	In labour	Normal	T.	G.	Typhoid fever. Transferred to Q.M.H.
1206	26	1	39	Nil	†	Clear	Legs	Nil	Nil	138/90	In labour	Normal	G.	G.	D.A.A.
1261	19	1	40	Nil	††	Clear	Legs	Nil	Nil	146, 106	In labour	Normal	G.	S.B.	
1286	32	7	40	Nil	Trace	Clear	Legs	Nil	Nil	150, 70	In labour	Normal	G.	G.	
1366	28	1	39	Nil	††	Clear	Legs	Nil	Nil	150, 86	In labour	Normal	G.	G.	
1400	36	12	37	Nil	††	Clear	Legs	Nil	Nil	144/118	In labour	Forceps	G.	S.B.	
1451	24	1	38	Nil	Trace	Clear	Legs	Nil	Nil	130/84	In labour	Normal	G.	G.	
1477	30	1	42	Nil	†	Clear	Legs	Nil	Nil	143/96	In labour	Normal	G.	G.	
1478	27	1	39	Nil	Clear	Clear	Legs	Nil	Nil	170/92	In labour	Normal	G.	G.	
1545	26	2	38	Nil	Trace	Clear	Legs	Nil	Nil	140/92	In labour	Normal	G.	G.	
1283	41	1	36	Nil	Trace	Clear	Legs	Nil	Nil	132/75	In labour	Normal	G.	G.	
1380	18	1	42	Nil	Trace	Clear	Legs	Nil	Nil	130, 88	In labour	Normal	G.	G.	
1475	24	1	39	Nil	Trace	Clear	Nil	Nil	Nil	140/90	In labour	Normal	G.	G.	
1497	30	1	37	Nil	Trace	Clear	Legs	Nil	Nil	138/96	In labour	Normal	G.	G.	
1640	23	3	41	Nil	Trace	Clear	Legs	Nil	Nil	146/88	In labour	Normal	G.	G.	
1645	20	1	38	Nil	†	Clear	Legs	Nil	Nil	182/118	In labour	Normal	G.	G.	
1611	39	12	38	Nil	Trace	Clear	Legs	Nil	Nil	136/88	In labour	Normal	G.	G.	
1612	25	4	38	Nil	†	Clear	Slight	Nil	Nil	134, 84	In labour	Normal	G.	G.	
1672	24	1	40	Nil	†	Clear	Slight	Nil	Nil	118, 75	In labour	Normal	G.	G.	
1717	23	1	40	Nil	Trace	Clear	Legs	Nil	Nil	142, 90	In labour	Normal	G.	G.	D.A.A.
1719	30	3	31	Nil	†	Clear	Legs	Nil	Nil	152/100	In labour	Normal	G.	G.	
1805	29	2	39	Nil	Trace	Clear	Legs	Nil	Nil	108/70	In labour	Normal	G.	G.	
1819	25	1	37	Nil	†	Clear	Legs	Nil	Nil	170/110	In labour	Normal	G.	S.B.	
1875	41	7	41	Nil	Trace	Clear	Legs	Nil	Nil	148/100	In labour	Twins	G.	G. G.	Twin delivery.
1896	28	4	37	Nil	Trace	Clear	Legs	Nil	Nil	138/90	In labour	Normal	G.	G.	
2000	26	2	38	Nil	Trace	Clear	Legs	Nil	Nil	132/90	In labour	Normal	G.	G.	
2075	21	1	36	Nil	†	Clear	Legs	Nil	Nil	160/90	In labour	Forceps	G.	G.	P.O.P. Manual Rotation.
2093	31	2	35	Nil	†	Clear	Legs	Nil	Nil	134/96	In labour	Normal	G.	G.	
2108	18	1	35	Nil	Trace	Clear	Legs	Nil	Nil	134/100	1	Normal	G.	G.	
2147	22	1	42	Nil	†	Clear	Legs	Nil	Nil	108/50	1	Normal	G.	G.	
2266	37	10	38	Nil	Trace	Clear	Legs	Nil	Nil	142/98	2	Normal	G.	G.	

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(a) Pre-eclampsia (Grade I).—*(Continued 2).*

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedoma*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before labour or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
EMERGENCY															
2276	24	2	40	Nil	Trace	Clear	Legs	Nil	Nil	142/88	In labour	Normal	G.	G.	
2280	33	7	39	Nil	Trace	Clear	Slight	Nil	Nil	156/94	In labour	Normal	G.	G.	
2353	27	4	42	Nil	Trace	Clear	Legs	Nil	Nil	162/105	In labour	Normal	G.	G.	
2387	32	3	40	Nil	+	Clear	Legs	Nil	Nil	110/60	In labour	Normal	G.	G.	
2400	31	4	38	Nil	Clear	Clear	Legs	Nil	Nil	146/98	In labour	Normal	G.	G.	
2417	33	4	39	Nil	Trace	Clear	Legs	Nil	Nil	160/120	In labour	Normal	G.	G.	D.A.A.
2418	25	3	40	Nil	Trace	Clear	Legs	Nil	Nil	140/84	In labour	Normal	G.	G.	
2430	28	1	41	Nil	+	Clear	Nil	Yes	Nil	140/100	1	Normal	G.	G.	Avitaminosis B
2433	37	5	39	Nil	Clear	Clear	Legs	Nil	Nil	135/85	In labour	Normal	G.	G.	
2454	26	1	38	Nil	+	Clear	Legs	Nil	Nil	120/90	In labour	Breech	G.	G.	
2480	37	7	41	Nil	Trace	Clear	Legs	Nil	Nil	178/100	In labour	Normal	G.	G.	D.A.A.
2489	26	3	42	Nil	Trace	Clear	Legs	Nil	Nil	130/88	In labour	Normal	G.	G.	
2309	19	1	36	Nil	Trace	Clear	Legs	Nil	Nil	172/108	In labour	Normal	G.	G.	D.A.A.
2516	25	2	39	Nil	Clear	Clear	Legs	Nil	Nil	142/96	1	Normal	G.	G.	
2522	29	2	40	Nil	Trace	Clear	Legs	Nil	Nil	130/90	In labour	Normal	G.	G.	
2525	21	2	39	Nil	+	Clear	Legs	Nil	Nil	130/90	In labour	Normal	G.	G.	
2535	26	1	42	Nil	+	Clear	Legs	Nil	Nil	160/100	In labour	Normal	G.	G.	D.A.A.
2546	26	1	40	Nil	+	Clear	Legs	Nil	Yes	144/90	1	Normal	G.	G.	
2561	25	3	31	Nil	Clear	Clear	Legs	Nil	Nil	142/80	In labour	Normal	G.	G.	
2562	25	5	38	Nil	Clear	Clear	Legs	Yes	Nil	138/92	1	Normal	G.	D.	
2563	36	4	39	Nil	Clear	Clear	Nil	Nil	Nil	136/86	In labour	Normal	G.	G.	
2569	20	1	43	Nil	Trace	Clear	Legs	Nil	Nil	140/108	1	Normal	G.	G.	D.A.A.
2574	39	12	40	Nil	Clear	Clear	Legs	Nil	Nil	150/108	1	Normal	G.	G.	Avitaminosis B
2589	28	2	41	Nil	Clear	Clear	Legs	Nil	Nil	142/90	2	Normal	G.	G.	Avitaminosis B^1
2611	45	7	39	Nil	Trace	Clear	Slight	Nil	Nil	144/96	In labour	Normal	G.	G.	
2616	33	5	39	Nil	Trace	Clear	Legs	Nil	Nil	158/94	5	Normal	G.	S.B.	
2632	34	3	40	Nil	Trace	Clear	Slight	Nil	Nil	138/88	1	Normal	G.	G.	
2636	20	1	38	Nil	++	Clear	Legs	Nil	Nil	138/116	1	Twins	G.	G. G.	Twin delivery.
2642	25	1	38	Nil	Clear	Clear	Legs	Nil	Nil	148/98	In labour	Normal	G.	G.	
2645	35	2	42	Nil	Clear	Clear	Slight	Nil	Nil	158/86	In labour	Normal	G.	G.	
2654	35	5	38	Nil	Trace	Clear	Legs	Nil	Nil	158/110	In labour	Normal	G.	G.	
2668	25	2	40	Nil	+	Clear	Legs	Nil	Nil	152/110	In labour	Normal	G.	G.	
2669	21	1	37	Nil	Trace	Clear	Legs	Nil	Nil	146/106	In labour	Normal	G.	G.	
2670	28	4	35	Nil	Trace	Clear	Legs	Nil	Nil	144/86	In labour	Twins	G.	D. D.	Twin delivery.

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(a) Pre-eclampsia (Grade I).—*(Continued 3).*

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedema*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before labour or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
EMERGENCY															
2686	31	7	39	Nil	Trace	Clear	Legs	Nil	Nil	144/86	In labour	Normal	G.	G.	
2695	20	1	34	Nil	Trace	Clear	Legs	Nil	Nil	154/96	1	Twins	G.	G. G.	Twin delivery.
2704	39	3	44	Nil	Trace	Clear	Legs	Nil	Nil	144/78	In labour	Normal	G.	G.	
2722	21	2	39	Nil	Clear	Clear	Legs	Nil	Nil	152/90	In labour	Normal	G.	G.	
2748	23	2	38	Nil	†	Clear	Legs	Nil	Nil	112/70	In labour	Normal	G.	G.	
2824	31	3	37	Nil	Clear	Clear	Legs	Nil	Nil	160/100	In labour	Normal	G.	G.	
2829	24	2	38	Nil	Trace	Clear	Legs	Nil	Nil	164/108	In labour	Normal	G.	G.	
2841	28	1	38	Nil	†	Clear	Legs	Nil	Yes	138/96	In labour	Normal	G.	G.	
2856	30	6	41	Nil	Trace	Clear	Nil	Nil	Nil	130/94	In labour	Normal	G.	G.	
2936	18	1	36	Nil	†	Clear	Legs	Nil	Slight	138/88	1	Normal	G.	G.	
2966	18	1	39	Nil	Clear	Clear	Legs	Yes	Nil	144/96	1	Normal	G.	G.	
2977	36	7	40	Nil	†	Clear	Legs	Nil	Nil	142/88	In labour	Normal	G.	G.	
2978	41	1	39	Nil	†	Clear	Legs	Nil	Nil	148/92	1	Normal	G	G.	
2982	21	1	38	Nil	Trace	Clear	Legs	Nil	Nil	148/90	In labour	Normal	G.	G.	
3071	23	2	37	Nil	†	Clear	Legs	Nil	Yes	154/102	9	Normal	G.	G.	
3137	22	1	40	Nil	Trace	Clear	Legs	Yes	Nil	162/112	In labour	Normal	G.	G.	D.A.A.
3161	24	1	39	Nil	Trace	Clear	Legs	Yes	Nil	134/88	1	Normal	G.	G.	
3275	21	1	36	Nil	†	Clear	Legs	Yes	Nil	140/110	1	Normal	G.	G.	

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(b) Pre-eclampsia (Grade II).

63 cases.

3 mothers died, a mortality of 4.8%.

6 babies were still born and 4 died, a mortality of 14.5%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedema*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before delivery or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
BOOKED															
335	24	1	40	Nil	++	Clear	Legs	Nil	Nil	168/80	In labour	Forceps	G.	G.	
1843	25	1	34	Nil	Trace	Clear	Legs	Yes	Yes	168/98	9	Normal	G.	G.	
2744	32	7	39	Nil	Trace	Clear	Legs	Yes	Yes	166/68	1	Normal	G.	G.	Avitaminosis B .
1942	31	1	40	Nil	Clear	Clear	Legs	Nil	Yes	182/130	7	Normal	G.	G.	Medical induction.
3174	36	7	40	Nil	Trace	Clear	Legs	Nil	Nil	164/90	5	Normal	G.	G.	Avitaminosis B_1.
EMERGENCY															
2397/38	21	1	37	Nil	++	Clear	Legs	Yes	Yes	194/122	In labour	Normal	G.	G.	A.R.M. Granular casts in urine.
188	25	2	39	Nil	+	Clear	Legs	Yes	Yes	176/90	In labour	Normal	G.	G.	D.A.A.
455	20	1	39	Nil	+	Clear	Legs	Yes	Nil	138/96	In labour	Normal	G.	G.	Mitral stenosis. Granular casts in urine. D.A.A.
463	27	1	38	Nil	+	Clear	General	Nil	Nil	172/110	In labour	Twins	G.	G.	Twin delivery. D.A.A.
659	37	1	35	Nil	+	Clear	Legs	Slight	Slight	170/96	In labour	Assisted Breech	G.	D.	D.A.A.
618	23	1	38	Nil	Trace	Clear	Legs	Yes	Nil	172/110	In labour	Normal	G.	G.	
795	28	2	38	Nil	Trace	Clear	Legs	Nil	Nil	168/85	In labour	Normal	G.	G.	Twin delivery.
806	28	1	37	Nil	++	Trace	Legs	Nil	Nil	174/90	In labour	Normal	G.	G.	D.A.A.
860	29	4	42	Nil	++	Clear	Lower extremities	Nil	Nil	178/105	In labour	Normal	G.	G.	
866	32	6	40	Nil	+	Clear	Legs	Nil	Nil	172/114	In labour	Normal	G.	G.	D.A.A.
874	30	4	40	Nil	+	Clear	Legs	Nil	Nil	160/120	In labour	Normal	G.	G.	D.A.A.
918	22	1	41	Nil	++	Clear	Legs	Yes	Yes	160/112	In labour	Normal	G.	G.	
922	39	11	39	Nil	Trace	Clear	Legs	Nil	Nil	160/92	In labour	Normal	G.	G.	
1010	34	3	36	Nil	Trace	Clear	Legs	Nil	Nil	175/100	In labour	Normal	G.	G.	
1123	29	7	40	Nil	Trace	Clear	Legs	Nil	Nil	164/102	In labour	Twins	G.	G.	Twin delivery.
1196	36	8	39	Nil	++	Clear	Legs	Nil	Nil	185/82	4	Normal	G.	G.	Medical induction.
1250	28	2	40	Nil	Trace	Clear	Legs, abdomen	Nil	Nil	170/90	In labour	Normal	G.	G.	D.A.A.
1238	31	3	40	Nil	++	Clear	Legs	Nil	Nil	170/116	In labour	Normal	G.	D.	
1274	40	11	36	Nil	+	Clear	Legs	Nil	Nil	176/108	In labour	Normal	G.	G.	
1280	30	5	41	Nil	Trace	Clear	Legs	Nil	Nil	174/86	In labour	Normal	G.	G.	
1295	31	4	32	Nil	++	Clear	Legs	Nil	Nil	170/106	In labour	Normal	G.	S.B.	Concealed Accidental Haemorrhage.
1333	40	8	38	Nil	++	—	Legs	Yes	Nil	165/118	In labour	Twins	D.	G.	Twin delivery, Oedema of lungs, Heart failure.

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(b) Pre-eclampsia (Grade II).—*(Continued 1).*

Reg. No.	*Age*	*Gravida*	*Maturity*	*History of Renal Disease*	*Albuminuria on admission*	*Albuminuria on discharge*	*Oedema*	*Headache*	*Eye Signs*	*Highest Blood Pressure*	*No. of days in Hospital before delivery or discharge*	*Type of labour*	*Result M.*	*Result C.*	*REMARKS*
EMERGENCY															
1387	19	1	37	Nil	†	Clear	Legs	Yes	Yes	174/88	In labour	Forceps	G.	G.	
1590	31	8	39	Nil	†	Clear	Legs	Nil	Yes	168/114	In labour	Normal	G.	G.	
1623	25	1	39	Nil	Trace	Clear	Legs	Nil	Nil	174/104	5	Forceps	G.	G.	Beri-beri. Medical induction.
1679	38	2	35	Nil	†	Clear	Legs	Yes	Yes	160/96	In labour	Normal	G.	S.B.	
1774	26	2	36	Nil	†	Clear	Legs	Yes	Yes	160/118	In labour	Normal	G.	G.	
1835	25	1	38	Nil	†	Clear	Legs	Yes	Yes	184/120	In labour	Normal	G.	G.	
1844	30	4	38	Nil	†	Clear	Legs	Yes	Yes	206/128	In labour	Normal	G.	G.	Lateral Placenta Praevia. **D.A.A.**
1884	41	2	39	Nil	Trace	Clear	Legs	Yes	Slight	146/98	In labour	Normal	G.	G.	
1887	20	1	40	Nil	Trace	Clear	Legs	Yes	Yes	192/120	14	Normal	G.	G.	Avitaminosis B .
2077	18	1	38	Nil	†	Clear	Legs	Giddiness	Yes	134/82	In labour	Normal	G.	G.	
2128	39	5	35	Nil	Trace	Clear	Legs	Nil	Nil	166/118	2	Normal	G.	G.	
2136	25	4	38	Nil	Trace	Clear	Legs	Yes	Yes	150/100	2	Twins	G.	G. G.	Twin delivery.
2220	30	3	39	Nil	Trace	Clear	Legs	Yes	Nil	186/108	1	Normal	G.	G.	Granular casts in urine.
2241	21	1	35	Nil	†	Clear	Legs	Yes	Yes	176/102	In labour	Normal	G.	G.	Granular casts in urine.
2278	37	8	44	Nil	†††	Clear	Legs	Nil	Nil	200/126	In labour	Normal	G.	G.	
2287	18	1	40	Nil	†	Clear	Legs	Nil	Nil	188/102	In labour	Normal	G.	G.	Granular casts in urine.
2289	28	1	39	Nil	†	Clear	Legs	Nil	Nil	152/100	1	Assisted, Forceps	G.	S.B.	Granular casts in urine.
2294	24	1	34	Nil	††	Clear	Legs	Giddiness	Yes	162/102	In labour	Normal	G.	S.B.	Granular casts in urine. **D.A.A.**
2487	30	4	42	Nil	Trace	Clear	Legs	Nil	Nil	180/130	In labour	Normal	G.	G.	
2468	25	3	39	Nil	Trace	Clear	Slight	Nil	Nil	152/102	In labour	Normal	G.	G.	
2501	28	3	42	Nil	Trace	Clear	Slight	Nil	Nil	160/112	In labour	Normal	G.	G.	D.A.A.
2581	30	3	39	Nil	††	—	Legs	Nil	Nil	176/130	In labour	Normal	D.	S.B.	Oedema of lungs, Heart failure.
2696	24	1	40	Nil	††	Clear	Legs	Yes	Yes	178/108	In labour	Normal	G.	G.	
2608	29	1	39	Nil	††	Clear	Legs	Nil	Nil	156/94	2	Normal	G.	G.	
2734	35	4	39	Nil	††	Clear	Legs	Yes	Yes	180/128	3	Normal	G.	G.	
2749	32	3	35	Nil	†††	—	Legs	Nil	Nil	168/104	2	Normal	D.	G.	Beri-beri. Cardiac failure.
2838	28	4	38	Nil	†	Clear	Legs	Slight	Nil	160/110	In labour	Normal	G.	G.	
2840	25	1	35	Nil	†	Clear	Legs	Yes	Nil	150/100	2	Normal	G.	D.	
2918	28	2	37	Nil	Trace	Clear	Legs	Slight	Nil	160/110	In labour	Normal	G.	G.	
3047	23	1	37	Nil	†	Clear	Legs	Nil	Nil	168/104	1	Normal	G.	G.	
3080	25	1	30	Nil	Trace	Clear	Legs	Nil	Nil	180/110	In labour	Normal	G.	G.	D.A.A.
3139	23	1	36	Nil	Trace	Clear	Legs	Nil	Nil	150/92	4	Normal	G.	G.	Avitaminosis B .
761	22	1	35	Nil	††	Clear	Legs	Yes	Yes	150/110	In labour	Normal	G.	D.	
1140	30	6	40	Nil	Clear	Clear	Legs	Yes	Yes	150/85	In labour	Normal	G.	G.	
2302	41	7	42	Nil	††	Clear	Legs	Yes	Nil	174/120	1	Normal	G.	G.	Avitaminosis B . **D.A.A.**
2365	23	1	41	Nil	Clear	Clear	Legs	Yes	Yes	168/120	6	Version	G.	S.B.	

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(c) Eclampsia.

8 cases.

1 mother died, a mortality of 12.5%.

1 baby was stillborn and 1 died undelivered, a mortality of 25%.

Reg. No.	Age	Gravida	Maturity	Condition on admission (including if in labour)	Fits: No. before Admission	Fits: Total	Fits: Onset	Albuminuria on Admission	Albuminuria on discharge	Quantity of Urine in first 24 hrs.	Oedema	Highest Blood Pressure	Headache	Eye Signs	No. of days in Hospital before delivery	Type of labour	Result M.	Result C.	REMARKS
BOOKED																			
769	30	6	39	In labour. Oedema. Headache, dimness of vision	Nil	1	Post-partum	Trace	Clear	18 ozs.	Legs	160/98	Yes	Yes	Nil	Normal	G.	G.	
EMERGENCY																			
2375/38	19	1	40	Had a fit on arrival ...	2	12	Ante-partum	†	Clear	29 ozs.	Legs	156/102	Yes	Yes	1	Forceps	G.	G.	Manual Rotation. A.R.M.
489	24	1	38	Not in labour. Oedema. Headache, dimness of vision	Nil	5	Ante-partum	Trace	Clear	23½ ozs.	Legs	150/110	Severe	Yes	2	Forceps	G.	G.	P.O.P. Manual Rotation.
780	21	1	40	In labour. Oedema of legs	Nil	5	Intra-partum	†	Clear	20 ozs.	Legs	136/88	Nil	Nil	Nil	Forceps	G.	G.	
915	29	1	26	Not in labour. Oedema. Headache	Nil	1	Ante-partum	†	Clear	19 ozs.	Legs	196/124	Yes	Nil	19	Assisted	G.	S.B.	Breech presentation with extended legs.
2127	34	4	47	Not in labour. Oedema of legs	Nil	1	Ante-partum	Clear	—	12 ozs.	Legs	184/120	Nil	Nil	7	—	D.	—	Patient died undelivered.
2270	19	1	38	Oedema	Nil	2	Post-partum	†	Clear	35 ozs.	Legs	152/110	Yes	Yes	1	Normal	G.	G.	Granular casts in urine.
3213	22	4	39	Comatose	12	12	Ante-partum	††	Clear	7 ozs.	Nil	170/118	Yes	Nil	In labour	Normal	G.	G.	

PREGNANCY TOXAEMIA AND ALLIED CONDITIONS:

(d) Nephritic Toxaemia.

4 cases.

1 mother died, a mortality of 25%.

1 baby was stillborn, a mortality of 25%.

Reg. No.	Age	Gravida	Maturity	History of Renal disease	Albuminuria on admission	Albuminuria on discharge	Oedema	Headache	Eye Signs	Highest Blood Pressure	No. of days in Hospital before delivery or discharge	Type of labour	Result M.	Result C.	REMARKS
EMERGENCY															
415	40	12	38	Probable	†	Clear	Legs	Nil	Nil	194/100	In labour	Normal	G.	G.	Blood urea 79mg. B.P. on discharge 174/92.
898	33	4	32	Nil	†††	Clear	Legs	Yes	Yes	164/80	In labour	Normal	G.	S.B.	Blood urea 46mg.
1142	37	8	31	Yes	Trace	Clear	Legs, abdomen	Nil	Nil	180/124	In labour	Normal	G.	G.	Oedema with all previous pregnancies.
2040	33	5	38	Nil	†	D.	Legs	Nil	Yes	178/126	3 days	Normal	D.	G.	Blood urea 42mg., Avitaminosis B, Cardiac failure.

(e) Essential Hypertension.

13 cases.

No mothers died.

2 babies were stillborn, a mortality of 15.4%.

Reg. No.	Age	Gravida	Maturity	History of Renal Disease	Albuminuria on admission	Albuminuria on discharge	Oedema	Headache	Eye Signs	Highest Blood Pressure	No. of days in Hospital before delivery or discharge	Type of labour	Result M.	Result C.	REMARKS
EMERGENCY															
935	29	5	39	Nil	Clear	Clear	Legs	Nil	Nil	170/118	In labour	Normal	G.	G.	
903	37	3	38	Nil	Trace	Clear	Legs	Nil	Nil	163/130	In labour	Normal	G.	G.	D.A.A.
870	27	3	40	Nil	Trace	Clear	Legs	Nil	Nil	166/98	In labour	Normal	G.	G.	D.A.A.
996	41	10	39	Nil	Clear	Clear	Legs	Nil	Nil	176/110	In labour	Normal	G.	G.	
1253	28	2	35	Nil	Trace	Clear	Legs	Nil	Nil	172/108	In labour	Normal	G.	S.B.	B.P. on discharge. 168/94.
1281	38	8	38	Nil	Clear	Clear	Nil	Nil	Nil	220/116	In labour	Normal	G.	G.	B.P. on discharge 200/100. D.A.A.
1978	32	6	36	Nil	†	Clear	Legs	Nil	Nil	214/130	In labour	Normal	G.	S.B.	D.A.A.
2316	31	7	38	Nil	Clear	Clear	Legs	Nil	Nil	172/110	In labour	Normal	G.	G.	D.A.A.
2324	36	6	35	Nil	Trace	Clear	Nil	Nil	Nil	152/108	In labour	Normal	G.	G.	
2649	32	3	43	Nil	Clear	Clear	Legs	Nil	Nil	178/120	12 days	Normal	G.	G.	
3085	27	2	44	Nil	Clear	Clear	Nil	Nil	Nil	144/94	In labour	Normal	G.	G.	
3130	30	7	40	Nil	Clear	Clear	Nil	Nil	Nil	154/100	In labour	Normal	G	G.	
3168	35	4	38	Nil	Clear	Clear	Legs	Nil	Nil	150/88	In labour	Normal	G.	G.	

VITAMINOSIS B_1 (BERI-BERI) COMPLICATING PREGNANCY AND LABOUR.

43 cases.

6 mothers died, a mortality of 13.9%.

4 babies were stillborn, a mortality of 9.3%.

Reg. No.	Age	Gravida	Maturity	Oedema Extent	Oedema Duration	Knee Jerks	Cardio-vascular Changes	Highest B. P.	Albuminuria	Blood Pyruvic Acid	No. of days in Hospital before labour or discharge	Type of Labour	Result M.	Result C.	REMARKS
BOOKED															
859	28	2	39	Legs	1 week	Absent	Dilatation of heart	144/108	Trace	—	33	Normal	G.	G.	
2640	26	5	39	Legs	3 months	Absent	——	122/64	Clear	—	In labour	Normal	G.	G.	
2744	32	7	39	Legs	5 weeks	Absent	——	166/68	Trace	—	1	Normal	G.	G.	
EMERGENCY															
854	28	2	33	Legs & abdomen	2 weeks	Absent	Systolic murmur	134/70	+	—	10	Normal	D.	S.B.	Lobar pneumonia and Pyelonephritis.
858	21	1	30	Legs	6 weeks	Absent	Dilatation of heart	120/65	Trace	—	6	Undelivered	D.	—	Transferred to Q.M.H. with acute lobar pneumonia.
1623	25	1	39	Legs	6 months	Absent	Pulsation in neck	174/104	Clear	1.25 mg.	5	Forceps	G.	G.	Anaesthaesia marked. Pre-eclampsia.
1774	36	2	36	Legs	2 months	Absent	Pulsation in neck	160/118	+	1.78 mg.	1	Normal	G.	G.	
1846	41	7	40	Legs	1 month	Absent	Dilatation of heart	154/78	Trace	—	8	Forceps	D.	S.B.	P.O.P. Manual rotation.
1884	41	2	39	Legs	3 months	Present	Dilatation of heart	146/98	Trace	1.52 mg.	2	Normal	G.	G.	
2040	33	5	38	Legs	2½ months	Absent	——	178/126	+	2.31 mg.	3	Normal	D.	G.	Nephritic Toxaemia.
2127	34	4	47	Legs	2 weeks	Absent	——	178/110	+	—	7	—	D.	—	Developed ante-partum eclampsia, Died undelivered.
2241	21	1	35	Legs	2½ months	Absent	Dilatation of heart	170/110	+	0.74 mg.	In labour	Breech	G.	G.	
2270	19	1	35	Legs	4 days	Absent	Pulsation in neck	152/110	+	0.75 mg.	1	Normal	G.	G.	Post-partum eclampsia.
2280	33	7	40	Legs	2 weeks	Absent	Pulsation in neck	156/94	Trace	1.49 mg.	In labour	Normal	G.	G.	
2294	24	1	34	Legs	10 days	Absent	Dilatation of heart	163/102	++	1.39 mg.	In labour	Normal	G.	S.B.	D.A.A.
2323	25	2	36	Legs	1½ months	Absent	——	115/75	Trace	—	In labour	Normal	G.	G.	
2339	20	1	43	Legs	1 month	Absent	——	138/96	Clear	—	In labour	Normal	G.	G.	
2347	29	2	41	Legs	2 months	Absent	——	110/68	Clear	—	In labour	Normal	G.	G.	
2348	37	5	38	Legs	1 month	Absent	——	132/84	Clear	—	1	Normal	G.	G.	
2353	27	4	42	Legs	2½ months	Present	Pulsation in neck	156/106	Trace	1.61 mg.	In labour	Normal	G.	G.	
2365	23	1	41	Legs	?	Present	——	168/112	Trace	0.88 mg.	6	Int. Version	G.	S.B.	
2370	33	2	38	Legs	25 days	Absent	——	122/68	Clear	—	In labour	Normal	G.	G.	
2389	30	4	38	Legs	1 month	Absent	——	128/80	+	—	In labour	Normal	G.	G.	
2534	28	2	38	Legs	11 days	Absent	——	122/94	Trace	—	In labour	Normal	G.	G.	
2543	38	6	38	Legs	1 week	Absent	——	134/86	Trace	—	In labour	Normal	G.	G.	
2566	30	1	39	Legs	1½ months	Absent	——	108/66	Trace	—	In labour	Normal	G.	G.	D.A.A.
2575	25	3	37	Legs	½ months	Absent	——	110/80	Clear	—	In labour	Normal	G.	G.	
2606	34	7	36	Legs	?	Absent	——	116/76	Clear	—	In labour	Normal	G.	G.	
2608	29	1	39	Legs	1½ months	Absent	——	156/94	++	2.63 mg.	2	Normal	G.	G.	Pre-eclampsia (Grade II).
2618	30	4	35	Legs	4 months	Absent	——	122/78	Clear	—	6	Normal	G.	G.	
2653	31	4	41	Legs	2 months	Absent	——	128/78	Clear	—	In labour	Normal	G.	G.	
2679	31	6	39	Legs	1 week	Absent	——	118/72	Clear	—	In labour	Normal	G.	G.	
2749	32	3	35	Legs, abdomen and vulva	7 days	Absent	Some dilatation	168/104	+½	1.03 mg.	1	Normal	D.	G.	Pre-eclampsia (Grade II).

AVITAMINOSIS B_1 (BERI-BERI) COMPLICATING PREGNANCY AND LABOUR.—(*Continued*).

Reg. No.	*Age*	*Gravida*	*Maturity*	*Oedema Extent*	*Duration*	*Knee Jerks*	*Cardio-vascular Changes*	*Highest B. P.*	*Albuminuria*	*Blood Pyruvic Acid*	*No. of days in Hospital before labour or discharge*	*Type of Labour*	*Result M.*	*Result C.*	*REMARKS*
EMERGENCY															
2764	28	6	36	Legs	2 months	Absent	——	118/68	Clear	—	In labour	Normal	G.	G.	
2811	32	7	38	Legs	3 months	Absent	——	110/70	Clear	—	In labour	Normal	G.	G.	
2833	29	4	41	Legs	1 week	Absent	——	122/82	Trace	—	1	Normal	G.	G.	
2904	24	1	40	Legs	1½ months	Absent	Pulsation in neck	130/80	Clear	—	In labour	Normal	G.	G.	
3116	35	8	38	Legs	8 days	Absent	——	138/76	Clear	—	In labour	Normal	G.	G.	
3223	24	2	34	Legs	2 months	Absent	——	144/106	Clear	—	2	Normal	G.	G.	
3260	27	3	41	Legs	1 month	Absent	——	112/78	Clear	—	In labour	Normal	G.	G.	
3278	24	2	38	Legs	2 months	Absent	——	118/80	Trace	—	In labour	Normal	G.	G.	
3286	24	2	33	Legs	1 month	Absent	——	110/64	Trace	—	In labour	Normal	G.	G.	
3288	29	2	36	Legs	10 days	Absent	——	128/88	Clear	—	In labour	Normal	G.	G.	

CARDIAC DISEASE.

4 cases.

There were no maternal or foetal deaths.

Reg. No	*Age*	*Gravida*	*Maturity*	*Lesion*	*Compensation*	*Pulse Rate*	*Days in Hospital before Delivery*	*Method of Delivery*	*Result M.*	*Result C.*	*REMARKS*
BOOKED											
3270	35	6	42	Mitral stenosis	Good	88/m	4	—	—		Medical induction failed. Delivered elsewhere.
EMERGENCY											
263	24	1	38	Mitral stenosis	Poor	128/m	Nil	Normal	G.	G.	
455	20	1	39	Mitral stenosis	Moderate	88/m	2	Normal	G.	G.	W.R. Positive.
1927	26	5	31	Mitral stenosis	Poor	110/m	21	Normal	G.	G.	

VERTEX PRESENTATIONS.

3,079 Cases of Vertex Presentation occured (including 43 Twins).

(*a*) *ANTERIOR POSITION OF THE OCCIPUT.*

The Occiput was anterior in 2,976 cases.

9 Mothers died, a mortality of 0.3%.

48 Babies were stillborn, and 57 died, a mortality of 3.6%.

(*b*) *POSTERIOR POSITION OF THE OCCIPUT.*

The Occiput was Posterior in 103 cases.

4 Mothers died, a mortality of 3.9%.

7 Babies were stillborn, and 2 died, a mortality of 8.7%.

MODE OF DELIVERY.	*CASES.*	*MOTHER.*		*CHILD.*		
BOOKED CASES: *TOTAL 7.*		*G.*	*D.*	*G.*	*S.B.*	*D.*
Spontaneous anterior rotation	3	3	—	3	—	—
Spontaneous delivery, face to pubes ...	1	1	—	1	—	—
Manual rotation and forceps	3	3	—	3	—	—
EMERGENCY CASES: *TOTAL 96.*						
Spontaneous anterior rotation	36	35	1	33	2	1
Spontaneous delivery, face to pubes ...	31	30	1	28	2	1
Forceps, face to pubes	10	10	—	8	2	—
Manual rotation and forceps	19	17	2	18	1	—

BREECH PRESENTATIONS:

(a) Uncomplicated deliveries.

There were 32 cases.

No mother died.

10 babies were stillborn and 4 died, a mortality of 43.7%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Method of Delivery*	*External Measurements* I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	*Weight in Grams*	*Morbid*	*Result* M.	C.	*REMARKS*
BOOKED													
50	20	2	38	Spontaneous delivery	—	—	—	—	2,930	No	G.	G.	
987	22	4	38	Spontaneous delivery	23.5	26.5	17.5	8.5	2,650	No	G.	G.	
1664	34	2	37	Spontaneous delivery	22	26	19	—	2,300	No	G.	S.B.	
EMERGENCY													
6	20	2	40	Spontaneous delivery	24	26	19	—	3,180	No	G.	G.	
163	25	4	33	Spontaneous delivery	24	27	22	—	2,700	No	G.	S.B.	
290	39	12	38	Spontaneous delivery	—	—	—	—	2,800	No	G.	S.B.	
538	26	4	29	Spontaneous delivery	20	24	18	—	1,600	No	G.	D.	
595	24	2	40	Spontaneous delivery	25	26	19	—	2,810	No	G.	G.	
646	24	6	32	Spontaneous delivery	—	—	—	—	2,400	No	G.	D.	
741	27	2	40	Spontaneous delivery	22	26	19	—	2,950	No	G.	G.	
1035	22	2	39	Spontaneous delivery	21	23	16	—	2,600	No	G.	G.	
1039	23	2	36	Spontaneous delivery	25	26	19	8	1,950	No	G.	G.	
1204	27	2	37	Spontaneous delivery	—	—	—	—	2,380	No	G.	G.	
1216	23	2	37	Spontaneous delivery	26	29	19	—	2,690	No	G.	G.	
1220	41	8	43	Spontaneous delivery	23	24.5	17	—	2,800	No	G.	G.	
1309	34	9	29	Spontaneous delivery	—	—	—	—	700	No	G.	S.B.	
1311	43	5	37	Spontaneous delivery	—	—	—	—	1,800	No	G.	S.B.	
1370	38	6	43	Assisted delivery and Forceps	20	25	18	—	3,900	No	G.	G.	Large child, Forceps on aftercoming head.
1371	32	9	36	Spontaneous delivery	—	—	—	—	1,960	No	G.	S.B.	
1528	18	2	35	Spontaneous delivery	24.5	26	18.5	—	2,000	No	G.	S.B.	
1573	29	2	41	Spontaneous delivery	24	26	19	—	3,550	No	G.	G.	
1610	28	5	36	Spontaneous delivery	24	26.5	20	—	2,700	No	G.	G.	
1641	27	4	36	Spontaneous delivery	23	25.5	19.5	—	1,800	No	G.	D.	
1869	29	4	37	Assisted delivery	25	29	21	—	4,400	Yes	G.	S.B.	
2282	30	5	34	Spontaneous delivery	24	26	19	10.5	1,490	No	G.	S.B.	
2295	29	5	38	Spontaneous delivery	22.5	24.5	18	9.5	2,400	No	G.	G.	
2428	27	2	36	Spontaneous delivery	22	26	20	—	2,050	No	G.	G.	
2685	30	4	38	Spontaneous delivery	—	—	—	—	3,800	No	G.	S.B.	
2896	31	4	36	Spontaneous delivery	23	27.5	19	8	1,620	No	G.	D.	D.A.A.
3037	27	6	39	Spontaneous delivery	24	26	18	8	3,100	No	G.	G.	
3180	28	5	36	Spontaneous delivery	26	29	20	8.5	2,600	No	G.	G.	
3196	29	2	37	Spontaneous delivery	23	26	18	8	2,550	No	G.	G.	

BREECH PRESENTATIONS:

(b) Complicated Deliveries (excluding breech by version and two cases delivered by Caesarean Section).

There were 62 cases.

1 mother died, a mortality of 1.6%.

14 babies were stillborn and 4 died, a mortality of 29.0%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Method of Delivery*	*External Measurements* I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	*Weight in Grams*	*Morbid*	*Result* M.	C.	*REMARKS*
BOOKED													
322	26	7	39	Assisted delivery	25	27.5	19.5	—	3,450	No	G.	G.	Extended legs and arms.
489	29	4	38	Assisted delivery	—	—	—	—	3,070	No	G.	G.	Extended legs and arms.
1235	42	5	38	Spontaneous delivery	—	—	—	—	2,150	No	G.	G.	1st of Twins.
2124	31	2	34	Spontaneous delivery	26	28	18	9.5	2,000	No	G.	G.	Extended legs.
2399	19	1	38	Assisted delivery	22.5	25	17.5	10.5	2,750	No	G.	G.	Primigravida. Extended legs.
2822	37	6	35	Assisted delivery	23	25	17.5	7.5	3,160	No	G.	S.B.	Extended legs and arms.
2845	22	1	38	Spontaneous delivery	23	24.5	18	7.5	2,050	No	G.	G.	Primigravida. Complete breech.
EMERGENCY													
38	28	7	40	Assisted delivery	—	—	—	—	2,900	No	G.	G.	Extended legs and arms.
40	20	1	40	Assisted delivery	23	25	17	—	2,675	No	G.	G.	Primigravida. Extended legs and arms.
56	31	5	40	Spontaneous delivery	—	—	—	—	2,310	No	G.	G.	2nd of Twins.
74	38	5	35	Assisted delivery	—	—	—	—	2,850	No	G.	G.	Extended legs and arms.
129	17	1	37	Assisted delivery	21	24	17	8	2,100	No	G.	S.B.	Primigravida. Extended legs and arms.
203	22	1	32	Assisted delivery	23	24	18	—	1,900	No	G.	S.B.	Primigravida. Breech extraction.
248	28	2	40	Assisted delivery	24	27	19	—	2,880	No	G.	G.	Extended legs.
449	24	2	40	Assisted delivery	—	—	—	—	3,000	No	G.	G.	Extended legs. 1st of Twins.
463	27	1	38	Spontaneous delivery	25	28	?	—	2,230	No	G.	G.	2nd of Twins.
667	23	2	41	Assisted delivery	26.5	28	20.5	9.5	3,800	No	G.	G.	Extended arms.
659	37	1	35	Assisted delivery	22	24	20	—	2,850	No	G.	D.	Primigravida. Extended legs and arms. D.A.A.
768	32	5	40	Assisted delivery	24	26.5	18	—	3,900	No	G.	G.	Extended arms.
795	28	2	38	Spontaneous delivery	25	27	22	—	2,570	No	G.	G.	2nd of Twins.
822	24	1	38	Assisted delivery	26	29	21.5	—	2,900	No	G.	G.	Primigravida.
915	29	1	26	Assisted delivery	25	27	18	—	860	No	G.	S.B.	Primigravida. Extended legs and arms.
980	37	6	38	Spontaneous delivery	—	—	—	—	1,900	No	G.	G.	2nd of Twins.
1021	20	1	29	Spontaneous delivery	24	27	17	—	1,120	No	G.	S.B.	Primigravida. Complete Breech.
1059	34	6	39	Spontaneous delivery	—	—	—	—	1,700	No	G.	D.	1st of Twins.
1108	29	1	40	Perforation	24	25	18	8	3,700	Yes	D.	S.B.	Disproportion.
1113	29	3	42	Assisted delivery	24	27.5	20	—	2,600	No	G.	G.	Extended right leg and arms.
1156	37	3	40	Assisted delivery	—	—	—	—	3,200	No	G.	S.B.	Extended legs and arms.

BREECH PRESENTATIONS:—*(Continued)*.

(b) Complicated Deliveries (excluding breech by version and two cases delivered by Caesarean Section).—*(Continued)*

Reg. No.	*Age*	*Gravida*	*Maturity*	*Method of Delivery*	*External Measurements* I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	*Weight in Grams*	*Morbid*	*Result* M.	C.	*REMARKS*
EMERGENCY													
1291	26	4	37	Assisted delivery	25	28.5	19	—	2,800	No	G.	G.	Extended legs and arms.
1292	18	1	36	Spontaneous delivery	23	27	17.5	—	2,600	No	G.	S.B.	Primigravida. Complete breech.
1444	42	8	39	Assisted delivery	23	25	19	—	3,000	No	G.	S.B.	Extended legs and arms.
1510	39	8	38	Assisted delivery	—	—	—	—	2,750	No	G.	G.	Extended legs and arms.
1777	23	1	38	Spontaneous delivery	24.5	27	18.5	—	2,500	No	G.	G.	Primigravida.
1863	19	1	34	Spontaneous delivery	23	25	19	—	2,650	No	G.	S.B.	Primigravida.
1875	41	7	11	Spontaneous delivery	26	28	21.5	—	2,200	No	G.	G.	2nd of Twins.
1965	37	7	39	Spontaneous delivery	24	27	20	9.5	3,250	No	G.	G.	Extended legs.
1982	37	4	43	Spontaneous delivery	24	27	21	—	2,650	No	G.	G.	Extended legs.
2005	43	10	36	Spontaneous delivery	23	24.5	20	9	2,420	Yes	G.	G.	2nd of Twins.
2010	26	1	37	Spontaneous delivery	24	26	22	10	2,100	No	G.	G.	1st of Twins. Primigravida.
2033	25	1	36	Spontaneous delivery	24	26	19	9	2,600	No	G.	G.	Primigravida. Extended legs.
2211	28	1	36	Assisted delivery	24	26	18	10.5	2,700	No	G.	G.	Primigravida. Extended right leg.
2241	21	1	35	Spontaneous delivery	23	25.5	17	7.5	1,100	No	G.	G.	Primigravida
2279	17	1	38	Assisted delivery	25	26.5	20	10	3,200	No	G.	G.	Primigravida. Extended legs and arms.
2289	28	1	39	Assisted delivery and Forceps	25	27.5	19	10.5	3,580	Yes	G.	S.B.	Primigravida. Extended legs and arms.
2297	28	1	42	Assisted delivery	24	26	17	10.5	2,600	No	G.	D.	Primigravida.
2333	28	1	38	Assisted delivery	25	27	17.5	10	2,850	No	G.	S.B.	Primigravida. Extended legs.
2408	23	1	39	Assisted delivery	24	27.5	20	9	2,250	No	G.	G.	Double uterus. Footling.
2454	26	1	38	Assisted delivery	24.5	26	18	9.5	3,200	No	G.	G.	Primigravida. Extended legs.
2495	22	1	37	Spontaneous delivery	22	25	21	8.5	1,800	No	G.	G.	Primigravida.
2524	33	5	37	Spontaneous delivery	23	25	19	9	3,040	No	G.	G.	Extended legs.
2636	20	1	38	Spontaneous delivery	24	27	18	9.5	1,500	No	G.	G.	2nd of Twins. Primigravida.
2695	20	1	35	Spontaneous delivery	22	25	18.5	9.5	1,800	No	G.	G.	Primigravida. 2nd of Twins. D.A.A.
2779	23	1	39	Spontaneous delivery	22	27	17	9	2,900	No	G.	G.	Primigravida. Complete breech.
2890	29	2	38	Assisted delivery	21.5	25.5	17	9	3,100	No	G.	S.B.	Extended legs and arms. D.A.A.
2934	29	3	38	Spontaneous delivery	26	27.5	20	10	1,900	No	G.	G.	2nd of Twins.
2940	21	1	38	Spontaneous delivery	23	24	17	7.5	2,400	No	G.	G.	Primigravida.
3051	31	1	39	Assisted delivery	25	27	18	8	2,650	No	G.	G.	Primigravida. Extended legs.
3057	24	1	38	Spontaneous delivery	22	28	20	10	?	No	G.	S.B.	Primigravida.
3162	18	1	41	Spontaneous delivery	24	26	19	8	2,750	No	G.	G.	Primigravida.
3217	24	1	39	Spontaneous delivery	—	—	—	—	1,250	No	G.	G.	Primigravida.
3279	20	1	39	Spontaneous delivery	—	—	—	—	2,300	No	G.	G.	Primigravida.
3301	30	4	41	B.B.A.	—	—	—	—	2,000	No	G.	D.	1st of Twins.

FACE AND BROW PRESENTATIONS.

There were 5 cases.

1 mother died, a mortality of 20%.

2 babies were stillborn and 1 died, a mortality of 60%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Position*	*Treatment*	*Result M.*	*Result C.*	*Weight of Child Grams*	*REMARKS*
EMERGENCY									
1145	28	1	39	R.M.A.	Spontaneous delivery ...	G.	D.	2,400	Prolapse of cord. Delivered spontaneously before forceps could be applied.
2111	37	6	39	Brow	Spontaneous delivery ...	G.	G.	3,100	Head flexed to R.O.A. during 2nd stage.
2555	37	10	41	Brow	Internal Version ...	D.	S.B.	4,060	Foetal Ascites.
2549	33	4	42	L.M.A.	Spontaneous delivery ...	G.	S.B.	3,150	
3036	34	6	40	R.M.P.	Manual Rotation ...	G.	G.	3,200	Spontaneous delivery 1½ hours after manual rotation of chin to front.

SHOULDER PRESENTATIONS.

There were 10 cases.

1 mother died, a mortality of 10%.

6 babies were stillborn, a mortality of 60%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Complication*	*TREATMENT*	*Result M.*	*Result C.*	*Weight of Child Grams*	*REMARKS*
EMERGENCY									
21	29	3	39	Prolapsed Arm	Internal version	G.	G.	3,050	Extraction.
85	37	5	40	Prolapsed Arm	Internal version	G.	G.	2,900	
193	31	3	36	——	Internal version	G.	G.	3,100	Extraction.
347	25	4	?	Twins	Internal version	G.	S.B.	2,250	2nd of Twins.
1333	40	8	38	Twins	Internal version	D.	G.	2,300	2nd of Twins.
1681	24	5	33	——	Bipolar Podalic Version ...	G.	S.B.	1,880	Spontaneous Breech Delivery.
2125	40	10	29	——	Internal version	G.	S.B.	1,650	——
2371	29	5	36	——	Spontaneous	G.	S.B.	1,290	——
2617	25	2	33	Prolapsed Cord	Internal version	G.	S.B.	1,900	Prolapsed cord.
3301	30	4	41	Twins	Internal version	G.	S.B.	2,350	2nd of Twins.

TWINS.

There were 30 cases of twins.

1 mother died, a mortality of 3.3%.

5 babies were stillborn and 4 died, a mortality of 15%.

Reg. No.	Age	Gravida	Maturity	Position 1st	Position 2nd	Sex 1st	Sex 2nd	Weight in grams 1st	Weight in grams 2nd	Type	M.	Result 1st	Result 2nd	REMARKS
BOOKED														
1235	42	5	38	V3	V1	F.	F.	2,150	2,500	Uniovular	G.	G.	G.	Oedema of legs.
2931	29	3	38	V1	V2	F.	F.	2,200	1,900	Uniovular	G.	G.	G.	
EMERGENCY														
2380/38	30	3	10	V1	V2	M.	M.	2,352	2,210	Uniovular	G.	G.	G.	
56	31	5	40	V1	B1	M.	M.	2,600	2,310	Uniovular	G.	G.	G.	Oedema of legs.
148	25	5	39	V3	V1	M.	M.	2,650	2,650	Uniovular	G.	G.	G.	Oedema of legs.
347	25	4	?	B.B.A.	Shoulder	M.	M.	?	2,250	Binovular	G.	G.	S.B.	Placenta Praevia.
419	21	2	40	B4	V1	M.	M.	3,000	3,200	Binovular	G.	G.	S.B.	
463	27	1	38	V1	B1	F.	F.	2,170	2,230	Binovular	G.	G.	G.	Pre-eclampsia (Grade II).
754	26	3	36	V1	V2	M.	M.	1,810	1,100	Uniovular	G.	G.	G.	
795	28	2	38	V1	B2	F.	F.	2,150	2,570	Uniovular	G.	G.	G.	
980	37	6	38	V1	B	M.	M.	1,800	1,900	Uniovular	G.	G.	G.	Oedema of legs.
1059	34	6	39	B1	V1	M.	M.	1,700	1,520	Binovular	G.	D.	G.	
1123	29	7	40	V1	V4	M.	M.	2,280	2,100	Binovular	G.	G.	G.	Pre-eclampsia (Grade II).
1223	24	2	36	V1	V2	M.	F.	2,100	2,600	Binovular	G.	G.	G.	
1333	40	8	38	V1	Shoulder	M.	M.	2,600	2,300	Binovular	D.	G.	G.	Pre-eclampsia (Grade II).
1728	25	2	37	V1	V1	F.	F.	2,550	2,250	Binovular	G.	G.	G.	Oedema of legs.
1875	41	7	41	V1	B4	F.	M.	2,800	2,250	Binovular	G.	G.	G.	Pre-eclampsia (Grade I).
1958	28	2	38	V2	V4	M.	M.	1,550	1,700	Uniovular	G.	G.	G.	
2005	43	10	36	V1	B4	M.	M.	2,520	2,420	Uniovular	G.	G.	G.	Oedema of legs.
2010	26	1	37	V1	B4	M.	M.	2,100	2,300	Uniovular	G.	G.	G.	Oedema of legs.
2074	38	6	38	V1	V3	M.	M.	2,200	2,500	Binovular	G.	G.	G.	Oedema of legs.
2185	30	1	35	V1	V2	M.	M.	2,050	1,800	Uniovular	G.	G.	S.B.	Oedema of legs.
2186	25	4	38	V1	V2	M.	M.	2,130	1,920	Binovular	G.	G.	G.	Pre-eclampsia (Grade II).
2306	28	3	34	V1	V2	F.	F.	2,050	2,200	Uniovular	G.	G.	G.	
2636	20	1	38	V1	B2	F.	F.	1,700	1,500	Uniovular	G.	G.	G.	Pre-eclampsia (Grade I).
2670	28	4	35	V1	V2	M.	M.	2,200	2,400	Uniovular	G.	D.	D.	Pre-eclampsia (Grade I).
2695	20	1	34	V2	B1	M.	M.	2,000	1,800	Binovular	G.	G.	G.	Pre-eclampsia (Grade I), D.A.A.
2934	29	3	39	V2	B4	M.	M.	2,500	1,900	Binovular	G.	G.	G.	
3014	22	1	37	V4	V1	M.	M.	2,320	2,300	Uniovular	G.	G.	S.B.	
3301	30	4	41	B.B.A.	Shoulder	M.	M.	2,000	2,350	Uniovular	G.	D.	S.B.	1st baby B.B.A.

PROLAPSE OF CORD.

There were 11 cases.

No mother died.

7 babies were stillborn and 1 died, a mortality of 61.5%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Size of os when diagnosed*	*Treatment*	*Result* M.	C.	*Complications*	*REMARKS*
EMERGENCY									
76	29	4	39	6 cm.	Spontaneous delivery	G.	G.	Nil	
118	30	7	40	Full dilatation ...	Forceps delivery ...	G.	S.B.	Nil	
129	17	1	37	7 cm.	Replaced	G.	S.B.	Nil	
241	41	9	34	Full dilatation ...	Spontaneous delivery	G.	G.	Nil	Prematurity.
347	25	4	?	Full dilatation ...	Spontaneous delivery	G.	S.B.	2nd of Twins ...	Prolapse of 2nd cord.
792	26	2	38	Full dilatation ...	Spontaneous delivery	G.	S.B.	Nil	
1291	26	4	37	7 cm.	Spontaneous delivery	G.	G.	Breech	Prematurity.
2617	25	2	33	5 cm.	Spontaneous delivery	G.	S.B.	Transverse lie ...	Prematurity.
3095	21	1	38	3 cm.	Spontaneous delivery	G.	S.B.	Nil	
3301	30	4	41	Full dilatation ...	Spontaneous delivery	G.	D. / S.B.	Twins	Prolapsed left arm.
1123	29	7	40	Full dilatation ...	Internal Version ...	G.	G. / G.	Twins	Membranes and cord of second presented before delivery of first.

HYDRAMNIOS.

There were 6 cases.

1 mother died, a mortality of 16.6%.

2 babies were stillborn, a mortality of 33%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Girth of Abdo.*	*Treatment*	*Result* M.	C.	*REMARKS*
BOOKED								
587	26	2	40	96.5 cm.	Forceps	G.	G.	
EMERGENCY								
60	21	2	37	101 cm.	Nil	G.	G.	About 2,500cc. liquor.
865	26	3	35	95 cm.	Artificial rupture of membrane	G.	S.B.	About 3,000cc. liquor.
1249	36	8	38	102 cm.	Nil	T.	G.	Developed Typhoid Fever. Transferred to Q.M.H.
2082	28	4	35	86.5 cm.	Nil	G.	G.	About 3,500cc. liquor.
2555	37	10	41	100 cm.	Nil	D.	S.B.	Foetal ascites, obstructed labour.

PRIMARY UTERINE INERTIA

(Arbitrary definition being the first stage of labour lasting 48 hours or more).

There were 2 cases.

Reg. No.	Age	Gravida	Maturity	Position of Foetus	Time of Rupture of Membranes	Other Obstertic Abnormalities	Pelvic Measurements I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	Duration of Labour 1st St.	2nd St.	Method of Delivery	Treatment Medical	Treatment Operative	Weight of Child Grams	Result M.	Result C.
BOOKED																		
1749	28	1	41	V2	?	Nil	25	27	18½	—	112 hrs.	1 hr.	Forceps	Yes	Forceps	3,800	G.	S.B.
EMERGENCY																		
414	23	1	40	V2	33 hrs.	Nil	23	20½	20	—	50½ hrs.	45 m.	Forceps	Yes	Yes	3,200	G.	G.

TRIAL LABOUR FOR SUSPECTED DISPROPORTION.

There were 4 cases.

No maternal or foetal mortality.

Reg. No.	Age	Gravida	Maturity	Onset of Labour Spontaneous	Onset of Labour Induced	Method of Delivery	I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	1st St.	2nd St.	Weight grams	Length cm.	Circum. of Head cm.	M.	C.	REMARKS
BOOKED																		
1946	28	3	39		†	Spontaneous	22	25	19	9	6¼	¼	3,120	48	30.5	G.	G.	Some overlapping.
EMERGENCY																		
2399	22	2	38	†		Caesarean	20	21	17	7	23¾	—	2,610	—	—	G.	G.	Head floating.
122	24	1	40	†		Caesarean	20	23	16.5	7.5	9¾	—	3,136	—	—	G.	G.	Head floating.
520	21	1	43	†		Caesarean	21.5	21.5	17.5	8	20	—	2,856	—	—	G.	G.	Head floating

INDUCTION OF LABOUR (Spontaneous delivery).

There were 10 cases.

There were no maternal or foetal deaths.

Reg. No.	Age	Gravida	Maturity	Indication	I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	Duration of 1st St.	Duration of 2nd St.	Weight Grams	Child Length cms.	Circum. of Head	Result M. C.	I.D.I.	Drug	Method Instrumental	REMARKS
BOOKED																		
1942	31	1	40	Pre-eclampsia	25	26	20	—	21½ hrs.	15 m.	2,900	52	37	G. G.	28 hrs.	Yes	Nil	
1946	28	3	39	Contracted pelvis ...	22	25	19	9	6¼ hrs.	20 m.	3,120	48	37	G. G.	?	Yes	Nil	Mild degree. Some overlapping of head.
2991	35	4	50	Overterm	24	26	20	10	3 hrs.	20 m.	2,200	43	34	G. G.	48 hrs.	Yes	A.R.M.	
EMERGENCY																		
147	38	5	40	Pre-eclampsia	—	—	—	—	21 5/6 hrs.	1¼ hrs.	3,400	50	—	G. G.	2¼ hrs.	Yes	No	
191	19	1	41	Pre-eclampsia	25	27	19	—	7½ hrs.	3 5/6 hrs.	3,600	56	—	G. G.	9½ hrs.	No	A.R.M.	
733	32	1	39	Pre-eclampsia	28	29	21	9	16 hrs.	40 m.	2,480	43	31.1	G. G.	42⅔ hrs.	Yes	Nil	
860	29	4	42	Pre-eclampsia	25	28½	21	—	5 hrs.	55 m.	4,200	52	35.7	G. G.	6 hrs.	Yes	Nil	
1196	36	8	39	Pre-eclampsia	23	25	19	—	1 hrs.	30 m.	3,200	49	—	G. G.	4½ hrs.	Yes	Nil	
1287	27	1	40	Pre-eclampsia	24	26	21½	8½	1½ hrs.	20 m.	2,550	50	—	G. G.	29 hrs.	Yes	Nil	
2649	32	3	43	Pre-eclampsia	24	28	21½	10½	5½ hrs.	15 m.	2,900	49	35	G. G.	6½ days	Yes	Nil	

FORCEPS DELIVERY: (a) Labour Induced.

There was 1 case.

Reg. No.	Age	Gravida	Maturity	Indication For Induction	Indication For Forceps	I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	Duration of Labour 1st St.	Duration of Labour 2nd St.	Weight Grams	Child Length cms.	Circum. of Head cms.	Result M.	Result C.	I.D.I.	Drug	Method Instrumental
EMERGENCY																			
1623	25	1	39	Pre-eclampsia	Maternal distress	26	30	21½	—	10 hrs.	1½ hrs.	3,600	50	34½	G.	G.	72 hrs.	Yes	—

FORCEPS DELIVERY: (b) Labour Not Induced.

There were 63 cases.

2 mothers died, a morality of 3.2%.

10 babies were stillborn and none died, a mortality of 15.6%.

Reg. No.	Age	Gravida	Maturity	Indication	I.S. cms.	I.C. cms.	E.C. cms.	T.O. cms.	Duration of Labour 1st St.	Duration of Labour 2nd St.	Weight Grams	Child Length cms.	Circum. of Head cms.	Result M.	Result C.	REMARKS
BOOKED																
335	24	1	40	Prolonged 2nd stage	23½	25½	20	8½	16¾ hrs.	2¼ hrs.	3,200	50	—	G.	G.	
587	26	2	40	Prolonged 2nd stage	23	25½	20½	—	1½ hrs.	1¼ hrs.	4.010	50	35	G.	G.	Hydramnios.
1749	28	1	41	Rigid os	25	27	18½	—	112 hrs.	1 hr.	3,800	52	—	G.	S.B.	Vaginal hysterotomy.
1917	29	1	37	Prolonged 2nd stage	24	25½	19	—	10.5/6 hrs.	3¼ hrs.	2,500	50	34½	G.	G.	P.O.P. Manual Rotation.
2425	25	3	36	P.O.P.	24½	27	16½	10	1¾ hrs.	20 m.	2,400	48	36	G.	G.	Manual Rotation.
2662	32	1	34	Maternal distress	24½	26	19	8½	1¾ hrs.	50 m.	2,250	44	—	G.	S.B.	
2713	21	1	40	Prolonged 2nd stage	25	27	18	9	24 hrs.	2¾ hrs.	3,150	51	34	G.	G.	P.O.P. Manual Rotation. **D.A.A.**
2913	23	1	37	Prolonged 2nd stage	25	27½	18½	8	8½ hrs.	2¼ hrs.	4.000	61	35	G.	G.	
3172	19	1	42	Prolonged 2nd stage	24	26	18	7	22¼ hrs.	2½ hrs.	3.350	50	39	G.	G.	
EMERGENCY																
2375/38	19	1	40	Maternal distress	—	—	—	—	9½ hrs.	20 m.	2,576	45	—	G.	G.	Eclampsia. A.R.M. Manual **Rotation.**
2377/38	28	2	39	Pelvic contraction	21	24	16	—	5½ hrs.	2⅛ hrs.	3.021	48	34	G.	G.	Minor degree. Foetal **distress.**
66	30	1	38	Prolonged 2nd stage	24	25½	19	9	8 hrs.	5¼ hrs.	3.070	49	—	G.	G.	P.O.P.
104	33	1	40	Prolonged 2nd stage	24½	26½	17	—	15½ hrs.	4 hrs.	3,200	50	—	G.	G.	
108	20	2	40	Prolonged 2nd stage	24½	26½	19¼	—	46 hrs.	3 hrs.	2.890	51½	—	G.	G.	
118	30	7	40	Prolapse of cord	—	—	—	—	8 hrs.	3½ hrs.	3,450	50	—	G.	S.B.	Manual Rotation.
244	22	1	39	Prolonged 2nd stage	24	26	19½	—	6½ hrs.	2⅜ hrs.	2.950	50	34.3	G.	G.	
414	23	1	40	Uterine inertia	23	20½	20	9	50¼ hrs.	45 m.	3.200	50	36	G.	G.	Maternal and Foetal distress.
439	24	1	38	Eclampsia	23	25	18	—	23 hrs. &	15 m.	3.270	47.5	—	G.	G.	Maternal and Foetal distress.
616	24	1	41	Prolonged 2nd stage	23	26	19	—	?	3½ hrs.	3.500	52.5	34½	G.	G.	P.O.P.
632	19	1	40	Foetal distress	24½	29	22	10	20 hrs. &	20 m.	3,510	51	35½	G.	G.	
643	29	1	36	Prolonged 2nd stage	24½	28	20	—	11¼ hrs.	3 hrs.	2,500	49	33	G.	G.	P.O.P. Manual Rotation.
651	25	1	40	Prolonged 2nd stage	25	29	20	—	19 hrs.	1½ hrs.	3,400	50	36	G.	G.	
603	20	1	43	Maternal distress	21½	26	20½	—	7 hrs.	1½ hrs.	3,130	47.5	33½	G.	G.	P.O.P. A.R.M.
716	45	11	43	Prolonged 2nd stage	—	—	—	—	6 hrs.	1¼ hrs.	3.280	46	35.5	G.	G.	P.O.P. Manual Rotation.
730	21	1	40	Eclampsia	24	26½	19½	—	20 hrs.	2 hrs.	3.100	47	—	G.	G.	P.O.P. Manual Rotation.
797	23	1	40	Prolonged 2nd stage	25	26	20	—	9½ hrs.	2½ hrs.	3,700	52	34.3	G.	G.	
803	28	1	40	Rigid cervix	23½	25	21	9	68½ hours		3,100	50	34.3	G.	G.	Maternal distress.
823	21	1	40	Prolonged 2nd stage	24	26	20	9	8½ hrs.	4 hrs.	3,500	52.5	32	G.	G.	P.O.P. Manual Rotation.
865	26	3	35	Prolonged 2nd stage	—	—	—	—	1½ hrs.	1 5/6 hrs.	2,550	47	—	G.	S.B.	Manual Rotation.
1123	29	7	40	Oedema of Cervical lip	22	24	18½	8½	12 hrs.	12 hrs.	2,280	41	—	G.	G.	1st of Twins.
1153	41	13	42	P.O.P.	22	26	19	—	4 hrs.	2½ hrs.	2.950	48	36	D.	G.	Manual Rotation. Adherent **Placenta.**
1168	27	1	41	Prolonged 2nd stage	25	28	19	9½	8½ hrs.	3¼ hrs.	2.900	52	35.1	G.	G.	

FORCEPS DELIVERY: (b) Labour Not Induced.—*(Continued).*

Reg. No.	*Age*	*Gravida*	*Maturity*	*Indication*	*I.S. cms.*	*I.C. cms.*	*E.C. cms.*	*T.O. cms.*	*Duration of Labour* 1st St.	2nd St.	*Child* Weight Grams	Length cms.	Circum. of Head cms.	*Result* M.	C.	*REMARKS*
EMERGENCY																
1233	25	1	40	Prolonged 2nd stage	22½	24½	20	8	20 hrs.	2½ hrs.	3,330	50	31	G.	G.	P.O.P. Manual Rotation **Foetal distress.**
1318	24	1	36	Prolonged 2nd stage	23½	26	17½	—	15 hrs.	2 hrs.	3,050	52.5	33	G.	G.	Maternal and Foetal distress.
1370	38	6	40	Postmaturity	20	25	18	—	5 hrs.	30 m.	3,900	50	—	G.	G.	Big head.
1378	22	1	41	Prolonged 2nd stage	24	26	21	—	24½ hrs.	2 5/6 hrs.	3,270	51	34	G.	G.	Maternal distress.
1387	19	1	37	P.O.P.	21	24	21	—	12 hrs.	10 hrs.	3,100	50	—	G.	G.	Maternal distress.
1397	25	1	39	Prolonged 2nd stage	25	27	21	—	27½ hrs.	2¼ hrs.	2,890	49	32½	G.	G.	P.O.P. Manual Rotation. **Foetal distress.**
1400	36	12	37	Prolonged 2nd stage	—	—	—	—	5½ hrs.	1 11/12 hrs.	3,750	50	—	G.	S.B.	Maternal distress.
1444	42	8	39	After coming head	23	25	19	—	3 hrs.	½ hr.	3,000	48	35	G.	S.B.	Assisted breech.
1620	27	1	39	Prolonged 2nd stage	26	27	19	9½	9 hrs.	3½ hrs.	2,900	51	35	G.	G.	
1638	21	1	39	Prolonged 2nd stage	22	24	20	—	1½ hrs.	3 hrs.	2,950	47.5	33¼	G.	G.	
1700	22	1	43	Prolonged 2nd stage	25	26	20	—	6½ hrs.	3½ hrs.	3,200	54	34	G.	G.	
1780	25	1	40	Prolonged 2nd stage	23	25½	18½	—	8 hrs.	4½ hrs.	3,420	50	34½	G.	G.	P.O.P.
1794	37	3	39	Prolonged 2nd stage	23	26	20	—	7 hrs.	4 hrs.	3,300	50	33	G.	G.	
1835	25	1	38	Prolonged 2nd stage	25	29	21	—	6 hrs.	9 hrs.	3,000	50	30½	G.	G.	R.O.P. Manual Rotation.
1846	41	7	40	Prolonged 2nd stage	23½	26	20	—	4½ hrs.	2 hrs.	3,800	50	34½	D.	S.B.	Maternal distress.
2075	21	1	36	Prolonged 2nd stage	24	26	21	10	8¾ hrs.	3 hrs.	3,200	47	37	G.	G.	P.O.P. Manual Rotation.
2275	21	1	37	Prolonged 2nd stage	23½	26	19	11	10 5/6 hrs.	3 hrs.	3,100	51	36	G.	G.	P.O.P. Manual Rotation.
2280	28	1	39	After coming head	25	27½	19	10½	14 hrs.	4 m.	3,580	54	—	G.	S.B.	
2293	20	1	39	Prolonged 2nd stage	22	25	20	9½	2¾ hrs.	2½ hrs.	3,050	52	32	G.	G.	
2479	30	4	42	Prolonged 2nd stage	—	—	—	—	19 hrs.	2 hrs.	3,900	56	38	G.	G.	P.O.P. Manual Rotation.
2512	27	1	42	Prolonged 2nd stage	25	29	20	8	16½ hrs.	3⅜ hrs.	3,650	54	31	G.	G.	P.P. Manual Rotation. **D.A.A.**
2603	23	1	39	P.O.P.	24	26	18	9½	9 hrs.	1½ hrs.	3,700	53	35	G.	G.	Manual Rotation.
2869	22	1	41	Prolonged 2nd stage	24	25	17	9	31½ hrs.	3 hrs.	3,050	52	42	G.	G.	P.O.P. Manual Rotation.
2890	20	2	38	After coming head	21½	25½	17	9	1½ hrs.	1 hr.	3,100	51	35	G.	S.B.	Assisted breech. **D.A.A.**
2978	41	1	39	Prolonged 2nd stage	27½	29½	21½	11	21 hrs.	10 hrs.	3,020	51	27½	G.	G.	Pre-eclampsia Grade I.
3014	22	1	37	M. & F. distress	25	27	19½	9½	5¾ hrs.	1¼ hrs.	2,320 2,300	48 48	32 —	G.	G. S.B.	Twins.
3031	40	8	39	Prolonged 2nd stage	—	—	—	—	11⅛ hrs.	1¼ hrs.	2,950	49	37	G.	G.	P.O.P. T. B. hip joint.
509	18	1	40	Maternal distress	24	26½	20	8	43 hrs.	1½ hrs.	3,450	51	—	G.	G.	**P.O.P.**
3086	24	1	39	Prolonged 2nd stage	22	23	17	8	4½ hrs.	3 hrs.	2,600	49	32	G.	G.	P.O.P. Manual Rotation.
3105	21	1	42	Prolonged 2nd stage	25	28	20	10½	13 hrs.	2¼ hrs.	3,000	52	33	G.	G.	Maternal distress.
3190	23	1	41	Prolonged 2nd stage	24	27	20	8	23¾ hrs.	2 5/6 hrs.	3,150	49½	32	G.	G.	P.O.P. Manual Rotation.

VERSION (In Labour)

There were 13 cases.

2 mothers died, a mortality of 15.4%.

8 babies were stillborn, a mortality of 57.1%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Indication*	*Type*	*Weight of Child Grams*	*Result M.*	*Result C.*	***REMARKS***
EMERGENCY									
21	29	3	39	Shoulder presentation...	Internal	3,050	G.	G.	Prolapsed right elbow.
85	37	5	40	Shoulder presentation...	Internal	2,900	G.	G.	Prolapsed right arm.
193	31	3	36	Shoulder presentation...	Internal	3,100	G.	G.	
347	25	4	?	Shoulder presentation...	Internal	2,250	G.	S.B.	2nd of Twins. 1st placenta praevia.
1123	29	7	40	Cord presentation of 2nd baby ...	Internal	2,400	G.	G.	Cord of 2nd presented before delivery of 1st.
1333	40	8	38	Shoulder presentation of 2nd baby	Internal	2,300	D.	G. G.	Twins. Pre-eclampsia. Both babies did well.
1681	24	5	33	Placenta Praevia	Bipolar	1,880	G.	S.B.	Transverse lie converted to breech.
2044	27	1	41	P.O.P. Failed Forceps	Internal	3,820	G.	S.B.	H. S. Infection.
2125	40	10	29	Shoulder presentation...	Internal	1,650	G.	S.B.	
2365	23	1	41	P.O.P. Failed Forceps	Internal	4,000	G.	S.B.	V3 to Breech.
2555	37	10	41	Brow presentation	Internal	4,060	D.	S.B.	Foetal ascites, obstructed labour.
2617	25	2	33	Shoulder presentation...	Internal	1,900	G.	S.B.	
3301	30	4	41	Shoulder presentation...	Internal	2,350	G.	S.B.	2nd of Twins.

EMBRYOTOMY AND CRANIOTOMY.

There was 1 case.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Indication*	*Previous Treatment*	*I.S. cms.*	*I.C. cms.*	*E.C. cms.*	*T.O. cms.*	*Duration of labour 1st Stage*	*Duration of labour 2nd Stage*	*Weight of Child*	*Result to Mother*	*Type of Operation*	***REMARKS***
EMERGENCY															
1108	**29**	**1**	**40**	Disproportion	Traction	24	25	18	8	3 hrs.	21 hrs.	3,700	D.	Perforation	**Pre-eclampsia.**

CAESAREAN SECTION.

There were 9 cases.

No maternal mortality.

1 baby was stillborn and 1 died, a mortality of 22%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Indication*	*I.S. cms.*	*I.C. cms.*	*E.C. cms.*	*T.O. cms.*	*Duration of labour* 1st St.	2nd St.	*Weight Grams*	*Child Length cms.*	*Circum. of Head cms.*	*Result* M.	C.	*Admitted for Trial Labour*	*Type of Operation*	*REMARKS*
EMERGENCY																		
2399/38	22	2	38	Contracted Pelvis	20	21	17	—	23½ hours		2,850	—	—	G.	G.	Yes	Lower Segment Classical	
G755/38	27	2	39	Contracted Pelvis	20½	22½	18	—	—	—	—	—	—	G.	G.	Nil		
122	24	1	40	Contracted Pelvis	20	23	16½	—	9½ hours		3,100	—	—	G.	G.	Yes	Lower Segment	
265	31	1	40	Carcinoma of Cervix	23	27	19½	—	4 days 10 hrs. 40 m.		2,760	—	—	G.	G.	Nil	Caesarean Hysterectomy	Carcinoma Stage III. Hysterectomy above site of growth.
520	21	1	43	Contracted Pelvis	21½	24½	17½	—	—	—	3,900	—	—	G.	G.	Yes	Lower Segment	
605	23	2	28	C. Placenta Praevia	24	26	21	—	—	—	3,250	—	—	G.	D.	Nil	Classical	
949	18	1	39	Accidental Haem.	23	26	20½	—	—	—	—	—	—	G.	S.B.	Nil	Caesarean Hysterectomy	Uterine muscle completely paralysed. Severe haemorrhage.
1799	34	7	39	C. Placenta Praevia	—	—	—	—	—	—	3,200	50	—	G.	G.	Nil	Classical	
2711	34	8	34	C. Placenta Praevia	22½	25	20	—	—	—	2,200	49	32	G.	G.	Nil	Classical	

PERINEAL LACERATION AND EPISIOTOMY.

225 Lacerations (of 2nd or 3rd Degree).
62 Episiotomies.

(Incidence of Laceration and Episiotomy = 9.2% of Total Deliveries).

A. LACERATION OF PERINEUM (of 2nd or 3rd degree).

TYPE OF LABOUR	*2ND DEGREE*	*3RD DEGREE*
Natural Forces :—		
Vertex	197	1
Breech	2	—
Face	1	—
Forceps Delivery :—		
Vertex	17	—
After coming head	1	—
Assisted Breech Delivery	4	—
Internal Version	1	—
Perforation of after coming head	1	—

B. EPISIOTOMY.

TYPE OF LABOUR	*CENTRAL*	*LATERAL*	*BILATERAL*
Natural Forces :—			
Vertex	14	13	—
Breech	1	—	—
Forceps Delivery :—			
Vertex	5	22	1
After coming head	—	1	—
Assisted Breech Delivery	1	3	—
Internal Version	—	1	—

ACCIDENTAL ANTE-PARTUM HAEMORRHAGE.

There were 6 cases.

No mother died.

4 babies were stillborn, a mortality of 66.6%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Condition on Admission*	*Albumen*	*Treatment*	*Result M.*	*Result C.*	*Amount of Bleeding Concealed*	*Amount of Bleeding Revealed*	*REMARKS*
EMERGENCY											
949	18	1	39	Very ill	†	Caesarean Hysterectomy	G.	S.B.	1,800cc.	—	Hysterectomy necessary to stop bleeding.
1154	42	12	35	Blanched	††	A.R.M.	G.	S.B.	—	?	
1295	31	4	32	Slight oedema ...	‡‡	A.R.M.	G.	S.B.	900cc.	—	Pre-eclampsia.
1571	28	3	38	Marked oedema ...	††	A.R.M. Tight Binder...	G.	S.B.	Mixed	1,200cc.	D.A.A.
1625	29	2	37	Fair	Clear	A.R.M.	G.	G.	Mixed	900cc.	
2660	23	2	41	Good	Clear	Nil	G.	G.	—	150cc.	Mild.

PLACENTA PRAEVIA.

There were 17 cases.

The placenta was central in 4, marginal in 8, and lateral in 5.

No mother died.

8 babies were stillborn and 2 died, a mortality of 58.8%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Condition on Admission*	*Variety*	*Treatment*	*Result M.*	*Result C.*	*Amt. of Bleeding*	*REMARKS*
BOOKED										
2822	37	6	35	Good	Lateral	Nil	G.	S.B.	600 c.c.	
EMERGENCY										
118	28	5	33	Good	Marginal	Willett's Forceps ...	G.	G.	300 c.c.	
347	25	4	?	Retained 1st placenta	Marginal	Internal Version ...	G.	S.B.	?	2nd or Twins.
1679	38	2	35	Fair	Marginal	Willett's Forceps ...	G.	S.B.	600 c.c.	
1681	24	5	33	Fair	Marginal	Bipolar Version ...	G.	S.B.	900 c.c.	
1771	33	7	36	Fair	Central	Willett's Forceps ...	G.	S.B.	1,200 c.c.	
1775	30	4	33	Good	Marginal	Willett's Forceps ...	G.	D.	600 c.c.	D.A.A.
1844	30	4	38	Oedema	Lateral	Nil	G.	G.	Normal	
1799	34	7	39	Blanched	Central	Caesarean Section ...	G.	G.	600 c.c.	
2007	37	9	25	Anaemic...	Marginal	Nil	G.	G.	900 c.c.	
2125	40	10	29	Fair	Lateral	Internal Version ...	G.	S.B.	600 c.c.	
2218	34	7	28	Fair	Lateral	Nil	G.	S.B.	240 c.c.	
2247	36	14	37	Fair	Marginal	Willett's Forceps ...	G.	S.B.	900 c.c.	A.R.M.
2692	38	3	38	Good	Lateral	Willett's Forceps ...	G.	G.	240 c.c.	
2711	34	8	34	Anaemic...	Central	Caesarean Section ...	G.	G.	780 c.c.	
2945	28	8	38	Good	Marginal	Willett's Forceps ...	G.	G.	Normal	
605	23	2	28	Fair	Central	Caesarean Section ...	G.	D.	600 c.c.	Premature Infant.

POST-PARTUM HAEMORRHAGE.

There were 43 cases.

2 mothers died, a mortality of 4.6%.

4 babies were stillborn and 1 died, a mortality of 11.5%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Relevant Features*	*Predisposing Cause*	*Treatment*	*Result M.*	*Result C.*	*Amt. of Bleeding*	*REMARKS*
BOOKED										
16	23	1	40	Nil	Atony	General...	G.	G.	450 c.c.	
50	20	2	38	Traumatic	Lacerated cervix	Gauze plugging	G.	G.	600 c.c.	
587	26	2	40	Hydramnos	Cervical tear	Suture	G.	G.	600 c.c.	
2594	21	2	40	Nil	Atony	General...	G.	G.	750 c.c.	
2822	37	6	35	Nil	Atony	General...	G.	S.B.	600 c.c.	
EMERGENCY										
118	30	7	40	Nil	Atony	General...	G.	S.B.	900 c.c.	
249	22	3	40	Adherent placenta	Atony	General...	G.	G.	700 c.c.	
353	19	1	38	Nil	Atony	General...	G.	G.	1,000 c.c.	
497	21	1	35	Adherent placenta	Atony	Manual Removal	D.	G.	1,200 c.c.	
481	25	3	40	Nil	Atony	General...	G.	G.	900 c.c.	
512	32	1	40	Nil	Atony	General...	G.	G.	600 c.c.	
552	21	2	39	Nil	Atony	General...	G.	G.	750 c.c.	
620	31	5	37	Nil	Atony	Suture	G.	G.	1,000 c.c.	
704	19	1	39	Nil	Atony	General...	G.	G.	750 c.c.	
721	23	1	40	Nil	Atony	General...	G.	G.	750 c.c.	
751	26	1	41	Nil	Atony	General...	G.	G.	750 c.c.	
770	25	2	38	Nil	Atony	General...	G.	G.	700 c.c.	
782	26	4	39	Nil	Atony	General...	G.	G.	900 c.c.	
797	23	1	40	Nil	Atony	General...	G.	G.	700 c.c.	
816	36	3	38	Nil	Atony	General...	G.	G.	750 c.c.	
821	24	2	39	Nil	Atony	General...	G.	G.	900 c.c.	
845	19	1	40	Oedema	Atony	General...	G.	G.	600 c.c.	
850	21	1	39	Nil	Atony	General...	G.	G.	1,200 c.c.	
862	27	3	39	Nil	Atony	General...	G.	G.	900 c.c.	
968	23	1	38	Nil	Retained placenta	General...	G.	G.	700 c.c.	
1014	28	2	38	Nil	Atony	General...	G.	G.	650 c.c.	
1153	41	13	42	Nil	Adherent placenta	Manual Removal	D.	G.	?	
1223	24	2	36	Traumatic	Atony	General...	G.	G.	900 c.c.	
1265	23	1	37	Nil	Atony	General...	G.	G.	900 c.c.	
1387	19	1	37	Toxaemia	Atony	Manual Removal	G.	G.	900 c.c.	
1680	42	13	39	Nil	Atony	General...	G.	G.	1,500 c.c.	
1711	20	1	39	Traumatic	Torn Cervix	Suture	G.	G.	1,200 c.c.	
1740	32	3	40	Nil	Retained portion of placenta	Bimanual compression	G.	S.B.	1,500 c.c.	
1819	25	1	37	Toxaemia	Torn Cervix	Suture	G.	D.	1,200 c.c.	
1884	41	2	39	Nil	Laceration of soft ports	Suture	G.	G.	900 c.c.	
2282	30	5	34	Nil	Retained placenta	General...	G.	S.B.	1,500 c.c.	
2750	24	2	38	Nil	Partial placenta accreta	Manual Removal	G.	G.	1,500 c.c.	
2829	24	2	38	Pre-eclampsia	Atony	General...	G.	G.	800 c.c.	
2891	24	2	38	Nil	Retained placenta	Manual Removal	G.	G.	800 c.c.	
2953	22	3	40	Nil	Atony	General...	G.	G.	650 c.c.	
3126	29	1	40	Nil	Retained placenta	Manual Removal	G.	G.	600 c.c.	
3274	24	1	45	Nil	Atony	General...	G.	G.	900 c.c.	
3275	21	1	36	Pre-eclampsia	Atony	General...	G.	G.	1,000 c.c.	

MANUAL REMOVAL OF PLACENTA.

There were 11 cases.

3 mothers died, a mortality of 27.2%.

2 babies were stillborn, a mortality of 18.2%.

Reg. No.	*Age*	*Gravida*	*Maturity*	*Method of Delivery*	*Length of 3rd Stage*	*Indication*	*Morbidity*	*Result* M.	*Result* C.	*Amt. of bleeding*	*REMARKS*
EMERGENCY											
347	25	4	?	Internal Version ...	30 mins.	Adherent placenta	Yes	G.	S.B.	?	2nd of Twins.
497	21	1	35	Normal	1 hour	Haemorrhage	Nil	D.	G.	1,200 c.c.	Severe haemorrhage.
1153	41	13	42	Forceps	30 mins.	Haemorrhage	—	D.	G.	?	
1333	40	8	38	Assisted	1½ hrs.	Retention of placenta ...	Nil	D.	G. } G. }	?	Twins. Pre-eclampsia
1387	19	1	37	Forceps	15 mins.	Massive P.P.H.	Yes	G.	G.	900 c.c.	
1400	36	12	37	Forceps	50 mins:	Adherent placenta	Yes	G.	S.B.	?	
1443	35	1	39	Normal	1¼ hrs.	Retained placenta	Nil	G.	G.	Normal	
2197	19	1	36	Normal	3 hrs.	Retained placenta	Yes	G.	G.	Normal	
2750	24	2	38	Normal	1½ hrs.	Partial placenta accreta ...	Nil	G.	G.	1,500 c.c.	
2801	24	2	38	Normal	1¼ hrs.	Retained placenta	Yes	G.	G.	800 c.c.	
3126	29	1	40	Normal	1¾ hrs.	Retained placenta	Nil	G.	G.	600 c.c.	

MATERNAL MORBIDITY.

130 Cases.

Morbidity Rate 4.1%

All cases with pyrexia and all maternal deaths are included as morbid.

The definition of puerperal pyrexia, as adopted at this Clinic, is: "A temperature of 100.4 F. or over, occurring on two or more occasions during the puerperium, whilst the patient is under observation, not including the first twenty-four hours."

MORBIDITY RATE FOR WHOLE CLINIC

BOOKED CASES.

Number of Cases delivered	222
Cases of Pyrexia	12
Maternal Deaths	—
Morbidity Rate	5.4%

EMERGENCY CASES.

Number of Cases delivered	2939
Cases of Pyrexia	104
Maternal Deaths without Pyrexia	14
Morbidity Rate	4.0%
.....	4.1%

DETAILS OF MORBID CASES.

BOOKED CASES.

Puerperal Infection	3
Breast engorgement	5
Acute bronchitis	2
Influenza	1
Malaria	1
	12

EMERGENCY CASES.

Puerperal Infection:

Uterine	28	(H.S. 7)
Perineal	4	
Breast engorgement	24	
Pyelitis	11	
Cystitis	1	
Pyelo-nephritis	1	
Poly-cystic kidneys	1	
Dental sepsis	2	
Bronchitis	9	
Broncho-pneumonia	1	
Lobar pneumonia	2	
Influenza	1	
Malarial Splenomegaly	1	
Chronic Malaria	1	
Bacillary Dysentery	1	
Typhoid fever	1	
Enteritis	5	
Infected haematoma	2	
Lymphangitis	1	
Mumps	1	
Cerebro-spinal meningitis	1	
Fever of unknown origin	5	
Maternal Deaths without Pyrexia	14	
	118	

Monthly distribution of cases with pyrexia, showing incidence of Haemolytic Streptococcus infection.

	CASES OF PYREXIA	*H.S.*		*CASES OF PYREXIA*	*H.S.*
January	3	—	July	18	—
February	3	—	August	16	2
March	6	1	September	9	—
April	13	—	October	13	1
May	10	—	November	7	3
June	14	—	December	4	—

The parity of the cases was as follows:—

Para	1	2	3	4	5	6	7	8	9	10 (or over)
BOOKED	8	—	1	1	—	—	2	—	—	—
EMERGENCY	54	13	12	7	5	3	6	2	—	2

MATERNAL MORTALITY.

17 Deaths.

Mortality rate 0.51%.

BOOKED:

No deaths.

EMERGENCY:

Case No. 1—*Reg. No. 497. Post-partum Haemorrhage.*

Primipara aet. 21 yrs., 35 weeks pregnant.
Admitted in labour, vertex 1 position. Labour lasted 11 hours. As soon as the baby was born the patient had severe haemorrhage while the placenta remained adherent. Saline injection of the cord was tried but failed to bring about separation and the placenta had to be removed manually under ether anaesthesia one hour after delivery. Ergometrine and pituitrin injections were given intramuscularly, in addition to intravenous ergometrine .125 mg., but the uterus remained atonic and had to be packed. The patient was given saline injection and cardatone but died 1 hour after removal of the placenta.

Case No. 2—*Reg. No. 854. Lobar Pneumonia, Pyelonephritis, Avitaminosis B_1, Heart failure.*

Para 2, aet. 28 yrs., was admitted 33 weeks pregnant suffering from oedema of legs, and lower abdomen, dyspnoea and cough of 2 weeks duration. On admission she had normal temperature, systolic murmur and some dilatation of heart, bronchial breathing and loud rhonchi heard over both lungs, albuminuria, B.P. 124/70 knee jerks were absent. She was under treatment for 10 days when she came into labour following a day's diarrhoea. Labour was normal and only lasted 3 hours. Her condition became worse and 23 hours after delivery she had a rigor and died 36 hours after delivery. Post-mortem examination showed lobar pneumonia of right lung at a stage of red hepatisation, fatty degeneration of left ventricle with some enlargement, marked enlargement of liver with fatty degeneration and anaemia, kidney showed pyelonephritis.

Case No. 3—*Reg. No. 858. Avitaminosis B_1, Lobar Pneumonia.*

Primipara aet. 21 yrs., admitted 30 weeks pregnant complaining of cough, palpitation and inability to walk for 7 days. On admission she had oedema of legs, absence of knee jerks, slight albuminuria, B.P. 120/65. Six days after admission she developed left lobar pneumonia and was transferred to Queen Mary Hospital where she afterwards died of pneumonia.

Case No. 4—*Reg. No. 1063. Suppurative Pyelo-nephritis.*

Para 3, aet. 24 yrs., 36 weeks pregnant, admitted in labour with temperature of 100°F. and history of fever for 10 days with frequent rigors, often 4 per day. Vertex iv position, with spontaneous rotation and labour of only 4 hours duration. Patient's temperature continued high and rose on the second day after delivery to 104°F. and she died the following day. The only positive findings clinically were albuminuria, a leucocytosis of 13,800 and B.P. 132/79.
Post-mortem—multiple abscesses in both kidneys were found with degeneration of the epithelial cells, the tubules being filled with hyaline material.

Case No. 5—*Reg. No. 1108. Pre-eclampsia Grade I, Disproportion, Failed Forceps, Perforation, Obstetric Shock.*

Primipara aet. 29 yrs., 40 weeks pregnant. Admitted in labour with temperature 99.8°F. some oedema of legs, B.P. 140/94, slight albuminuria. Spleen enlarged. Breech presentation, right footling, left leg and arms extended. Breech was extracted and forceps on the after-coming head failed and perforation had to be performed. The baby was large, weighing 3,700 gms. The placenta was adherent and had to be removed. Patient severely shocked and tied 3½ hours later despite treatment.

Case No. 6—*Reg. No. 1153. Post-partum Haemorrhage.*

Para 13, aet. 41 yrs., 42 weeks pregnant. Temperature on admission 99.4°F. Slight oedema of legs with mild albuminuria. Vertex iii position. Patient 6 hours in labour, delivered by forceps, manual rotation of the head having failed. Severe post-partum haemorrhage necessitated manual removal of the placenta after which salines and stimulants were given but without avail, and the patient died 4 hours later.

Case No. 7—*Reg. No. 1200. Typhoid Fever.*

Primipara aet. 25 yrs., 30 weeks pregnant. Admitted with a history of diarrhoea with blood in the stool for 15 days, a temperature of 99.8°F. and in labour. Labour lasted 3 hours, when premature still-born infant delivered. Urine showed numerous granular casts with some r.b.c. and pus cells. On the second day temperature rose to 101.°F., pulse 120 and chest full of moist rales. Condition became gradually worse. On the 5th day B. typhosus cultured from stool, urine gave no growth. On the evening of the 6th day patient became delirious and died.

Case No. 8—*Reg. No. 1333. Pre-eclampsia Grade II, Oedema of Lungs, Heart Failure.*

Para 8, aet. 40 yrs., Twin pregnancy at 37th week. Admitted complaining of severe dyspnoea at rest for 2-3 days with headache. Oedema of legs for 3 weeks. Cough for 4 days. On admission oedema of legs and abdominal wall up to umbilicus. B.P. 165/118. Urine showed much albumen but no casts. Chest full of rhonchi, lips oedematous. After one day's treatment patient was somewhat improved but on second day had some blood stained sputum and a sudden attack of dyspnoea. It was decided to induce labour and the first bag of membranes was ruptured artificially. The first infant was born 5 hours later, normal delivery in vertex i position. Mother's respiration rate 46, pulse 136. Second baby transverse, attempts at external version failed so internal version was performed and baby delivered as a breech. Placenta retained and patient died as this was about to be removed under ether anaethesia. Post-mortem showed all signs of severe pre-eclampsia with oedema of the lungs, enlargement of both sides of the heart, free fluid in abdominal cavity and degeneration of the kidneys.

Case No. 9—*Reg. No. 1499. Congenital Polycystic Kidneys, Pyelitis, Uraemia.*

Para 3, aet. 26 yrs., 34th week of pregnancy. Admitted in labour with temperature of 102.2°F., pulse 108, history of cough and sore throat for 7 days. B.P. 132/76, Albuminuria slight, Vertex i position. Labour lasted 35 hours. Premature infant lived 3½ days, then became cyanosed and died suddenly. Mother's temperature rose to 103.8°F. on second day of puerperium. No malarial parasites were present in the blood, vaginal swab and urine culture gave negative results, but the urine showed granular casts, r.b.c. and pus cells. On the 4th day of the puerperium she became comatose and died early the next morning.

Post-mortem examination showed congenital poly-cystic kidneys.

Case No. 10—*Reg. No. 1846. Avitaminosis B_1 Cardiac Failure.*

Para 7, aet. 41 yrs., 30th week of pregnancy. Admitted suffering from marked weakness of legs, inability to walk, oedema. B.P. 128/70, knee jerks absent. Cough. Treated for Avitaminosis B_1 and showed considerable improvement, 6 days after admission foetal movements and foetal heart failed. The next day labour commenced, the first stage lasted

4½ hours but after two more hours there was no further advance and the patient was very dyspnoeic so forceps were applied under spinal anaethesia and patient delivered of macerated foetus. Third stage lasted only 25 minutes and after delivery of the placenta patient's condition improved considerably. Improvement was maintained for 5 hours when suddenly patient became very dyspnoeic and died in a few minutes.

Case No. 11—*Reg. No. 2040. Nephritic Toxaemia, Avitaminosis B_1, Cardiac Failure.*

Para 5, aet. 33 yrs., 38th week of pregnancy. Admitted with history of oedema of legs for 2½ months. B.P. 144/90, marked albuminuria with hyaline and granular casts. Labour commenced 2 days after admission. Vertex i, normal delivery labour lasted 2¼ hours. Patient's condition fairly good up to 6th day of puerperium when she had an attack of dyspnoea in the early morning. Injections of Betaxin were started at once. Blood urea 42 mgs. per c.c. Pyruvic acid 2.34 mgm. per 100 c.c. Despite treatment condition did not improve. On the 9th day of puerperium B.P. rose to 178/120. Patient died on 11th day of puerperium.
Post mortem showed chronic nephritis with signs of acute Vitamin B_1 deficiency.

Case No. 12—*Reg. No. 2127. Antepartum Eclampsia, Avitaminosis B_1.*

Para 4, aet. 34 yrs., pregnant 40 weeks. Admitted with history of oedema for 3 weeks with weakness and numbness of lower extremities, absent ankle jerks. B.P. 126/90, Urine showed abumin +. Patient was admitted for treatment of avitaminosis B_1. Five days later she developed headache, dimness of vision and vomiting. Granular casts appeared in the urine and the B.P. rose to 178/110. In spite of sedative treatment the patient developed ante-partum eclampsia and after one convulsion lapsed into coma and died undelivered.

Post mortem examination showed signs of acute beri-beri with enlargement and fatty degeneration of the liver and kidneys.

Case No. 13—*Reg. No. 2555. Obstructed Labour (Foetal Ascites), Obstetric Shock.*

Para 10, aet. 37 yrs., 41 weeks pregnant. On admission relatives gave history of low muttering delirium with attacks

of violence for 2 days. Pulse 100, B.P. 126/94. Abdomen was very distended with marked hydramnios, foetal heart not heard. Os was fully dilated but uterine contractions were poor. The membranes were ruptured and the presenting part was found to be a brow. Patient's condition had improved slightly with submammary salines and internal version was performed with difficulty. On pulling on the legs no progress was made because of very marked foetal ascites. Foetal abdomen was perforated and the macerated foetus was then delivered easily, no difficulty being experienced with the head. The placenta separated normally and there was no marked bleeding. Patient's condition not good after delivery, shock treated by heat, salines, etc. but patient died 2 hours later.

Case No. 14—*Reg. No. 2581. Pre-eclampsia Grade II, Oedema of Lungs, Heart Failure.*

Para 3, aet. 30 yrs., pregnant 40 weeks. History of oedema for 20 days. On admission legs very oedematous, B.P. 176/130, albuminuria marked with granular casts. Presentation vertex i, head engaged but labour not started. Foetal heart not heard. Labour commenced 15 hours after admission and patient was delivered of a stillborn infant 1 hour later. Before and after delivery patient very dyspnoeic. Knee jerks absent. Blood urea 31 mgs./100 c.c. Patient died 2½ hours after delivery. Permission for post mortem examination could not be obtained.

Case No. 15—*Reg. No. 2749. Pre-eclampsia Grade II, Avitaminosis B_1, Oedema of Lungs, Heart Failure.*

Para 3, aet. 32 yrs., 35 weeks pregnant. Admitted with history of oedema of legs for 7 days. Oedema of legs, abdomen and vulva very marked, albuminuria + + with granular casts, B.P. 168/104. Knee jerks absent, heart moderately dilated. Vertex i presentation, normal delivery, labour lasted 18 hours. Blood pyruvic acid 1.03 mg. per 100 c.c. She was treated with vibex and with cardatone, etc. but breathing became impeded especially on the right side and she died 2 days after delivery. Post mortem examination showed dilatation of heart with signs of degeneration in both kidneys.

Case No. 16—*Reg. No. 3188. Pulmonary Tuberculosis.*

Para 5, aet. 28 yrs., 32nd week of pregnancy. Patient was delivered 5 minutes after admission of a premature male

infant. After delivery she was found to have Temperature 100.4° F., Pulse 120, B.P. 144/88. She was very emaciated, could not sit up, and could only talk in a whisper. She had been ill for 10 months, getting worse as pregnancy advanced. There were signs of advanced tuberculosis in both lungs, tubercles were also studded over the posterior pharyngeal wall. Died 6th day after delivery.

Case No. 17—*Reg. No. 3265. Cerebro-spinal meningitis.*

Patient aet. 23 yrs., primipara, 37 weeks pregnant. Patient delivered of normal male infant, vertex i, labour lasted 2 hours. Quite normal till third day after delivery when she complained of headache which got more severe as the day went on. Temperature rose to 103.2° F. The next day she became comatose and died. Post mortem examination showed purulent fluid all over vertex of brain. Smears of this showed Gram-negative diplococci.

INFANTS REPORT.

MATURE INFANTS:	*Booked*	*Emergency*	*Total*
Born alive and survived	204	2,658	2,862
Stillbirths	3	39	42
Macerated foetus	—	20	20
Neo-natal Deaths	—	27	27
Total	207	2,744	2,951

PREMATURE INFANTS:

(Birth weight 2,300 grams, or 5 lb. and under):

	Booked	*Emergency*	*Total*
Born alive and survived	10	151	161
Stillbirths	1	18	19
Macerated foetus	1	17	18
Neo-natal Deaths	5	37	42
	17	223	240
Total number of Infants delivered:	224	2,967	3,191
Stillbirth rate (including macerated foetus):	2.2%	3.2%	3.1%
Neo-natal Death Rate:	2.2%	2.2%	2.2%
Combined Stillbirth and Neo-natal Mortality Rate:	4.4%	5.4%	5.3%

STILL BIRTHS.

There were 99 still-births (including 38 cases of Macerated Foetus).

Still-birth rate – 3.1%.

Reg. No.	*Sex*	*Weight*	*Maturity*	*Method of delivery*	*Maternal Complication*	*Cause of Death*	*REMARKS*
BOOKED							
1664	F.	2,300	37	Breech	Nil	Undetermined	Macerated foetus.
1749	F.	3,800	41	Forceps	Fever	Asphyxia	
2662	M.	2,250	34	Forceps	Exophthalmic Goitre	Cerebral haemorrhage	
2822	M.	3,100	35	Assisted breech	P.P.H.	White Asphyxia	
3007	M.	2,600	44	Normal	Nil	Unknown	
EMERGENCY							
118	M.	3,150	40	Forceps	Nil	Asphyxia	Prolapsed cord.
129	M.	2,100	37	Breech	Nil	Prolapsed cord	
163	M.	2,700	33	Breech	Nil	Undetermined	Macerated foetus.
203	F.	1,900	32	Breech	Syphilis	Prematurity	Foetal Ascites.
220	F.	1,600	32	Normal	Nil	Undetermined	Macerated foetus.
290	M.	2,800	33	Breech	Nil	Undetermined	Macerated foetus.
347	M.	2,250	38	Internal version	Placenta Praevia	Prolapsed 2nd cord	2nd of Twins.
383	M.	2,300	30	Normal	Syphilis	Syphilis	Macerated foetus.
449	M.	3,200	40	Normal	Nil	White Asphyxia	2nd of Twins.
470	F.	1,820	36	Normal	Nil	Undetermined	Macerated foetus.
547	F.	2,900	32	Normal	Syphilis	Syphilis	Macerated foetus.
568	F.	2,850	39	Normal	Nil	Congenital deformity	Non-fusion of facial processes.
628	F.	2,900	35	Normal	Nil	Undetermined	Macerated foetus.
687	M.	2,690	30	Normal	Nil	Foetal Ascites	Macerated foetus.
731	M.	1,200	26	Normal	Nil	Undetermined	Macerated foetus.
792	M.	2,680	38	Normal	Nil	Compression of cord	Macerated foetus.
854	M.	1,980	34	P.O.P.	Avitaminosis B	Prematurity	
865	F.	2,550	35	Forceps	Pre-eclampsia	Toxaemia	Macerated foetus.
906	M.	1,500	35	Normal	Nil	Undetermined	Macerated foetus.
898	F.	1,400	32	Normal	Albuminuria	Prematurity	
915	F.	860	26	Assisted	Ante-partum Eclampsia	Toxaemia	Macerated foetus.
949	M.	?	39	Caesarean hysterectomy	Concealed haemorrhage	Premature Separation of Placenta.	
965	M.	3,150	42	Normal	Condylomata of vulva	? Syphilis	Macerated foetus.
998	M.	2,800	40	Normal	Syphilis	Syphilis	Macerated foetus.
1004	F.	1,300	35	Normal	Nil	Undetermined	Macerated foetus.
1021	F.	1,120	29	Breech	Syphilis	Syphilis	Macerated foetus.
1082	F.	2,230	32	Normal	Syphilis	Syphilis	Macerated foetus. Asoites.
1108	M.	3,700	40	Perforation	Contracted Pelvis	Asphyxia	
1154	F.	2,800	35	A.R.M.	Accidental haemorrhage	Premature Separation of Placenta.	

STILL BIRTHS.—(*Continued 1*).

Reg. No.	*Sex*	*Weight*	*Maturity*	*Method of delivery*	*Maternal Complication*	*Cause of Death*	*REMARKS*
EMERGENCY							
1156	F.	3,200	40	Assisted	Syphilis	Syphilis	Macerated foetus.
1200	M.	2,900	30	Normal	Nil	Undetermined	
1253	M.	1,650	35	Normal	Pre-eclampsia	Toxaemia	Foetal Ascites.
1261	F.	2,800	40	Normal	Pre-eclampsia	Foetal Ascites	
1292	F.	2,600	36	Breech	Syphilis	Syphilis	Macerated foetus.
1295	F.	?	32	Normal	Concealed haemorrhage ...	Premature Separation of Placenta..	
1309	M.	700	29	Breech	Nil	Prematurity	
1311	F.	1,800	37	Breech	Nil	Prematurity	
1371	M.	1,960	36	Breech	Nil	Prematurity	
1400	M.	3,750	37	Forceps	Pre-eclampsia	Toxaemia	
1404	F.	2,900	38	Normal	Nil	Undetermined	
1444	M.	3,000	39	Forceps	Nil	Cerebral haemorrhage	
1528	F.	2,000	35	Breech	Nil	Congenital Polycystic Kidneys ...	
1530	M.	3,500	43	Normal	Nil	Asphyxia	
1571	M.	3,200	38	Normal	Accidental haemorrhage ...	Premature Separation of Placenta..	
1592	F.	1,100	35	Normal	Nil	Prematurity	
1641	M.	1,450	32	Normal	Nil	Prematurity	
1656	F.	2,800	36	Normal	Nil	Asphyxia	
1679	F.	2,800	35	Normal	Marginal Placenta Praevia ...	Asphyxia	
1681	M.	1,880	33	Transverse lie	Marginal Placenta Praevia ...	Asphyxia	
1690	M.	?	29	Normal	Nil	Prematurity	
1707	M.	2,700	36	Normal	Nil	Cerebral haemorrhage	
1740	F.	3,320	40	Normal	Retained portion of Placenta	Undetermined	Macerated foetus.
1771	F.	2,600	36	Assisted	Central Placenta Praevia ...	Asphyxia	
1846	F.	3,800	40	Forceps	Avitaminosis B 1	Unknown	
1863	M.	2,650	34	Breech	Nil	Undetermined	Macerated foetus.
1869	M.	4,400	37	Assisted breech	Nil	Cerebral haemorrhage	
1970	M.	1,650	32	Normal	Nil	Undetermined	Macerated foetus.
1978	F.	1,250	36	Normal	Pre-eclampsia	Undetermined	Macerated foetus.
2011	M.	1,950	37	Normal	Nil	Undetermined	Macerated foetus.
2037	M.	2,900	38	Normal	Oedema	Foetal Ascites	
2041	F.	2,820	41	Internal version... ...	Nil	White Asphyxia	
2070	M.	2,860	38	Normal	Nil	White Asphyxia	
2125	M.	1,650	29	Internal version... ...	Lateral Placenta Praevia ...	White Asphyxia	
2135	M.	1,800	35	Normal	Nil	Undetermined	Macerated foetus. 2nd of Twins.
2247	F.	2,250	37	Willett's Forceps ...	Marginal Placenta Praevia ...	Asphyxia	
2282	F.	1,490	34	Breech	Syphilis	Syphilis	
2289	M.	3,580	39	Assisted Forceps ...	Pre-eclampsia	White Asphyxia	

STILL BIRTHS.—(*Continued 2*).

Reg. No.	*Sex*	*Weight*	*Maturity*	*Method of delivery*	*Maternal Complication*	*Cause of Death*	*REMARKS*
EMERGENCY							
2294	M.	1,800	34	Normal	Pre-eclampsia	Toxaemia	
2315	M.	?	36	Normal	Oedema	Undetermined	Macerated foetus.
2333	M.	2,850	38	Assisted breech	Nil	Cerebral haemorrhage	
2371	M.	1,200	36	Spontaneous	Nil	Undetermined	Macerated foetus.
2365	M.	4,060	41	Internal version	Pre-eclampsia	White Asphyxia	
2460	F.	1,200	41	B.B.A.	Nil	Undetermined	Macerated foetus.
2499	M.	500	35	Normal	Nil	Undetermined	Macerated foetus.
2555	M.	4,060	41	Brow presentation	Nil	Undetermined	Macerated foetus.
2581	M.	2,100	39	Normal	Pre-eclampsia	Toxaemia	
2464	M.	?	37	Normal	Nil	Undetermined	Macerated foetus.
2548	F.	2,200	33	Normal	Nil	Prematurity	
2549	M.	3,150	42	Face presentation	Oedema	Unknown	
2583	F.	3,100	39	Normal	Nil	Asphyxia	
2593	M.	2,800	40	Normal	Nil	Cerebral haemorrhage	
2616	F.	1,000	39	Normal	Nil	Asphyxia	
2617	M.	1,900	33	Internal version	Nil	Asphyxia	
2685	M.	3,800	38	Breech	Nil	White Asphyxia	
2784	M.	3,000	39	Normal	Nil	White Asphyxia	
2791	F.	3,050	42	Normal	Nil	Undetermined	Macerated foetus.
2890	M.	3,100	38	Forceps	Nil	Asphyxia	
3014	M.	2,300	37	Forceps	Nil	Undetermined	Macerated foetus. 2nd of Twins.
3040	F.	1,500	32	Normal	Nil	Undetermined	Macerated foetus.
3057	F.	?	38	Breech	Nil	Anencephalus	Macerated foetus.
3095	M.	2,370	38	Normal	Nil	Prolapsed cord	
3103	M.	1,200	34	Normal	Ankylostomiasis	Prematurity	
3217	F.	1,250	39	Breech	Nil	Undetermined	Macerated foetus.
3301	M.	2,350	41	Transverse lie	Nil	Prolapsed cord	2nd of Twins.

NEO-NATAL DEATHS.

There were 69 infant deaths (including 42 premature babies).

Neo-natal death rate – 2.2%.

Reg. No.	*Sex*	*Birth Weight*	*Maturity*	*Method of delivery*	*Maternal Complication*	*Cause of Death*	*Age*	*Method of Feeding*	*REMARKS*
BOOKED									
1830	M.	2,100	39	Normal	Pre-eclampsia	Intracranial haemorrhage ...	67 hrs.	Breast	
1964	F.	2,200	34	Normal	Nil	Prematurity	6 days	Breast	
3118	F.	1,650	32	Normal	Nil	Prematurity	4½ days	Dropper	
3134	F.	2,190	35	Normal	Syphilis	Prematurity	9½ hrs.	Breast	
3179	M.	1,840	32	Normal	Nil	Prematurity	46 hrs.	Dropper	
EMERGENCY									
2395/38	F.	1,120	30	Normal	Nil	Prematurity	10 hrs.	—	
19	M.	2,724	35	Normal	Nil	Blue Asphyxia	2⅜ days	Breast	
92	M.	2,250	40	Normal	Nil	Broncho-pneumonia	2⅜ days	Breast	
97	M.	3,000	37	Normal	Nil	Congenital debility	3 days	Breast	
181	F.	1,600	34	Normal	Nil	Prematurity	11 hrs.	Dropper	
246	F.	3,250	38	Normal	Nil	Intracranial haemorrhage ...	50 mins.	—	
410	F.	2,270	36	Normal	Nil	Prematurity	3⅝ days	Breast	
436	M.	2,750	39	Normal	Nil	Intracranial haemorrhage ...	3½ days	Breast	
538	F.	1,600	29	Breech	Syphilis	Prematurity	7½ hrs.	—	
626	M.	1,440	29	Normal	Nil	Congenital debility	27 hrs.	Dropper	
646	M.	2,100	32	Breech	Nil	Intracranial haemorrhage ...	1½ hrs.	—	
659	M.	2,850	35	Assisted breech ...	Nil	Intracranial haemorrhage ...	28½ hrs.	Breast	
713	F.	2,500	40	Normal	Syphilis	Congenital syphilis	3½ days	Breast	
734	M.	2,000	37	Normal	Pre-eclampsia	Atelectasis	60⅔ hrs.	Breast	
761	M.	2,550	35	Normal	Pre-eclampsia	Intracranial haemorrhage ...	37 hrs.	Breast	
774	M.	1,500	34	Normal	Nil	Prematurity	2 hrs.	—	
784	F.	1,910	31	Normal	Oedema	Prematurity	10½ hrs.	—	
805	M.	3,700	42	Normal	Nil	Icterus Neonatorum... ...	5 days	Breast	
1059	M.	1,700	39	Breech	Nil	Intracranial haemorrhage ...	28½ days	Dropper	1st of Twins.
1145	F.	2,400	39	Face	Nil	Intracranial haemorrhage ...	36 hrs.	Breast	
1238	F.	3,400	40	Normal	Pre-eclampsia	Pre-eclampsia	55½ hrs.	Breast	
1314	F.	1,900	34	Normal	Nil	Atelectasis	21⅞ hrs.	Dropper	Foetal Ascites.
1346	F.	2,450	38	Normal	Nil	Intracranial haemorrhage ...	5 days	Breast	
1431	F.	1,550	29	Normal	Syphilis	Intracranial haemorrhage ...	3¼ hrs.	—	
1499	M.	2,700	35	Normal	Nil	Atelectasis	3 days	Breast	
1593	M.	1,100	31	Normal	Nil	Prematurity	13 hrs.	Dropper	
1921	M.	2,100	35	Normal	Nil	Atelectasis	38½ hrs.	Breast	
1641	M.	1,800	36	Breech	Nil	Prematurity	2 hrs.	—	

NEO-NATAL DEATHS.—(*Continued*).

Reg. No.	*Sex*	*Birth Weight*	*Maturity*	*Method of delivery*	*Maternal Complication*	*Cause of Death*	*Age*	*Method of Feeding*	*REMARKS*
EMERGENCY									
1775	M.	1,400	33	Normal	Placenta Praevia	Prematurity	9¼ hrs.	—	
1819	F.	2,700	37	Normal	Pre-eclampsia, P.P.H. ...	Icterus Neonatorum... ...	6 days	Breast	
1824	M.	2,500	38	Normal	Nil	Broncho-pneumonia	13½ days	Breast	
1847	M.	1,900	32	Normal	Nil	Prematurity	3 days	Dropper	
1890	M.	2,200	37	Normal	Nil	Prematurity	24¼ hrs.	Breast	
1908	F.	1,350	35	Normal	Nil	Prematurity	58½ hrs.	Dropper	
1986	M.	2,950	41	Normal	Nil	Partial Atelectasis	23¾ hrs.	Breast	
2016	M.	1,500	39	Normal	Nil	Prematurity	7 hrs.	—	
2181	F.	1,940	36	Normal	Nil	Icterus Neonatorum... ...	5 days	Dropper	
2214	M.	2,800	39	Normal	Nil	Broncho-pneumonia	3 days	Breast	
2297	M.	2,600	42	Assisted breech ...	Nil	Intracranial haemorrhage ...	10 days	Breast	
2312	M.	—	28	Normal	Nil	Prematurity	9 hrs.	—	
2412	M.	2,500	39	Normal	Nil	Partial Atelectasis	3 days	Breast	
2419	F.	1,700	37	Normal	Nil	Prematurity	7¼ hrs.	—	
2507	F.	1,650	36	Normal	Syphilis	Prematurity	33 hrs.	Dropper	
2562	M.	2,750	38	Normal	Pre-eclampsia	Unknown	20¼ hrs.	Breast	
2580	F.	2,150	41	Normal	Nil	Prematurity	2 days	Breast	
2670	M.	2,200	35		Pre-eclampsia	Prematurity	3½ days	Breast	
"	M.	2,400	35	Twins	Pre-eclampsia	Partial Atelectasis	4 days	Breast	
2742	F.	2,400	37	Normal	Syphilis	Atelectasis	7¾ hrs.	—	
2796	M.	2,610	41	Normal	Nil	Intracranial haemorrhage ...	2½ days	Breast	
2816	F.	1,300	29	Normal	Nil	Prematurity	7 days	Dropper	
2840	M.	2,050	35	Normal	Pre-eclampsia	Prematurity	5½ days	Breast	
2844	M.	1,430	30	Normal	Nil	Prematurity	2¼ days	Dropper	
2875	F.	1,120	30	Normal	Syphilis	Prematurity	14 hrs.	Dropper	
2896	F.	1,620	36	Breech	Nil	Prematurity	28 days	Dropper	
3001	M.	2,880	37	Normal	Nil	Unknown	38¼ hrs.	Breast	
3044	F.	1,500	34	Normal	Syphilis	Prematurity	2⅛ hrs.	—	
3049	F.	1,640	37	Normal	Nil	Prematurity	23½ hrs.	Dropper	
3061	M.	2,050	35	Normal	Nil	Atelectasis	10½ hrs.	—	
3091	M.	2,600	39	P.O.P....	Nil	Intracranial haemorrhage ...	43½ hrs.	Breast	
3156	F.	1,300	27	Normal	Nil	Prematurity	2½ hrs.	—	
3207	F.	2,100	36	Normal	Nil	Intracranial haemorrhage ...	6 days	Breast	
3241	M.	1,300	31	Normal	Nil	Prematurity	15⅝ hrs.	Dropper	
3301	M.	2,000	41	Breech	Nil	Intracranial haemorrhage ...	3 days	Breast	1st of Twins.
3325	F.	2,750	43	Normal	Nil	Broncho-pneumonia	5 days	Breast	

FOETAL ABNORMALITIES.

Reg. No.	*REMARKS.*
BOOKED	
125	Incomplete harelip.
EMERGENCY	
2381/38	Right sided harelip.
137	Premature lower central incisor.
333	Bilateral harelip and cleft palate.
568	Non-development of Pro-labium, nose, and median part of soft and hard palate.
1116	Right sided harelip.
2253	Harelip and cleft palate (left side).
2689	Haemangioma of left cheek.
3057	Anencephaly Exomphalos.
3180	Left lateral harelip. Incomplete central cleft palate.

OPHTHALMIA.

Reg. No.	*Number of days Treated*	*REMARKS.*	
EMERGENCY			
3248	10	Streptocide treatment, total 2gms.	Good result.

REPORT OF THE GYNAECOLOGICAL UNIT.

During the year 1939 the following numbers of cases were treated :—

Gynaecological Out-Patients :—

New Cases	2,909
Old Cases	2,660
Sterility Clinic	129
Utero-tubal Insufflations	129

Gynaecological In-Patients :—

Admissions to Queen Mary Hospital	409
Number of operations performed	298
Number of cases subjected to Deep X-Ray or Radium Therapy	18
Deaths	8

CLASSIFICATION OF DISEASES.

Vulva :—

Fibroma of labium majus	1
Leukoderma of vulva and anus, syphilis	1
Epithelioma	1
Bartholinitis	1

Perineum :—

Laceration	8
Ano-perineal fistula	1

Urethra :—

Urethral caruncle	2
Urethral polyp, gonorrhoea	1
Urethro-vaginal fistula	1
Vesical calculus	1
Congenital malformation of urethra	1

Vagina :—

Senile vaginitis	1
Vaginal stenosis, rigid hymen	1
Haematocolpos	1
Vesico-vaginal fistula	3
Carcinoma	1

Uterus :—

Congenital	—Infantile uterus	2
	Double uterus	1
Displacements	—Retro-displacement	5
	Utero-vaginal prolapse	15
	Cystocele	2
	Acute Ante-flexion of uterus	1

Disorders of menstruation—

Dysmenorrhoea	8
Subinvolution	2
Metropathia haemorrhagica	9
Endometritis	10
Hyperplasia of endometrium	2

Neoplasms —

Fibroid polyp	12
Uterine fibroid	26
Adeno-carcinoma of body of uterus	3
Endometrioma	6

Cervix :—

Chronic endocervicitis	92
Laceration of cervix	5
Ectropion of anterior lip	1
Polyp	14
Fibromyomata	3
Carcinoma	17
Post radium scarring of old carcinomatous cervix	1

Tubes and Ovaries :—

Inflammation—

Acute salpingo-oophoritis	6
Chronic salpingo-oophoritis	19
Hydrosalpinx	2
Lutein abscess of left ovary	1
Tubo-ovarian cyst	7
Ectopic gestation	4

Neoplasms—

Multilocular cyst	20
Papilliferous cyst	4
Follicular cyst	1
Dermoid cyst	7
Carcinoma of ovary	4

Sterility	9

Pregnancy, normal and abnormal :—

Normal pregnancy	5
Threatened abortion	5
Inevitable abortion	6
Incomplete abortion	9
Carneous mole	2
Hydatidiform mole	4
Hyperemesis gravidarum	3

Pregnancy with pulmonary tuberculosis	2
Pregnancy with chronic nephritis	11
Pregnancy at term obstructed by carcinoma of the cervix	1
Pregnancy with prolapse	1
Pregnancy with condylomata acuminata	1
Pregnancy with endocervicitis	2
Pregnancy with splenomegaly	1
Pregnancy with endometrial polyp	1
Pregnancy with toxic exophthalmic goitre	1
Pregnancy with lympho-granuloma	1

General pelvic conditions:—

Tuberculous peritonitis	1
Encysted tuberculous peritonitis	2
Cellulitis	1
Abscess	1
Carcinoma	1

General abdominal conditions:—

Peritonitis	1
Subacute intestinal obstruction	1
Visceroptosis with duodenal stasis	1
Ascites, cirrhosis of liver	1
Appendicular abscess	2
Retro-peritoneal lipo-sarcoma	1
Diastasis of recti	1

Miscellaneous:—

Pulmonary tuberculosis	1
Observation	1

NATURE AND NUMBER OF CASES TREATED BY OPERATION INCLUDING CASES OF RADIO-THERAPY.

Vulva:—

Fibroma of right labium majus, removal of	1
Epithelioma, radical removal	1

Perineum:—

Perineorrhaphy	6
Ano-perineal fistula	1

Urethra:—

Urethral caruncle, excision of	2
Urethro-vaginal fistula, repair of	1
Vesical calculus, cystoscopy	1
Congenital malformation, plastic operation	1

Vagina :—
- Vaginal stenosis, manual dilatation 1
- Haematocolpos, incision 1
- Vesico-vaginal fistula, repair of 3
- Colpo-perineorrhaphy 13

Uterus :—
- Simple curettage 46
- Curettage for abortion 9
- Curettage for mole 2
- Hysterectomy (subtotal) 34
- Hysterectomy (total) 5
- Hysterotomy 1
- Vaginal myomectomy 10

Cervix :—
- Dilatation 2
- Cauterization 86
- Trachelorrhaphy 4
- Cervical polyp, removal of 12
- Carcinoma (Deep X-Ray therapy) 14
- Carcinoma (Radium treatment) 4

Tubes and Ovaries :—
- Ovariotomy 27
- Salpingo-oophorectomy 8
- Salpingectomy 4
- Ectopic gestation 3
- Tubal insufflation 3

Miscellaneous :—
- Exploratory laparotomy 9
- Retro-peritoneal lipo-sarcoma 1

NATURE AND NUMBER OF CASES TREATED WITHOUT OPERATION.

Vulva :—
- Leukoderma of vulva, syphilis 1
- Bartholinitis 1

Perineum :—
- Perineal lacerations 2

Urethra :—
- Urethral polyp, gonorrhoea 1

Vagina :—
- Senile vaginitis 1

Uterus :—

Retro-version	5
Acute anteflexion	1
Prolapse	2
Sterility	1
Threatened abortion	5
Complete abortion	4
Incomplete abortion	2
Hydatidiform mole	1
Normal pregnancy	5
Hyperemesis gravidarum	3
Pregnancy with prolapse	1
Pregnancy with endocervicitis	2
Pregnancy with splenomegaly	1
Pregnancy with endometrial polyp	1
Pregnancy with exophthalmic goitre	1
Pregnancy with lympho-granuloma	1
Dysmenorrhoea	1
Metropathia haemorrhagica	1
Subinvolution of uterus	1
Adeno-carcinoma of body of uterus	1

Cervix :—

Chronic endocervicitis	6
Mucous polyp	1
Carcinoma	3
Carcinoma with fibroid	1

Tubes and Ovaries :—

Salpingitis	17
Papilliferous cyst	1
Ovarian cyst	1

General pelvic conditions :—

Pelvic cellulitis	1
Secondary pelvic carcinoma	1

General abdominal conditions :—

Tuberculous peritonitis	1
Peritonitis	1
Visceroptosis with duodenal stasis	1
Ascites, cirrhosis of liver	1
Appendicular abscess (transferred)	1
Diastasis of recti	1

Miscellaneous:—

Pulmonary tuberculosis	1
Observation	1
Refused operation	7

MORTALITY.

There were 8 deaths:—

1. Multilocular pseudomucinous ovarian cyst, general peritonitis.
2. Multilocular pseudomucinous ovarian cyst, pyelitis, suppurative parotitis.
3. Retro-peritoneal lipo-sarcoma.
4. Tubo-ovarian cyst, suppurative parotitis.
5. Pregnancy with lympho-granuloma.
6. Pregnancy (28 weeks), acute appendicitis, general peritonitis.
7. Carcinoma of body of uterus, general peritonitis.
8. Pregnancy with chronic nephritis.

THE WATERHOUSE-FRIDERICHSEN SYNDROME. TWO CASE REPORTS WITH REFERENCES TO THE LITERATURE

by

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Fulminant meningococcaemia, or the Waterhouse-Friderichsen syndrome as it is the fashion to call it nowadays, is an uncommon condition and is not infrequently missed owing to ignorance of the clinical picture it presents. As meningococcal meningitis is endemic in Hong Kong it is probable that the condition occurs here more often than is thought, and it is the purpose of this paper to describe two cases and to give a detailed account of the pathological and post-mortem findings.

CASE HISTORIES.

CASE I.

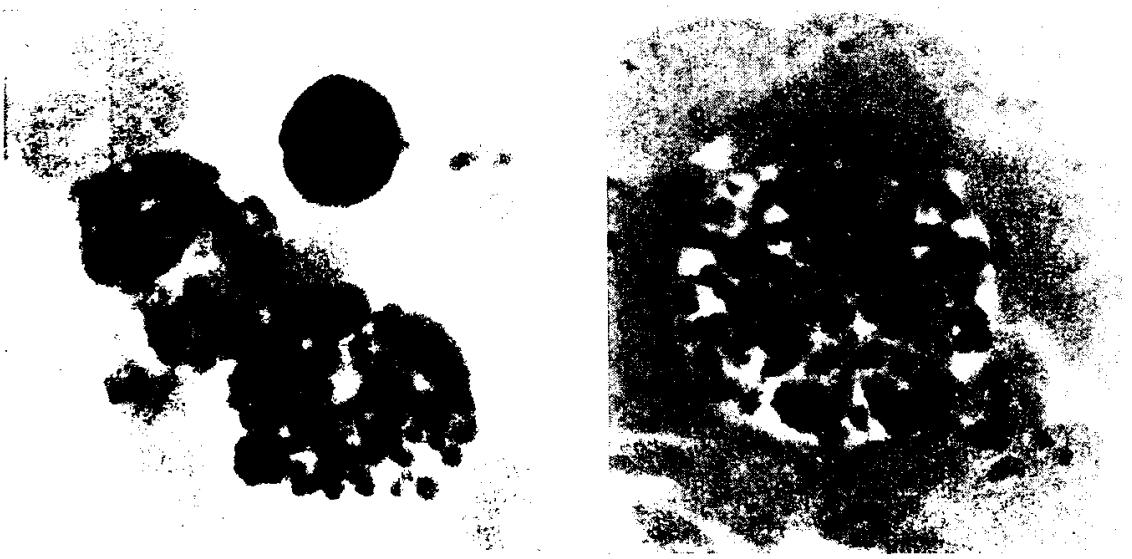
L.S.Y., a female child, aged 5, was admitted to hospital at 7 p.m. on February 29th, 1940.

Her mother gave the following history. The child was quite well on the 28th, and attended school. On the morning of the 29th she woke up apparently well, ate her breakfast at 8 a.m., shortly after complained of headache, and then vomited. She was put to bed immediately, and thereafter her condition rapidly deteriorated. There was no complaint of abdominal pain. By 2.30 p.m. she had lapsed into semi-consciousness; the eye-lids were half-closed, and she weakly resented interference, although she was not delirious nor did the mother notice any abnormality in her decubitus. The temperature was taken once and found to be normal. A doctor was sent for at 3 p.m., and he gave an intramuscular injection of a "yellow liquid" thought to be atebrin. No improvement was noticed, and soon after this the mother noticed that several bluish-purple spots had appeared on the child's belly and a few on her arms. The child was brought to hospital at 7.0 p.m. The past history revealed nothing significant. The child had always been healthy, and had been vaccinated against small-pox four months previously.

A brief examination was made in the casualty room: the child was in a restless state which resembled delirium; her lips and nails were cyanosed, there was generalised hypotonus and the knee and ankle jerks could not be elicited. Occasionally the right leg was drawn up and the foot inverted as if in a spasm. The neck was not rigid, nor was Kernig's sign positive. Purpuric spots ranging in size from a pin point to 5 mm. in diameter were seen scattered over the belly, chest, arms, base of neck and buttocks. The heart and lungs showed no gross abnormalities. A provisional diagnosis of meningococcal meningitis was made and the child was put to bed and lumbar punctured immediately without a local anaesthetic as she was by then unconscious. The cerebrospinal fluid pressure was 80 mm. of water, Queckenstedt's phenomenon was positive on both sides and the fluid was clear and colourless. The apparently normal cerebrospinal fluid threw doubt on the diagnosis and blood films were made at the same time to exclude cerebral malaria, a disease not uncommon in Hong Kong. The blood films showed numerous extracellular and intracellular diplococci, many of the polymorphonuclear cells containing the organisms being degenerated and vacuolated. The lie of the diplococci was not unlike that of meningococci.

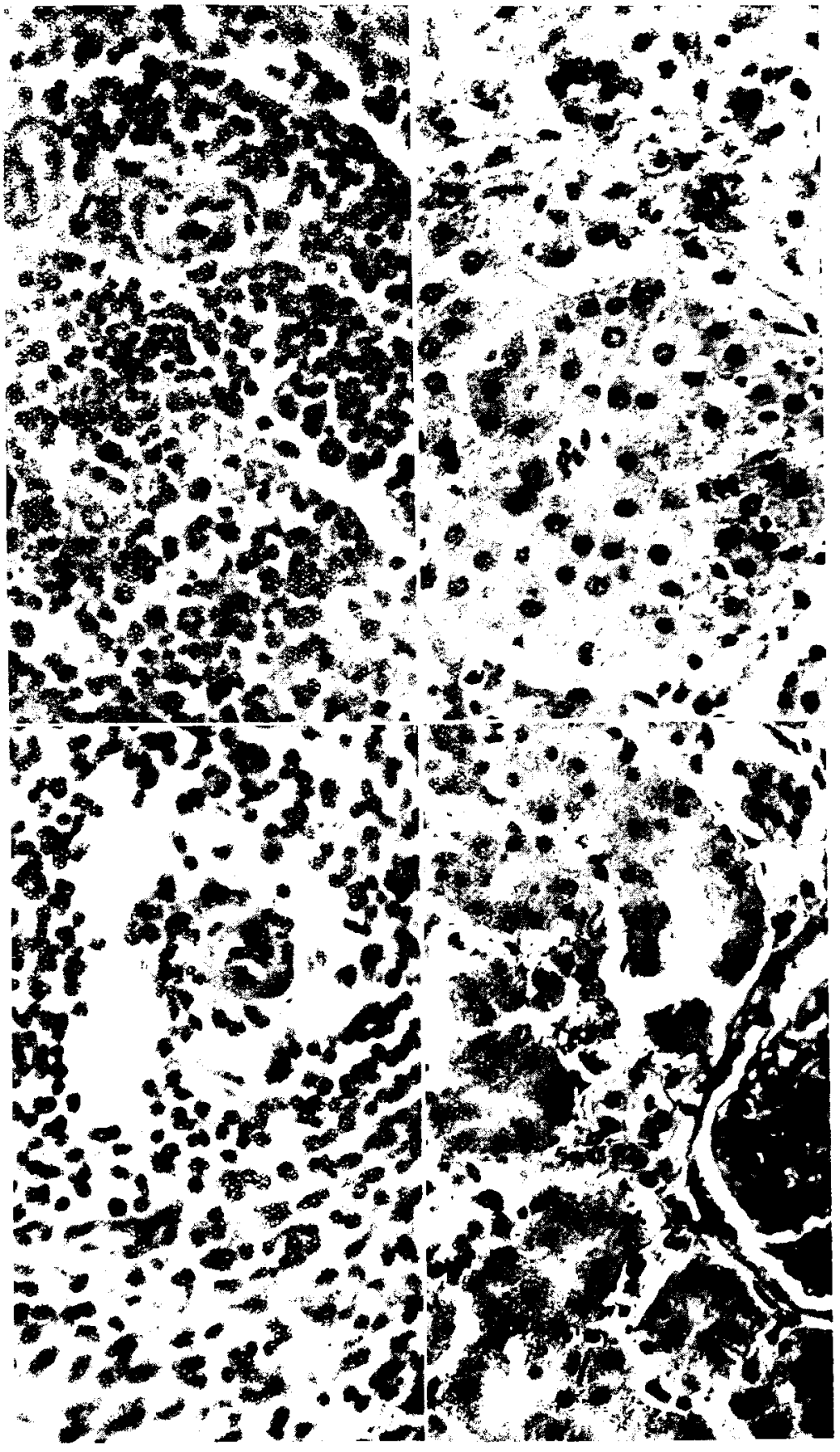
PHOTOMICROGRAPHS OF BLOOD FILMS AND MYOCARDIUM FROM CASE I

The myocardium showing a focus of polymorphonuclear infiltration.



Photomicrographs showing a polymorphonuclear leukocyte packed with diplococci. The film showed numerous extra and intracellular Gram negative diplococci, and the leukocyte shown here was vacuolated.

PHOTOMICROGRAPHS OF TISSUES FROM CASE I.



Photomicrographs showing (1) the thymus, (2) the adrenal, (3) the spleen and (4) the kidney. The thymus shows a slight degree of lymphoid hyperplasia, the spleen congestion. In both kidney and adrenal medulla numerous areas showing intracellular extravasation of blood were seen. The haemorrhages in the adrenal medulla had encroached on cortex in several parts of the gland.

The diagnosis of meningococcaemia was made and 5 c.c. of Bayer's prontosil were at once given intramuscularly, the intravenous route having proved impracticable.

The patient's condition was deteriorating rapidly and by this time she had developed a positive Kernig's sign on both sides. The knee and ankle jerks were now obtainable but the plantar responses were flexor. No neck rigidity had developed nor was any abnormality found in the abdomen. The pupils were unequal and reacted to light sluggishly, and the corneal reflexes were absent. The fundi showed no abnormality. The purpuric spots were steadily increasing in number and now ranged in size from a pin-point to ecchymoses 1 cm. in diameter. They were most numerous on the belly and inner surfaces of arms and thighs, and one haemorrhage was seen on the bulbar conjunctiva of the left eye. Nothing abnormal was found in the throat, nor was herpes labialis noted. The pulse was 130 per minute, the temperature 100.6° F., and the respirations 34 per minute. The respirations were shallow and rapid and the pulse was almost imperceptible. The child's cyanosis had deepened and she appeared to be in a state of profound shock. She died at 8.30 p.m., one and a half hours after admission to hospital, the total duration of her illness having been about twelve and a half hours. Intra-cardiac stimulants were given in an attempt to start the heart again and some heart's blood was preserved and used for further investigations.

PATHOLOGICAL EXAMINATIONS.

The cerebrospinal fluid, which was clear and colourless to the naked eye, gave a faintly positive Pandy reaction, globulin being estimated at 100 mgms per 100 c.c. The cell count was 2 per cu. mm. and a centrifuged specimen showed neither organisms nor cells in the deposit. Subsequent culture of the cerebrospinal fluid yielded a growth of coliform organisms and staphylococci only. These were undoubtedly contaminants.

The blood films made shortly before the child's death showed numerous extra and intracellular diplococci, which were found to be Gram negative and morphologically indistinguishable from meningococci in appropriately stained films.

The cell counts showed 3,640,000 red blood corpuscles per cu. mm. and 12,650 white, a trifling leukocytosis. The differential white count showed:—

Polymorphonuclears	78%
Lymphocytes	22%

No eosinophil cells were noted and no difficulty was experienced in obtaining blood for these examinations, a point which is of interest as in some similar cases great difficulty has been found in obtaining blood from puncture wounds.

38.4% of the polymorphonuclear leukocytes were vacuolated. Those containting organisms all showed vacuolation, and constituted 18% of the total polymorphonuclears. Cultures made from the blood taken from the heart at the moment of death failed to yield a growth, despite the fact that the blood was incubated at 37° overnight.

Unfortunately no preparations were made from the purpuric spots themselves nor was it possible to obtain a specimen of urine for examination.

AUTOPSY REPORT.

A complete autopsy was made on the day after death, the body having been kept meanwhile in a refrigerated chamber. We are indebted to Professor Robertson for the following account of the findings.

The body was that of a well nourished female child, and was covered with a purpuric rash which was most profuse over the lower part of the belly and the inner aspects of the thighs.

On opening the body numerous subpleural haemorrhages were noted near the lung apices on both sides. The lungs showed merely a mild degree of congestion. There were several haemorrhages beneath the visceral layer of the pericardium, especially at the base of the heart, but the heart muscle and valves showed no gross abnormalities. In the abdominal cavity numerous areas of subserosal haemorrhage were found in stomach and throughout the whole of small intestine, but no haemorrhages were seen in the mucous coat of the gut. The liver, spleen and kidneys all showed congestion and the mesenteric lymph glands were enlarged and congested.

The adrenals were larger than normal and both showed subcapsular foci of extravasation of blood on naked eye inspection. The cut surface of the medulla showed haemorrhagic effusion on both sides. The brain was wet and heavy and its superficial vessels were congested. A few pin-point haemorrhages were noted in the pia-arachnoid and the convolutions were flattened. There were no signs of purulent exudate on the surface of the brain or in the lateral ventricles. Cultures made from heart blood and spleen proved to be sterile.

The only noteworthy changes found on microscopic examination of the tissues were a few foci of polymorphonuclear infiltration in the myocardium, and numerous small foci of haemorrhage into the medulla and cortex of both adrenals. The zona glomerulosa on both sides was disrupted by these haemorrhagic extravasations. The spleen showed proliferation of the reticulo-endothelial cells lining the sinus and swelling of the Malpighian bodies with early necrosis of their centres. The brain on section showed nothing beyond congestion and oedema.

CASE II.

A female child eighteen months old was admitted to hospital on March 27th, 1940 with the following history. At 4.0 p.m. on the 26th the child had suddenly developed fever which increased and nine hours later she had a convulsion and vomited. Twelve hours from onset a purpuric eruption was beginning to appear on the back. The spots increased in size and number and twenty hours after onset the child became unconscious and showed twitching of the limbs. The mother had noticed no rigidity of the neck or limbs throughout the course of the illness. The child was admitted to hospital twenty-two hours after the illness began.

She had had no previous illnesses and had always seemed to be a perfectly healthy and normal child. Her five brothers and sisters and her parents were in good health at the onset of her illness.

On admission the child was partially unconscious. The lips and finger nails were cyanosed and continual clonic spasms of the right arm and right leg were noticed as she lay in bed. The temperature was 102.6°, the pulse 150 and the respirations 76 a minute The head was not obviously retracted and no herpes was noted. The whole of the body was covered with a profuse purpuric eruption; the spots ranging in size from a pin point to irregular extravasations several centimetres in diameter. They were most numerous on the anterior aspect of the trunk, the extensor aspect of the forearms, the buttocks and the upper third of the thighs. A few were noted on the face but there were no haemorrhages in the conjunctivae or buccal mucosa.

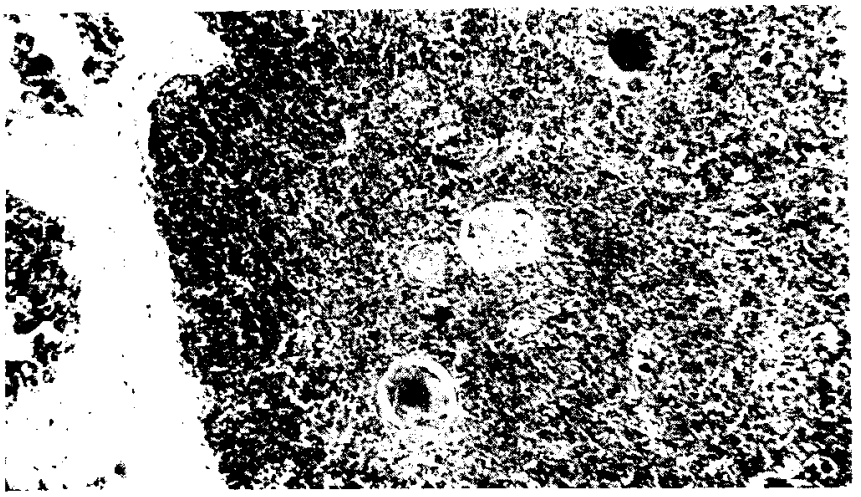
There was slight neck rigidity although Kernig's sign was negative. The knee and ankle jerks could only be obtained with difficulty and the plantar responses and abdominal reflexes were not obtainable. The heart sounds were distant. Râles were heard all over both lungs.

PATHOLOGICAL EXAMINATIONS.

A diagnosis of meningococcaemia was made at once, and numerous blood smears and smears from the purpuric spots were made. Blood for culture was taken from the heart and lumbar and cisternal punctures were immediately performed. The cerebrospinal fluid pressure was 40 mm. of water and Queckenstedt's phenomenon was negative on both sides. The fluid itself was slightly

PHOTOMICROGRAPHS OF TISSUES FROM CASE 2

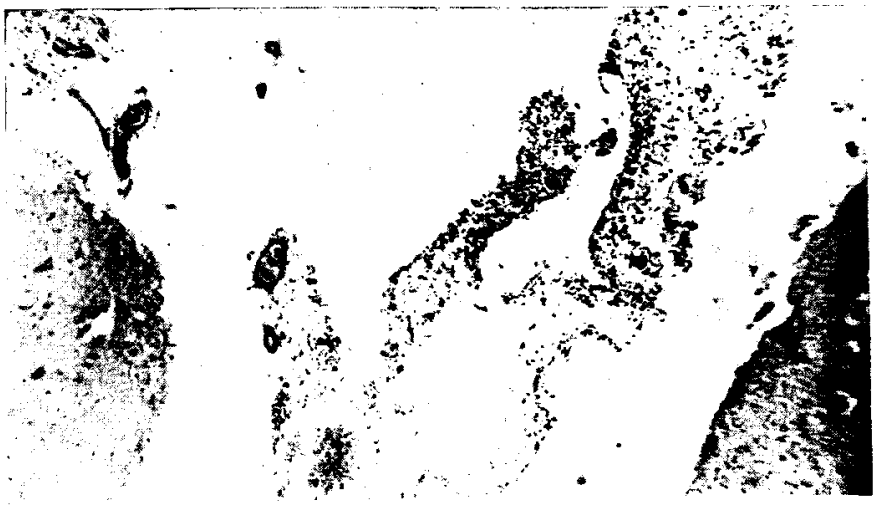
Low power view of section of right adrenal to show the widespread intracellular extravasation of blood which has occurred throughout the cortex. Similar changes were noted in the left adrenal.



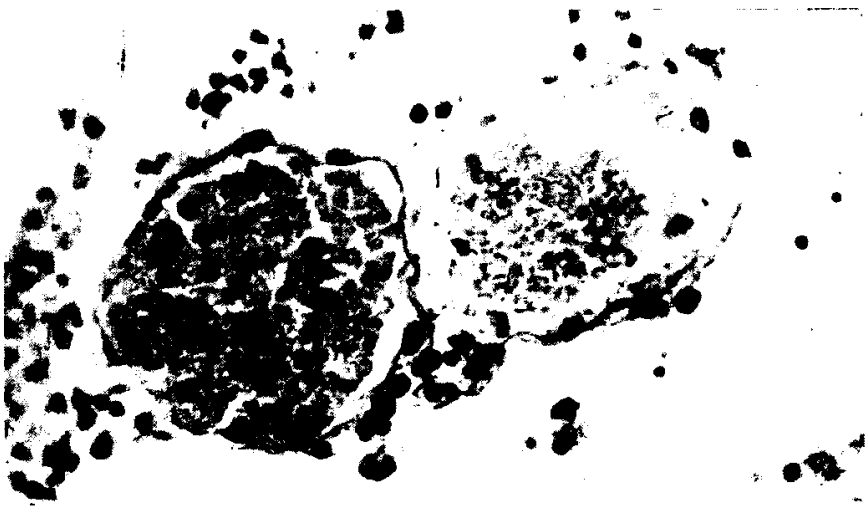
Thymus showing marked lymphoid hyperplasia and enlargement and central degeneration of Hassall's corpuscles.

High power view of the same section.

PHOTOMICROGRAPHS OF BRAIN FROM CASE 2.



Low power view of cerebral cortex to show submeningeal cellular infiltration.



High power view of cerebral cortex to show intense vascular engagement.

blood tinged, owing to a faulty puncture. Pandy's test was positive, the cell count was 124 per cu. mm. the cells being predominantly polymorphonuclear. Culture of the fluid was sterile, and direct smears showed no organisms. The blood films showed gross vacuolation of many of the polymorphonuclear leukocytes but no organisms were noted, nor could any be found in direct smears from the purpuric spots. Some difficulty was experienced in obtaining blood for films from skin punctures.

The differential count was as follows:—

Polymorphonuclears	79%
Lymphocytes	18%
Large mononuclears	2%
Eosinophils	1%

Blood culture yielded a growth of Gram negative diplococci after 48 hours. No urinary examinations were made. The child's condition deteriorated rapidly, despite the exhibition of adrenaline subcutaneously and streptocide intramuscularly, and she died at 5.0 p.m. on the evening of admission, 25 hours from the onset of her illness.

AUTOPSY REPORT.

An autopsy made on the 28th showed a few subepicardial haemorrhages and numerous subserosal haemorrhages in the small intestine. No pleural haemorrhages were noted naked eye. The thymus, which was obviously enlarged, weighed 42 grms. The heart showed no macroscopic changes, but the lungs were slightly congested and oedematous. The stomach, liver and pancreas were normal but both liver and kidneys were congested. The adrenal glands were both enlarged, weighing 21 grms. each, but although they appeared congested no naked eye haemorrhages were seen in either. The brain showed marked engorgement of the cortical veins and flattening of the convolutions. It was obviously oedematous and traces of purulent exudate were found in the left Sylvian fissure though the base and the lateral ventricles showed none. There was a slight excess of fluid in the lateral ventricles and the cisternae magna and basalis.

On section of the various viscera the most striking changes were found in the adrenal glands and the brain. There was marked intracellular extravasation of blood throughout the medulla and cortex of both adrenal glands and the brain showed intense vascular congestion and some cellular infiltration underlying the meninges. The only other noteworthy findings were the conspicuous lymphoid hyperplasia of the thymus coupled with enlargement and degeneration of Hassall's corpuscles, and a slight degree of fatty degeneration of the myocardium. The spleen and liver showed merely congestion.

DISCUSSION.

Although Weichselbaum described the meningococcus in 1887, it was not until 1899 that Gwynn first found the organism in the blood stream. Since then the extrameningeal potentialities of the meningococcus have been gradually recognised, and by now meningococcaemia with or without metastasis is a well known condition.

It was at first thought that meningococcal septicaemia invariably followed meningitis and that the skin eruption of the disease was due to circulating toxins. Thanks largely to the work of Herrick we now recognise three phases in the clinical development of the ordinary case of meningococcal meningitis: the first phase in which there is a local infection of some part of the upper respiratory tract lasting from two

days to six weeks; the second phase in which there is a bacteriaemia lasting as a rule forty-eight to seventy-two hours; and the third phase in which metastatic localisation of the organism occurs in the meninges with the production of meningitis. But in certain cases the bacteriaemic phase of the disease passes into a septicaemia which thenceforth dominates the picture and assumes one of several forms.

In the fulminant, or acutest form, the septicaemia may cause death in a few hours and as a rule kills the patient before meningitis has had time to develop. During the evolution of the ordinary form of meningococcal meningitis, the blood stream is not, as a rule, infected for more than 48-72 hours, before meningeal metastasis occurs. In a word, the condition is a bacteriaemia which never becomes a septicaemia.

In the subacute forms the septicaemia may persist for days or weeks, producing various metastases and occasionally terminating in an attack of meningitis, and in the chronic forms the blood stream may remain infected for many months. The metastases commonly seen in the subacute forms are arthritic, endocardial, conjunctival and pleural. In the chronic forms of meningococcaemia the diagnostic triad consists of an intermittent fever which may simulate malaria, recurrent skin eruptions which may be papular or purpuric closely simulating at times erythema nodosum, and recurrent arthralgias and myalgias. In all these conditions blood culture is usually positive for meningococci.

Most of the recorded cases of fulminant meningococcaemia have occurred in young children, who as a rule have been in perfect health up to the onset of the disease. Vomiting and abdominal pain are common early symptoms, and moderate fever may or may not be noted. The patient passes rapidly into a stuporose state, the lips and nails become cyanosed and as the septicaemia becomes profounder haemorrhages begin to appear in the skin. Towards the end their evolution can be watched, so rapid is their appearance, and in one of the recorded cases a mother noted her babe becoming covered with black spots while she bathed it. The respirations become rapid and shallow, the pulse becomes almost imperceptible, the skin temperature drops, the blood pressure falls, and death may be ushered in by Cheyne-Stokes breathing, incontinence and convulsion.

Pathological investigations usually show a slight leukocytosis with vacuolation of leukocytes, the presence of diplococci in blood films, and a positive blood culture for meningococci. Blood may be difficult to obtain from skin punctures. The cerebrospinal fluid as a rule is normal because death occurs before metastasis has supervened.

At autopsy the outstanding finding is haemorrhage into the medulla of one or both adrenals, and it is impermissible to diagnose the Waterhouse-Friderichsen syndrome in the absence of such haemorrhages. It

is usual to find, as in our cases, that haemorrhages have occurred in all the serous membranes and sometimes into the mucosae, as well as into the medulla of the adrenals. If death has occurred before the phase of metastasis has become established the brain and meninges show no overt signs of meningitis. The brain may be wet and heavy, the superficial vessels may be congested and there may be an excess of fluid in the cisternae, but pus formation has not yet begun.

In our first patient the illness lasted twelve hours only, and was characterised by a sudden onset with vomiting occurring in perfect health, rapid production of a state resembling shock, cyanosis, flaccidity, generalised purpura and death. Blood films gave clear evidence of the existence of a septicaemia which overwhelmed and killed the patient in the course of a few hours. Death occurred before the metastatic phase had been reached, and this explains why the cerebrospinal fluid was normal and why there was no evidence of overt meningitis at autopsy. The second child's illness lasted 25 hours and it was clear from the autopsy findings and the pleocytosis in the cerebrospinal fluid that the stage of meningeal metastasis had begun.

The two cases resembled one another in the suddenness of onset and the fulminant course, and in both cyanosis, purpura and shock were the outstanding clinical features. It is noteworthy that organisms were abundant in blood films made from the first child though blood culture was negative, whereas blood culture was positive in the second case but blood films showed no organisms.

The conditions found at autopsy in both our cases were those characteristic of the syndrome. Haemorrhages were noted in the conjunctiva, pleura, pericardium, peritoneum and adrenals, and the brain and meninges presented the appearances described above.

A cursory study of the literature makes it abundantly clear that this clinical picture has been known at any rate since the beginning of this century.

Little in 1901 described a small series of cases of fatal purpura showing adrenal haemorrhages at autopsy. Blaker and Bailey in the same year reported four cases of haemorrhage into the skin and the suprarenal capsules. The patients were all children whose ages ranged from seven months to one year, all were taken ill suddenly while in good health and all died in a few hours. The disease in all cases was characterised by vomiting, collapse, stupor, cyanosis and purpura, and all showed adrenal haemorrhages at autopsy. Three of these children showed haemorrhages into the gut mucosa and peritoneum but nothing beyond vascular congestion in the nervous system. Blood cultures were negative in two of the cases. They concluded that they were dealing with a toxaemia sui generis, and they quote two similar cases recorded by Talbot in 1900, and two others by Garrod, Drysdale and Andrewes

in 1898. Langmead in 1904 described three cases of so-called suprarenal apoplexy in children, one being aged three days, the others aged two and seven months respectively. He distinguished rightly between the suprarenal haemorrhages occurring in the first few days of life and those occurring later. The second and third cases in his series both died after short illnesses characterised by acute abdominal pain, vomiting, fever and purpura, and in both adrenal haemorrhages were found at autopsy. He discussed various organismal possibilities but did not mention the meningococcus, and he regarded the cases as being analogous to the malignant types of some of the acute infections. It seems highly probable that they were, in fact, cases of the Waterhouse-Friderichsen syndrome.

In 1906 Andrewes reported one of the earliest proved cases of fulminant meningococcaemia on record. His patient, a doctor of 53, died after an illness lasting only 24 hours. Shivering at onset, stupor and profuse purpura were the outstanding symptoms, and the blood yielded a growth of meningococci and films showed numerous exclusively intracellular Gram negative cocci. At autopsy cutaneous, intestinal and adrenal haemorrhages were noted, and a subarachnoid haemorrhage, but no signs of meningitis were found on examining the brain. Death was said to be due to acute meningococcal septicaemia without meningitis and without known contact with a case of meningococcal meningitis.

Waterhouse, of Bath, in 1911 described a case of suprarenal apoplexy occurring in a male child aged 8 months. The child died after an illness lasting 10-12 hours, in which there were no meningeal signs. The case presented the typical picture of a sudden onset with vomiting followed by purpura, cyanosis, falling temperature and death. At autopsy both adrenals were found swollen and purple with extravasated blood, but cultures from them and from the spleen and cerebrospinal fluid were sterile. Waterhouse inclined to the view that the condition might be due to toxic smallpox and referred to other similar cases. In none of them had the disease lasted more than 48 hours, and all showed purpura and adrenal haemorrhages at autopsy. He makes no mention of meningococcaemia as a possible cause of the condition.

Coles was one of the earliest observers to recognise the value of blood films in the diagnosis of meningococcal septicaemia, and in 1915 he published photographs of blood films showing both extra and intracellular diplococci proved to be meningococci. His patient, a man of 33, died after a 70 hour illness, whose course was marked by vomiting, diarrhoea, fever and purpura. There were no meningeal signs and the cerebrospinal fluid was sterile. He stressed the absence of eosinophil cells and the occurrence of vacuolation in the polymorphonuclear cells in his blood films.

A little later Netter and Salanier demonstrated the presence of meningococci in the purpuric lesions themselves, and it was becoming well recognised by this time that fulminant meningococcaemia was usually accompanied by haemorrhage into the adrenals.

In 1916 both Denehy and Maclagan reported fulminant types of meningococcal meningitis with conspicuous enlargement of the adrenals due to extravasation of blood into the medulla. Maclagan stressed the constancy of the association of purpura with adrenal haemorrhage, and described the two stages of fulminant meningococcaemia: the first in which death occurs while the cerebrospinal fluid is clear although blood culture is positive for meningococci; the second in which metastasis to the meninges has occurred with the production of meningitis. In both types he found adrenal haemorrhage, so massive as to destroy the medulla entirely in one case. He emphasised the fact that meningeal signs are blotted out in this type of the disease by the rapid onset of a condition resembling shock and suggested that the adrenal involvement might be responsible for this. He also pointed out that 'the meningococcus appears to exercise a selective action on three structures which all develop from the same embryological anlage, namely skin, adrenal medulla and nervous system.

In 1918 King commented on the value of blood films in the early diagnosis of meningococcal infections, and described a child who died of fulminant meningococcaemia after a 15 hour illness. He states that he could find only one previous reference (Horder 1915) to the use of blood films diagnostically in meningococcal infections. Evidently circumnavigators of medical libraries are even worse off in Porto Rico than they are in Hong Kong.

Friderichsen realised clearly in 1918 that suprarenal apoplexy gave rise to a distinctive picture; and in addition to publishing a case of his own he collected 27 other cases from the literature. He stressed the following points: the condition occurs in healthy children of either sex who are still on the breast. A sudden onset early in the morning, vomiting, diarrhoea, cyanosis, purpura and shock are constant features. He also noted that high fever was a common terminal phenomenon. At autopsy the constant findings are haemorrhages into the skin and the zona reticularis of the adrenal cortex on either side. In his patient, a 6-month old boy, no mention is made of nervous system changes at autopsy but enlargement of the thymus was noted. A Gram negative diplococcus was isolated from blood obtained at autopsy.

Friderichsen discussed the various aetiological possibilities and decided in favour of an infectious or toxic factor of some sort, but despite the discovery of a Gram negative diplococcus in the blood of his own case he did not put forward the suggestion of a meningococcaemia as the explanation of most of these cases, and he seems to have been unaware of much of the work on fulminant meningococcaemia published shortly before his own paper appeared.

Dwyer's case of purpura fulminans occurring in a boy of 3, recorded in 1922, clearly belongs to this group, although he scouted the idea of a meningococcal infection. As he makes no mention of blood or cerebrospinal fluid findings during life, and blandly ignores the state of the nervous system and the adrenals after death one is left with the uncomfortable conviction that more might have been done to prove or disprove the possibility of fulminant miningococcaemia.

It is only fair to draw attention to Lusk's case of non-traumatic suprarenal haemorrhage, reported in 1919. His patient developed a streptococcal septicaemia as a result of a felon of the right third finger. Blood cultures were positive for streptococci and death occurred as a result of haemorrhage from the left suprarenal. Purpura was not noted during the course of the disease.

Kessel's case of acute haemorrhage into both suprarenal bodies, published in 1925, in all probability belongs to this group, although the blood and cerebrospinal fluid were bacteriologically negative. A man of 30 died after a short illness the main features of which were a sudden onset with headache, vomiting and drowsiness followed by a profuse purpuric rash and conjunctival haemorrhages. At autopsy both adrenals were enlarged and dark red, and their medullae were completely destroyed by haemorrhage. The brain was congested but no more.

Battley in 1927 reported the case of a male child aged ten months who died after an illness lasting ten hours, characterised by hyperaesthesia, cyanosis, purpura, fever and terminal convulsion. Autopsy showed numerous serosal haemorrhages, and destruction of the adrenal medulla by haemorrhages on both sides. The meninges were not inflamed, but there was an excess of cerebrospinal fluid in the cisternae and the small vessels of the brain were congested. The cerebrospinal fluid though sterile on culture showed a pleocytosis of 60 cells per cu. mm. On section Gram negative organisms were found in the skin lesions and the uvula. Battley discusses the mechanical, toxic, cachectic and infective causes of purpura and briefly reviews the various infections which have been held to produce this picture. He emphasises the point made by Herrick that the meningococcus is the organism responsible for most cases of fulminant purpura and stresses the combination of cerebrospinal fluid pleocytosis and adrenal haemorrhage shown by his case.

Henderson and Pettigrew in 1932 described a case of sudden death from haemorrhage into the suprarenal capsules in a female child aged seven months. The child had been well until the previous day and died after an illness of a few hours marked by initial vomiting, cyanosis, purpura, collapse and death. Autopsy showed recent extensive haemorrhages in both adrenals but nothing else abnormal in

the thorax, belly, brain or meninges. Although no bacteriological examinations were made it is clear that the case may well have belonged to this group.

It is a little doubtful whether the case of acute suprarenal haemorrhage described by Rosenthal in 1933 can be included in this category. A female child aged seventeen months vomited and had three convulsions. She was admitted to hospital 24 hours later in coma with a temperature of 104.6° and a respiration rate of 80. No abdominal tumour was felt and the heart and lungs were normal. A rash consisting of erythematous spots appeared shortly after admission but faded before death which occurred seven hours later in hyperpyrexia after a terminal convulsion. Autopsy revealed engorged adrenals and on both sides the medulla was destroyed by effused blood. The brain was normal but the left lung showed bronchopneumonia. No mention is made of the cerebrospinal fluid, and the absence of purpura coupled with the failure to find organisms in Gram stained sections makes it unlikely that the case can be regarded as one of meningococcaemia, especially as meningococci were specifically sought for.

Aegerter reported two cases of the syndrome in 1936 and gave a succinct review of the literature and therapeutic possibilities of the condition. His patients were both children, one aged 7 who died after an illness which lasted 19 hours, the other aged 5 who survived for 24 hours. In the first case purpura, prostration and cyanosis were the outstanding features. Blood culture gave a growth of meningococci but the cerebrospinal fluid was clear, colourless and normal. At autopsy, massive bilateral adrenal haemorrhages and haemorrhages into all the mucosae were noted, but the brain though wet and heavy showed no overt meningitis.

The second child developed signs of meningitis before death and meningococci were isolated from the cerebrospinal fluid. Autopsy showed serosal and mucosal haemorrhages throughout the body and an early purulent meningitis and pericarditis. The thymus was large and both adrenals showed definite microscopic haemorrhages.

Aegerter maintains that the syndrome is usually seen in children under 1 year of age, and points out that, in addition to adrenal haemorrhage, it is common to find serosal haemorrhages and congestion of lymphoid tissue throughout the body at autopsy. He mentions the fact that numerous observers have found a persistent and large thymus at autopsy in these cases. In discussing the symptomatology of the condition he remains undecided whether the adrenal involvement or the invasion of the blood stream is the more important factor. He emphasises the necessity for prompt treatment with anti-meningococcal serum, sodium chloride and cortical extract by the intravenous route in this type of case.

Craster and Simon (1938) mention three cases of the syndrome in a paper on meningococcic meningitis. Two of their patients were children, the third was a woman aged 42. All presented the typical picture. The authors state that the diagnosis of the Waterhouse-Friderichsen syndrome requires the finding of meningococci, adrenal haemorrhages a fulminant infection and death before a purulent meningeal exudate develops. As many writers on the subject seem to hold the view that all these cases would develop a purulent meningitis if they lived long enough this claim seems to be faintly puerile. If it were valid we should have to allow Aegerter's first case, but to dismiss his second because it lived five hours longer and developed a frank meningitis. Their contention merely demonstrates the futility of eponymous nomenclature and the impossibility of fitting clinical pictures into Procrustean frames.

However, the cases we have reported and this brief summary of the available literature make it obvious that the syndrome of fulminant meningococcaemia is an independent and unmistakable entity. It must be admitted that the possible causes of adrenal haemorrhage, especially in early life, are many, but when one excludes the groups due to asphyxia at birth, the haemorrhagic diathesis in the first few days of life, trauma, burns and the leukaemias, one is confronted with the largest group of all, that due to the acute infections and various septicaemic processes. And the more closely this group is examined, the clearer does it become that the majority of these cases are due to meningococcal infections. The other acute infections which may produce adrenal haemorrhages do not necessarily produce the purpuric eruption which is essential for the diagnosis of fulminant meningococcaemia, nor do they produce a picture as constant in its outline as the one we have sketched.

SUMMARY.

1. The histories of two cases of fulminant meningococcaemia are given.
2. The patients were both female children who died one after an illness of 12 hours, the other after an illness of 25 hours.
3. The outstanding clinical features in both cases were the suddenness of onset, vomiting, stupor, purpura, cyanosis and shock.
4. Blood films from the first child showed numerous extra and intracellular Gram negative diplococci indistinguishable from meningococci but blood culture was negative. The second child gave a positive blood culture but no organisms were found in her blood films.

5. The cerebrospinal fluid in the first case was normal. In the second case a mild pleocytosis was present, but no organisms were found. In both cases culture of the fluid was sterile.

6. Autopsy showed haemorrhages in the skin and serous membranes, and diffuse haemorrhages throughout the adrenals in both cases. The brain in the first case was wet, heavy and congested; in the second case in addition to these signs some purulent exudate was found in the left Sylvian fissure.

We are greatly indebted to Dr. K. D. Ling for the photomicrographs illustrating the cases.

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