MATERNITY WORK IN HONG-KONG

WITH SPECIAL REFERENCE TO TROPICAL DISEASES
ASSOCIATED WITH PREGNANCY

BY

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The Alice Memorial Maternity Hospital, part of the Alice Memorial and Affiliated Hospitals, Hong-Kong, provides accommodation for fifteen patients; in addition, beds are available in the adjacent Women's Hospital for the ante-natal treatment of patients with concurrent medical complications; there is also an isolation ward for septic cases.

During the period under review—1926-30—there were 1,600 deliveries, about one-third of the patients being primiparae. Most of the women were seen for the first time on their admission to hospital, often after the onset of labour, though the attendances at the ante-natal clinic gradually increased year by year. As the patients were all Chinese, opportunity was afforded for comparing their pelvic measurements with those of English women. It was found that on the whole the measurements of the Chinese (mostly Cantonese) were smaller; there were many cases of natural delivery or easy forceps delivery in patients with an external conjugate diameter of between $6\frac{1}{2}$ and 7 inches, and with correspondingly small interspinous and intercrural diameters. The babies, however, were usually smaller, the average weight being nearer $6\frac{1}{2}$ than 7 lb. The most difficult forceps cases were those in which the pelvis was normal, with a large and unyielding foetal head, often due to post-maturity. There were very few cases of serious pelvic contraction, and the only case where Caesarean section was performed in this series of 1,600 cases was in a very small, deformed, kyphotic woman. Very few people in Hong-Kong suffer from rickets, and osteomalacia is unknown there.

Abnormal Labour

Presentations other than vertex were as follows: breech 44, face 4, brow 1, transverse 7, and twins 22. The large number of breech deliveries is accounted for partly by the fact that external version was seldom performed, and partly by the fact that several of these breech deliveries were of premature (often syphilitic) foetuses. With regard to twin deliveries, it is interesting to note that three out of the twenty-two patients suffered from severe toxæmia of pregnancy, one of them dying from eclampsia and one from yellow atrophy of the liver; the third recovered from pregnancy toxæmia with acute nephritis.

Forceps were used in 77 cases (4.8 per cent.), and craniotomy was performed twice, one of the two patients being an eclamptic, who subsequently had a living child after a normal labour.

Drugs during Labour

Potassium bromide and chloral were the chief analgesics used, but in primiparae having severe pain $\frac{1}{4}$ grain of morphine was sometimes given before the first stage was too far advanced; no ill effects were noted in the foetus in any of these cases. During the second stage use was made increasingly of $\frac{1}{2}$ c.cm. of pituitrin in cases where delay occurred after the head was on the perineum. These cases had previously formed the bulk of our forceps deliveries; by the administration of pituitrin the number of forceps cases was reduced by one-half during 1929. Where instrumental delivery ultimately became necessary, there was a perceptible strengthening of uterine contractions, with consequent prevention of post-partum haemorrhage.

Complications during Pregnancy and Labour

Complications during pregnancy and labour were as follows:

Pre-eclamptic symptoms	16
Placenta praevia	15
Accidental haemorrhage	11
Beri-beri	10
Eclampsia	9
Ankylostomiasis	6
Prolapsed cord	5
Hydatidiform mole	4
Hyperemesis gravidarum	3
Acute yellow atrophy of liver	2
Hydramnios (severe)	1

There were many other medical complications not enumerated above, such as valvular disease of the heart, myocarditis with chronic bronchitis, pneumonia, broncho-pneumonia with empyema, acute phthisis, acute and chronic nephritis, pyelitis, cystitis, venereal diseases, amoebic hepatitis and amoebic dysentery, malaria, etc. It will be seen from the causes of death given below that these complications were responsible for nearly half the deaths recorded.

The case of hydramnios was of special interest, as the foetus was an anencephalic monster presenting by the face, and accompanied by 150 oz. of liquor amnii. Although the mother was only 24 years old, this was her sixth pregnancy. The previous children were all living and healthy, but the husband had recently died of syphilis.

The figures referring to eclampsia are too small to furnish any deductions, but the after-history of three of the cases is noteworthy. All three patients had severe eclampsia with marked oedema and albuminuria in their first pregnancy. It is probable that albuminuria had continued for some time, as none of these patients came under observation before labour. It would therefore seem more reasonable to expect permanent kidney damage in these cases than in most of the cases in England which come under observation early and receive prompt treatment. The urine, however, was free from any trace of albumin during their second pregnancy, and no symptoms of toxæmia were present. The labour and the puerperium were normal in the three patients, each of whom had a living child.

The study of beri-beri in pregnant women is of special interest in view of the statement that this disease occurs almost solely in males.¹ I have not seen any cases in non-pregnant women, though I have heard of their occurrence, but it is certain that pregnancy predisposes to the disease, probably on account of the extra demand which it makes on metabolism. Besides the ten cases enumerated above, several others have come under observation during the puerperium, the patients having been admitted into hospital after delivery in their own homes. Features common to most of the cases were oedema, varying in severity; enlargement and incompetence of the right heart; and albuminuria (usually slight). In the three fatal cases oedema was extensive, and the "swelling" of the heart correspondingly severe. Moreover, these patients had no period of rest in bed before labour, and in all three cases operative delivery was necessary. In regard to the central nervous system, the special features in most cases were numbness and loss of power, sometimes in the legs only, but sometimes also in the arms. There was usually tenderness on pressure of the calf muscles; a few of the patients complained of very severe pains in the limbs during the first two or three weeks of the disease. Wasting of the calf muscles was apparent during the puerperium, after subsidence of oedema, and peroneal atrophy with foot-drop became marked in some patients.

¹ Cannon, Alexander: Some Observations on Beri-beri, *British Medical Journal*, 1929, ii, 852.

As to the effect of beri-beri on labour, four of the ten patients required forceps delivery, one because of face presentation, two on account of the serious condition of the heart, and one owing to weakness of labour pains. Poor uterine contractions were noted in some of the cases. Four of the babies were stillborn, or died within the first two days. As the blood pressure is low in this condition, and as heart stimulants are required during labour, pituitrin is particularly useful in these cases, having the double effect of stimulating the heart and strengthening uterine contractions.

However great a part vitamin B deficiency may play in the causation of this disease, the effect of dietetic treatment alone was found of little value when once the symptoms were well marked. Two patients who had suffered from the disease in a previous pregnancy came for treatment at the onset of early symptoms of numbness, and in these cases dietetic treatment proved sufficient to arrest the disease.

Treatment during the puerperium is difficult in most Chinese patients. As soon as the heart condition clears and the pains in the limbs disappear, with improvement in the general condition, they seldom have patience to wait until they regain the use of their limbs. The few who remain for a prolonged period are greatly benefited by massage treatment after the painful stage. Without treatment it is sometimes as long as six months before a patient recovers the complete use of her limbs.

Ankylostomiasis becomes a serious disease in pregnant women. The greater demand made on the blood by the growing foetus soon reveals the incipient anaemia, and the picture is a typical one. The face is pale, the lips and conjunctivae almost white; there is a general oedema, with shortness of breath, and often a hard, unproductive cough. Examination often discloses a systolic heart murmur, crepitations at the bases of the lungs, and a cloud of albumin in the urine. Microscopical examination of the faeces in these cases reveals the presence of ankylostoma eggs in sufficient numbers to suggest a heavy infection. Treatment consisted in the giving of 3 c.cm. of carbon tetrachloride, followed by iron and arsenic injections. If eggs were still present after two weeks the treatment was repeated. The babies were very small for the period of pregnancy, and in only two of the cases did the baby survive for more than a few hours. In every case, however, the condition of the mother showed marked and rapid improvement after treatment. In one case of repeated miscarriages I found and treated ankylostomiasis, and the patient subsequently had a living child.

Complications during the Puerperium

Of the deaths recorded during the four years under review, there was only one from puerperal sepsis. The case of secondary post-partum haemorrhage—the patient died on the twelfth day—might also be included under this heading, as a retained succenturiate placenta was found to be the cause of haemorrhage. The percentage of deaths from puerperal sepsis was 0.13.

It is surprising how seldom a case of severe puerperal sepsis is seen, though mild cases of sapraemia are not rare. In these cases the injection of glycerin into the uterus, together with daily mixed phylacogen injections, soon bring the fever down and clear up the condition. It is difficult to explain why we get so few cases of severe sepsis, except on the theory that the patients have acquired a strong resistance to streptococci on account of previous chronic infections. We find that better-class patients, who have lived more sheltered lives, are less resistant to infection. The causes of auto-infection, such as septic teeth, constipation, and gonorrhoea, are probably more prevalent in Hong-Kong than in England.

Mortality

The causes of death during the period under review were as follows:

Eclampsia	...	...	...	...	...	...	3
Chronic nephritis*	...	...	...	...	...	...	3
Beri-beri	...	...	...	...	...	...	3
Placenta praevia	...	...	...	...	...	...	2
Accidental haemorrhage	...	...	...	...	...	...	2
Acute yellow atrophy of liver	...	...	...	...	...	...	2
Acute phthisis	...	...	...	...	...	...	2
Secondary post-partum haemorrhage	...	...	...	...	...	...	1
Puerperal sepsis	...	...	...	...	...	...	1
Pulmonary embolism	...	...	...	...	...	...	1
Valvular disease of heart	...	...	...	...	...	...	1
Myocarditis and chronic bronchitis	...	...	...	...	...	...	1
Broncho-pneumonia and empyema	...	...	...	...	...	...	1
Tuberculous meningitis	...	...	...	...	...	...	1
Cerebral haemorrhage†	...	...	...	...	...	...	1
							25

* Probably due to pregnancy toxæmia.

† Patient admitted before labour with hemiplegia.

Excluding the ten deaths from diseases not directly connected with pregnancy, the percentage of deaths was 0.9. It may be mentioned that in the two cases of placenta praevia and of accidental haemorrhage the patients were moribund on admission, and that one of the patients with eclampsia died before labour during her first fit after admission. Most of the deaths—four from haemorrhage and eight from toxæmic conditions—might have been prevented if medical advice had been sought earlier. Increased confidence in ante-natal treatment should do much to decrease the death rate in future.

I am indebted to Dr. R. M. Gibson, medical superintendent of the Alice Memorial and Affiliated Hospitals, for permission to publish this review of work done in the Maternity Hospital.

PATENTS AND DESIGNS

REPORT OF DEPARTMENTAL COMMITTEE

The report of the Departmental Committee on the Patents and Designs Acts and practice of the Patent Office was issued on March 31st (Cmd. 3829, H.M. Stationery Office, 1s. 6d.). The minutes of evidence taken before the committee will be published in the course of the next few weeks.

The committee was appointed by the Board of Trade in May, 1929, to consider and report whether any, and if so what, amendments in the Patents and Designs Acts or changes in the practice of the Patent Office are desirable. Its members were Sir Charles Sargant (chairman), Mr. H. Ballantyne, Mr. H. A. Gill, Mr. E. H. Hodgson, Sir Herbert Jackson, F.R.S., Sir William Jarratt, Mr. Fearnley Owen, Mr. J. G. Weir, and Mr. J. Whithead, K.C.

In the course of its inquiry the committee heard oral evidence by witnesses on behalf of the following, among other bodies: British Medical Association, British Science Guild, Chartered Institute of Patent Agents, General Council of the Bar, International Association for the Protection of Industrial Property (British Group), Joint Chemical Committee set up by the councils of a number of chemical institutions, Law Society, and Medical Research Council. Oral evidence was given also by several witnesses on their own behalf, and a large number of observations and suggestions in writing were received from various associations, bodies, and persons.

COMMITTEE'S FINDINGS AND RECOMMENDATIONS

The report is divided into three parts: (1) patents; (2) designs; and (3) general; and contains a summary of the committee's main recommendations.

The committee finds no general demand for any alteration of the basic principles underlying the existing law in this country in relation either to patents or to designs, but recommends a large number of amendments in the Acts, some of which it regards as important and such as to justify early legislation. Among the more important recommendations are the following: