THE
**DUBLIN JOURNAL OF
MEDICAL SCIENCE**

THE OFFICIAL ORGAN OF THE ROYAL ACADEMY
OF MEDICINE IN IRELAND

FOURTH SERIES. No. 18.   AUGUST, 1921

Original Communications.

—*—

**ROTUNDA LYING-IN HOSPITAL.
CLINICAL REPORT FOR THE YEAR
1919-1920.**

By GIBBON FITZGIBBON, M.D., Master; J. S. ENGLISH,
M.D., and A. H. DAVIDSON, M.D., Assistants.

AT the beginning of the year 1919-1920 the hospital lost the services of Dr. Robert J. Rowlette, who had filled the post of pathologist since 1904, and whose able work in that department is shown in the pathological reports of the hospital published during his tenure of office. The vacancy has been filled by the appointment of Dr. J. T. Wigham.

Dr. Henry Jellett has been added to the Consulting Staff.

The hospital, in common with all other clinical hospitals, is seriously handicapped by a deficiency of income, which has resulted in a large overdraft to the Bank, all incurred during the last few years of the war and since, in spite of every effort to curtail expenditure and increase revenue. It is to be hoped that the efforts being made at present will result in finding means of stabilising hospital finance, and that the past year has seen the high-water mark in cost of maintenance.

During the year 2,627 patients were admitted for treatment to the maternity wards of the hospital. This is the largest number of patients admitted since the early half of

the last century. Of these 2,149 were delivered and 478 not in labour discharged. This latter figure contains a large number of cases who come in on account of some complication of pregnancy, receive treatment and are enabled to leave hospital for the remainder of their pregnancies. There were 548 patients admitted to the gynæcological wards, making a total of 3,175 cases treated in the hospital during the year. In the extern maternity 1,951 women were attended in their confinements at their own homes, making a total of 5,126 women treated by the hospital, of whom 4,100 were in their confinements.

Extern Maternity.

In the extern maternity 1,951 women were attended during their confinements, and there were seven deaths. Two of these were primiparæ, and chronic invalids, one with advanced pulmonary tuberculosis, the other with chronic cardiac disease. Two cases of eclampsia were attended in their own homes, on the routine lines adopted in the hospital, they came into labour, were delivered and recovered. Other cases of eclampsia in the district were moved into hospital and come into the intern report. I prefer that all cases of eclampsia should be brought into hospital, as it is almost impossible fully to carry out treatment and efficiently watch the cases in their own homes, particularly for the first few days after the attack is over. This may be claimed as a detraction against the eliminative treatment by advocates of more radical methods, but the same applies in a more marked degree against operative measures, and if treatment must be carried out in the patient's own home the eliminative will entail by far the lesser inherent risk.

Intern Maternity.

During the year 2,627 patients were admitted and 2,149 confined in the hospital, 2,126 infants being born, of whom 2,025 were alive.

Mortality.

Seven deaths occurred in the maternity, one the result of severe burns all over the body, arms, head and thighs, the result of her clothes catching fire. She was sent into the Rotunda from a general hospital as she was at term, and

delivered herself next day of a dead child. One case died on the 32nd day postpartum from cardiac disease; she had failing compensation all through, which became more marked on the tenth day and never responded to treatment. A third case died of pulmonary embolus on the day of delivery following manual removal of the placenta for P.P.H. The other four cases were toxæmias of pregnancy, and are better reported in detail.

(1) E.R. 35, VII.—Admitted with history of severe vomiting for three months and black vomit for last ten days. On admission temperature 96, pulse 140, very marked œdema, urine only one ounce secreted in 24 hours. The bowels had been confined for five days. The abdomen was larger than normal term, with history of 34 weeks' pregnancy. Lavage of stomach and colon carried out with good result and submammary infusion of sodii bicarb. After 24 hours condition slightly improved, but as vomiting continued and the kidneys had not resumed any action Cæsarean Section was done and dead twins extracted. During the next 24 hours the condition improved markedly, and 10 ounces of urine were secreted, but signs of pneumonia appeared and rapidly developed as typical double lobar. The patient died on the third night after operation. The œdema had disappeared, the bowels acted well and urine was being secreted freely.

(2) S.S. 32, I., Term.—Stated she had passed very little urine for the past few days. There was marked general œdema and a fair quantity of urine loaded with albumen. The abdomen was enormously enlarged, the uterus firm, regular and tense; the foetus was difficult to palpate owing to the patient being very fat as well as œdematous, but there was no evidence of hydramnios, and the head had entered the brim well. There was marked pulmonary and cardiac distress from pressure. The general condition improved during the next two days on water only and purgation; the albumen diminished and secretion of urine was good. Labour then started, but was poor and intermittent. At the end of 24 hours the os was only half dilated; very little advance in the next 24 hours, and the urine dropped to 27 ounces. The pulse, which had been 120, gradually came down to 88 after morphia and rest. Labour improved during the next 24 hours and the head came down to the perinæum; 55 ounces of urine were secreted. It was decided to complete delivery, but while giving æther the patient ceased to breathe and could not be resuscitated. P.M. delivery was done, and a macerated hydrocephalic foetus weighing 12 lbs. 15 oz. extracted. In this case the mistake was made of taking the large size of the uterus as due to multiple pregnancy, but the fat of the abdomen and tenseness of the uterus made definite palpation impossible. The patient had not been able to lie down, and it was probably get-

ting her to do so for the anæsthetic that caused the cardiac failure.

(3) E.G. 36, I.—36 weeks; admitted having had 5 fits. Routine treatment and $\frac{1}{2}$ grain of morphia given. Fits continued, and in the next 13 hours there were 21 fits. Morphia in $\frac{1}{4}$ -grain doses repeated to $1\frac{1}{2}$ grains in first 6 hours. Rectal lavage repeated in 6 hours and again in 12 hours with copious results. The fits ceased 2 hours after the second lavage and patient settled down to quiet and nearly normal sleep. Labour had started, and delivery of a breech was completed 6 hours after the last fit. The third stage lasted $1\frac{1}{2}$ hours and had to be completed manually, ten ounces of urine being drawn off at the time. The patient was greatly improved, semi-conscious, but very inclined to sleep. She was a good colour, breathing regularly and freely. Four hours later she was noticed congested, respiration stopped and could not be restarted. No fits had occurred for $10\frac{1}{2}$ hours; œdema had diminished and secretion of normal-looking urine had commenced. No morphia had been given for 14 hours, and the bowels were acting spontaneously. P.M. showed kidneys congested and enlarged, liver with numberless minute hæmorrhages on surface and through substance, lungs very collapsed, quite free from œdema, subperitoneal hæmorrhages over cæcum and in patches on colon.

(4) J.L. 32, I.—Admitted after 5 fits comatose. Routine treatment and morphia $\frac{1}{2}$ grain repeated in $\frac{1}{4}$ -grain doses to $1\frac{1}{4}$ grains in next three hours. Rectal lavage repeated in 6 hours and again in 6 hours with good result both times. Only $2\frac{1}{2}$ ounces of urine secreted in 9 hours. Thirteen fits occurred in 8 hours, after which they ceased. Very quiet labour set in and delivery was completed 3 hours after last fit. The pulse, which had been 110-120, then came down to 100. Respirations had been down to 12, but after delivery were 14-16. After delivery the patient seemed very satisfactory, semi-conscious and sleeping profoundly. Five hours after delivery and $8\frac{1}{2}$ hours after the last fit the patient was noticed a bad colour with respiration stopped and could not be resuscitated.

I have seen these last two cases 3 and 1 hours respectively previous to death, and was perfectly satisfied with their conditions. Both had a large number of fits, but were showing definite signs of returning consciousness. One had been given $1\frac{1}{2}$ grains, the other $1\frac{1}{4}$ grains, of morphia, but none for 12 or 14 hours before death. I learned afterwards that one of the cases had been noticed a bad colour by the staff nurse, who gave the patient a shake, whereupon she started breathing again quite satisfactorily and became a good colour at once. Both these cases were under special, but I am

afraid not observant, care of students and probationers, besides the light in the ward was very shaded. I believe both deaths were due to suffocation, which could have been prevented, only a shake or the compression of the chest being required to clear the larynx. Such cases should be watched in a good light and the respiration constantly noted, as after the toxæmia has been relieved, and particularly after delivery, they tend to sleep very profoundly, and if the respiration becomes obstructed they do not make any effort to clear it or show any sign of distress, very much like a patient under deep anæsthesia, and if not noticed at once die quietly of CO₂ poisoning. I believe both these cases were already dead from this cause, and possibly for some minutes before notice was taken of their state.

Presentations.

Amongst the cephalic presentations there were 24 persistent occipito-posterior, only five of which required to be completed with forceps. There were eight face presentations, four followed normal mechanism, one was converted to a vertex by Schatz's method. Two cases were anencephalic. One case in a 5-para was seen 10 days before labour, when the presentation was a third vertex well over the brim; when next seen after some hours' labour with poor pains, a face presentation was diagnosed with the chin in front and allowed to persist. There was a period of inertia and after rest with morphia labour continued. The head did not pass the brim when the second stage was reached; all efforts at conversion to a vertex failed, and as the cord when felt was found not to be pulsating the head was perforated and extracted. Brow presentation occurred four times; one the first of twins was changed to vertex and delivered with forceps. Two were a long time in labour, with membranes ruptured, os fully dilated and the fœtus dead; one was perforated and the other extracted after version, through a contracted pelvis with C.V. 9.3cm. The fourth case also a contracted pelvis C.V. 7.75; Trans. 14cm. had three previous labours:—1st, perforation; 2nd, pubiotomy, alive; 3rd, prolapse of cord, forceps, dead. Labour was induced at the 37th week; after 36 hours' labour, the head was still

free above the brim and had moved from a vertex into a brow; the os was fully dilated, so the head was changed back into a vertex and delivered by high forceps, the child being alive. Eighty-two children were delivered as breech presentations; 65 were primary. Sixty-two children were born alive and seven were macerated. Ten cases were associated with prolapse of the cord, and 11 with placenta prævia. There were six cases of transverse.

Forceps.

Forceps were applied ninety-four times, with one death in a case of eclampsia, 84 living children being born. Seventy-seven cases were 1-para and nine 2-para. High forceps were applied in two cases after pubiotomy and two other cases of contracted pelvis. The indications were:—

Delay in 2nd stage	...	65 cases, 1 child dead
P.O.P.	...	5 „ 1 „ „
Face and brow	...	2 „ 1 „ „
Primary inertia	...	4 „ 2 „ „
Albuminuria	...	4 „ 1 macerated
Eclampsia	...	6 „ 2 child dead
Prolapse of cord	...	1 „ 1 „ „
Contracted pelvis	...	6 „ 1 „ „
Accidental hæmorrhage	1 „	

Placenta Prævia.

There were 14 cases of unavoidable hæmorrhage, all the mothers recovered with complete freedom from morbidity. Of the children 8 were born alive. Bi-polar version was done eight times and delivery followed within six hours. One case was well advanced in labour and internal version was done. Three cases in which the bleeding was slight were kept in bed under close observation, allowed to fall into labour naturally and deliver themselves. One of these was the only 1-para in the series. A point which I do not think is sufficiently recognised is the care with which the third stage requires to be conducted in placenta prævia, so as to insure the complete removal of the membranes, which are adherent all over the fundus with the placenta below. The

third stage is frequently immediate, and when prolonged the placenta is often found detached, but held high up in the vagina by the membranes. In these cases I think it is better to pass the hand into the vagina and there to work the membranes off the uterine wall rather than to push the placenta out of the vulva before trying to separate the membranes.

Accidental Hæmorrhage.

Of the seven cases of accidental hæmorrhage six were external and one mixed. One case not in labour was treated by vaginal plugging, and one case thought to be in labour had the membranes punctured, which stopped the bleeding, but labour did not follow for five days, when the child was born alive.

Postpartum Hæmorrhage.

Twenty-eight cases had excessive bleeding during or after the third stage, which called for more than ordinary treatment. Three were secondary hæmorrhage; one in a case of postpartum eclampsia and one after pubiotomy will be referred to under those headings, the third case occurred 12 hours after delivery. All the patients recovered.

Contracted Pelvis.

There were thirty-four cases of contracted pelvis, the actual measurements being taken in 32 with Skutsch's pelvimeter. Nine were 1-paræ and twenty-five multiparæ. These latter had had 35 previous term confinements, eighteen children being born alive, only two spontaneous, one with forceps and the others either after pubiotomy or by section. Thirteen cases were treated by Cæsarean Section, five for the second time. The following case had a curiously irritable uterus:—

J.J. III.—First pregnancy terminated by pubiotomy, second with forceps, came into hospital in labour, with a breech presentation free above the brim, although the membranes were ruptured. The foetus was turned by external version into a vertex and labour allowed to continue for 71 hours. At the end of this time the head was still free above the brim. Between the pains the cervix was dilated to admit the half hand, but the uterus was highly irritable and at once contracted, the cervix contracting at the same time so as to only just admit two fingers and lifting

the presenting part away from the brim. As the child was alive section was done. The patient had a wholly afebrile convalescence, although the skin failed to unite and had to be resutured on the eighth day, when it healed perfectly.

Another case with a very marked dwarf pelvis was admitted 'after 36 hours' labour with the membranes ruptured. She was not measured, but the degree of contraction quite precluded pubiotomy; the puerperium was completely afebrile.

Pubiotomy was done on three cases—two for the second time; one done in 1911 had very marked, bony union with some projection on the inner side of the pelvis; the other had been done four days before labour, but the union did not show any tendency to relax. In the third case I did pubiotomy five days before labour started, the head came down slowly through the brim and labour was completed with forceps, having lasted 44 hours. Four days postpartum and eleven days after the pubiotomy a vesico-vaginal fistula developed; this was subsequently closed after three attempts being very difficult to get at. The opening into the bladder was behind the pubis, in which a gap $\frac{3}{4}$ of an inch remained, filled with fibrous tissue. The inner end of the pubic ramus had necrosed and formed a sequestrum. This is the only case in which I have tried so-called prophylactic pubiotomy; and I do not think there is any advantage in the method over doing the operation when the patient has got into the second stage and then completing delivery with forceps. This is the procedure I followed in the other cases, who left hospital on the 11th and 18th days respectively; one was delayed through having a secondary postpartum hæmorrhage on the 5th day from a small vessel in the vaginal wall which caused a considerable hæmatoma before showing externally. All the cases were allowed to do without the belt from the fourth day; one case was allowed out of bed on the 6th day.

Six patients delivered themselves spontaneously, in whom the C.V. was 8.5 to 9 cm., except one with a C.V. 9.7: Trans. 11.3. One of these had a section done at her first confinement and another a pubiotomy done four days before labour started. One case delivered by high forceps had a

complete tear of the perinæum from her first confinement; this was repaired immediately after delivery with good result.

Labour was induced in two cases, at the 37th and 39th weeks; the former had pubiotomy done 18 days before labour with her second pregnancy and prolapse of the cord occurred with her third. The head was free above the brim and remained so into the second stage, when it had moved into a brow, the head was flexed and delivered with forceps. Version was done twice where the fœtus was already dead and craniotomy five times in protracted cases which came under treatment with the fœtus dead.

Pelvimetry.

Measurements made with Skutsch's pelvimeter are of the greatest value, but they should always be taken under an anæsthetic, so that an estimate may be made of relative size by Müller's method, and the internal transverse measurement should always be taken, as the degree of contraction of this diameter has a very marked and rapidly-increasing influence on labour when in conjunction with flattening. The size of the fœtal head and its mouldability are essential points, and these can be best estimated by Müller's method. If this is done after the 36th week the amount of overriding present will give the best grounds to base a line of treatment upon.

Induction of Labour.

In ten cases labour was induced, eight on account of death of the fœtus and two for contracted pelvis. I think induction of labour in the last two or three weeks of pregnancy takes a most useful place in the treatment of contracted pelvis, and the selection of cases for it is best done by Müller's method, in conjunction with previous history. The introduction of three bougies was the method usually adopted, the bougies being left in place, even to 60 hours, till labour started; $\frac{1}{2}$ or $\frac{1}{4}$ cc. doses of pituitrin were given after 24 hours in several cases where labour had not set in. In two cases instead of bougies I adopted the introduction of a 30-inch, No. 20 to 24, soft rubber stomach tube: this is the method I have adopted in private for the past ten

years, and always found satisfactory. The tube is easier to sterilise, only requiring to be boiled and is not damaged by boiling. It is pushed through the cervix, and when five or six inches have been passed in, the tube coils of itself, below the presenting part, into rings about three inches in diameter; the whole tube is passed into the uterus and is left there till labour is well established. The method induces labour as well as the bougies, and has the advantage of being confined to the lower part of the uterus and much less risk of rupturing the membranes.

Prolapse of the Cord.

Prolapse of the cord occurred nineteen times, with vertex in 9, breech in 7, and transverse in 3. Ten children were born alive and one was macerated. Three cases were admitted with the cord already prolapsed and two were only discovered when the cord had ceased to pulsate. Internal version extracted two children alive out of three cases. Forceps were applied once, the child being born dead. One transverse and three breech cases resulted in dead children. One transverse, the second of twins, was changed to a vertex, the cord replaced and a living child born spontaneously.

Rupture of Uterus.

Two cases of rupture of the uterus were admitted. Both were treated by plugging the rent and recovered.

S.M.¹ III.—Had two previous Cæsarean Sections on account of contracted pelvis; came into hospital with history of having been in labour for several hours when bleeding started. On the way to hospital had very severe pains, but on admission these had ceased, and although there was evidence of some bleeding having occurred there was none continuing. The temperature was 96, pulse 72. There was slight abdominal tenderness, no uterine contractions; the pregnancy corresponded to the 34th week, and the fœtus was lying transverse. The patient was sallow and looked toxæmic. After an enema all pain ceased. The condition was thought to be toxæmic and treatment adopted on this line. After seven days, the fœtus being obviously dead, it was decided to empty the uterus. When the cervix was dilated sufficiently to admit two fingers, it was found that the uterus was ruptured

¹ Reported fully in "Dublin Journal," Sept., 1920.

and contracted, with the fœtus in the abdominal cavity. The fœtus was extracted by embryotomy, the pelvis douched in sitting posture through the rent and a loose gauze drain inserted. The patient left hospital quite well on the 16th day.

A.M. II. was delivered of the first of twins six hours before sending to hospital; when seen a neglected shoulder presentation was found, labour having completely ceased for some time. Version was easily done under anæsthesia, when it was found that the uterus was ruptured through the cervix and posterior fornix. The patient did not show much shock; a bunch of gauze was passed through the rent and partly removed next day and completely in 48 hours. There was some meteorism on the 3rd day, and the temperature rose to 100 on the 4th and 5th days, otherwise the puerperium was afebrile, and the patient left hospital on the 12th day.

Eclampsia.

There were thirteen cases of eclampsia—2 ante partum; 1 ante partum and during labour; seven during labour, and three postpartum, with two deaths. These are recorded as Nos. 3 and 4 under mortality. One fœtus was macerated, two were born dead and ten were born alive, but two of these were seven to ten weeks premature, and died on the 11th and 3rd days after birth. The treatment adopted was that introduced by Dr. Tweedy. The only modification I feel inclined to make is in not pushing the morphia after the first grain has been given and lavage of stomach and colon completed for the first time and a large purgative introduced. This latter I consider the curative part of the treatment, and now adopt as a routine the washing out of the colon in five or six hours after the first lavage and again after the same interval. After the first lavage in most of the cases there appeared to be an increase of toxæmia, as shown by coma, cedema, and occurrence of fits; but improvement began when the second washing out of the colon was done. Even in those cases in which a copious result is obtained with the first, the second wash out produces a vastly greater result; after that, as a rule, the bowels take on spontaneous action, but even when this does occur I think washing out should often be repeated for the third time. In the cases that died morphia was given to $1\frac{1}{2}$ and $1\frac{1}{4}$ grains in six and three hours, but fits continued to occur with undiminished frequency until after the second

lavage. Two cases had very marked dimness of vision, and this symptom persisted for several days after all others had cleared up, but finally the sight became quite normal. I give the notes of two cases.

K.G. II. developed postpartum eclampsia with three fits, the first 13 hours after delivery; was kept on water only for 6 days, as the kidneys were unusually slow in resuming action. Rectal lavage was done twice, after which the bowels were kept moderately free with purgatives and the patient was able to take fluid freely by the mouth. Muscular twitchings were marked and continued for 4 days, and the patient complained of almost total blindness for 6 days. Diuresis started on the 6th day. On the seventh day a free hæmorrhage occurred, and a large quantity of old blood clot was expressed apparently from the uterus; the fundus was well contracted, but had been all along too high. A few hours later some more bleeding occurred, and I started to douche the uterus; it was still well contracted, and only a little more clot came away. While doing this free bleeding was noticed coming from the urethra. On passing a catheter about an ounce of bloody urine came from the bladder and the urethral bleeding continued. The bladder on bi-manual palpation was found greatly thickened. For the next 24 hours what came from the bladder was largely blood containing numbers of small blood clots which appeared to be several days old. During the next 12 hours the urine passed was much less bloody, but contained an increasing quantity of old blood clot all in small pieces. The clots all came from the bladder after the uterine douche, the lochia containing very little blood. The urine from this time gradually cleared and was quite normal in four days.

I believe this was a case of toxæmic hæmorrhage into the parametrium between the uterus and bladder. The case was a mild one of eclampsia, but very marked toxæmia, as shown by the slow recovery of the kidneys and severe retinitis.

T.W. I. was sent in with a history of six fits a week previously and two the day before admission, and of having been kept on water only for a week. She was very mentally disturbed, had marked loss of sight and general œdema.

The bowels were very confined. Treatment consisted of free purgation, soda bicarbonate by the mouth and poultices to the loins. This was continued till after delivery, 15 days after the first fits. The general condition improved slightly under treatment and then remained stationary, except for the development of epistaxis for several days. The child was born alive.

Toxæmic Albuminuria.

Besides those patients that developed fits and so appear in the table of eclampsia, there were 15 others admitted in an advanced pre-eclamptic state, eleven primiparæ and four multiparæ. Oedema was marked in all, very marked in seven and amounting to anasarca in one multipara. The urine was loaded with albumin in eight, and albumin was present in large quantity in all except the case of anasarca. The quantity of urine secreted in 24 hours was reduced to 12 to 25 ounces in all but four, the anasarca case passing 31 ounces and three others 40 or more ounces; two of these were primiparæ. Granular and hyaline casts were found in all examined for same and R.B.C.'s in most. Of the symptoms, headache was very severe in three cases, associated with dimness of vision in two and vomiting in one; this was also a marked symptom in another case. One case was profoundly drowsy and two had ante partum hæmorrhage; one of these was with her XI. pregnancy, and labour had to be induced at the 22nd week on account of the bleeding, her previous pregnancy having been terminated by C.S. for concealed hæmorrhage. She has again been in hospital with another pregnancy which had to be terminated at the 16th week on account of hæmorrhage and albuminuria. Labour was induced in one other case, a primipara, at the 29th week after she had improved, the fœtus being obviously dead, and macerated when born. These cases were all treated by water diet, free purgation and soda bicarbonate by the mouth. Nine children at or near term were born alive; two at the 36th and 39th weeks were born dead; twins at the 32nd week were born alive, but died; one at the 28th week was born alive, but died. Two at the 32nd and 28th weeks were macerated. With the exception of the two cases referred to, labour was allowed to come on spontaneously.

Pyelitis.

Three patients had severe pyelitis during pregnancy, for which they were treated in hospital and subsequently delivered. The treatment consisted of a very light diet, plenty of water to drink and citrate of soda in half drachm doses, four to six hourly. Urotropin was given in two cases, but discontinued, as I did not think there was any additional benefit from it. The pus disappeared from the urine in all cases after delivery. One other case was treated on two occasions and allowed to leave hospital improved; she returned a third time this year with a relapse and was delivered 10 days later. The temperature came down to normal after 14 days and the pus in the urine diminished; after leaving hospital it increased, but has again improved.

Morbidity.

The morbidity for the year estimated by the B.M.A. standard gives a percentage of 6.98, which is somewhat above the average for previous years. This is altogether due to the very high number of extra-genital cases. By the Rotunda estimate the percentage is 4.0. In reality, the year was very satisfactorily free from genital infection, as shown by the fact that only 37 cases had a duration of temperature over 5 days; only twenty-eight cases required utero-vaginal douching and only ten of these had more than one douche. There were no deaths from sepsis. In 113 cases the duration of the temperature was under 5 days; in 29 cases 5 to 9 days, and in 7 cases 10 to 19 days. Four cases received vaginal douches only; in eighteen cases the uterus was douched once; in three cases, twice; in two cases, three, four and six times; and in one case, twelve times. Streptococci were found in smear or culture in 5 cases; three of these were treated with stock vaccine and two with stock and autogenous vaccines. Two cases showed staphylococci; one showed streptococci and bacillus coli; in one case no organism was found. All these cases were given stock vaccines, and all received one to three injections of antistreptococcus serum in 20cc. doses. Four cases were given only one injection of vaccine; two cases were given three injections; two were given five injections, and one case was

given nine. Twenty-two cases were treated by applications to the perinæum only.

The administration of antistreptococcic serum in 20cc. doses was adopted in all cases suggesting infection with pyogenic organisms, the injection being repeated in 24 to 48 hours and again in 2 days, but not persisted in beyond that. Stock vaccine was given in cases receiving a second dose of serum and autogenous vaccine when obtained if still required. Uterine douching was resorted to early in most cases, and I believe it is better to risk douching in cases where the uterus is not at fault than to delay it in cases of uterine infection. Two of the more serious cases were for several days thought to be so definitely extra-uterine that the douche was not given for several days after the rise of temperature, when the morbidity was found to be uterine in origin, and I believe if the douche had been given earlier the disease might have been stopped in the stage of sapræmia. Besides the above treatment all cases showing a rise of temperature are got to sit up in bed frequently during the day, to go on to their hands and knees to micturate, or to even get out of bed for this and for defæcation. I think this method of promoting uterine drainage is of the greatest importance and far more to be depended upon than the mere elevation of the top of the bed, which, to my mind, can never be sufficient to drain the uterus. With regard to vaccines, I think stock vaccines should always be used, and particularly those which appear to give a reaction. The delay in obtaining autogenous vaccines reduces their use; in the majority of cases the need for vaccine had passed before it was obtained. A vaccine made from a protracted case of infection is used for stock.

Other Complications.

There were three cases of hydramnios. From one case 20 pints of liquor amnii were removed, and the patient delivered herself of a normal child in asphyxia, which could not be resuscitated. The other two cases were associated with anencephalus or spina bifida. Three cases of hydatidiform mole occurred. One case was admitted three months later to the gynæcological wards with a chorion-epithelioma for which hysterectomy was done.

One case of chorea was treated at about the 20th week of pregnancy; the condition was very marked with general movements of trunk and limbs, most marked in the arms. The patient gave a history of having had chorea during childhood. She was treated with large doses of arsenic and improved considerably, when she was allowed to leave hospital and attend dispensary. She returned at about the 26th week and was delivered of a macerated foetus. The chorea having disappeared, there was never any albumen in the urine.

A very marked case of dermatitis herpetiformis was admitted a few days before term. The whole trunk, arms, thighs, and buttocks were covered with erythema and bullæ; the labia were very œdematous. The rash had developed rapidly about three weeks previously. The patient was delivered of a living, healthy infant. On the 2nd day the temperature rose above normal and reached 102.6 on the third evening, after which it persisted from 99 to 100 with the pulse from 80 to 100 for the next 20 days. The condition of the skin began to clear almost immediately after delivery, and was normal at the end of a week. The lochia was normal all through and a culture proved negative; the uterus involuted well. On the 18th day the patient complained of pain in the right iliac region, and there was definite rigidity; this increased during the next two days, and it was thought that an appendix abscess had developed. By vaginal examination a mass could be felt on the right side clearly detached from the uterus, which was quite mobile and well involuted. The abdomen was opened and an abscess of the right ovary found adherent above the pelvic brim; the rest of the pelvic organs were perfectly normal.

Two patients were delivered of living children, who had been treated for syphilis during their pregnancies. One had had two previous dead children; the other had had five dead children and two born alive, but dying in a few days. These were amongst the earlier pregnancies. The treatment adopted was injections of N.A.B. 0.6 gram doses at weekly intervals and hydrarg perchlor 1/16 grain by the mouth three times a day. The babies showed no evidence of disease.

Fœtal Complications.

There were eight cases of *melæna neonatorum*. In several cases the infant was profoundly anæmic, and all showed evidence of loss of blood. All were treated by injections of normal horse serum in single doses of 10ccs., and all recovered. Seven cases of ophthalmia developed; in five a pure culture of gonococci was found; one showed a pure culture of *staphylococcus aureus* and one was negative. The application of silver nitrate is carried out as a routine prophylactic after birth and also in the treatment, with the maintenance of free drainage by the application of a few drops of flavine in castor oil 1/1,500 two or three times a day. Free drainage I think is of great importance in preventing serious complications. One case developed corneal ulceration of both eyes with perforation of the anterior chamber in one eye, although treatment was started at the earliest indication of the infection and carried out with all possible care.

Three infants were born with depressed fractures of the skull. In all the depressed bone was lifted by means of one blade of a bullet forceps pushed through the bone and used to pull up the depression, as described by Dr. Tweedy. The method worked perfectly. One case was after forceps delivery following pubiotomy; the other two occurred in breech extractions, where rapid delivery was required on account of prolapse of the cord, Martin's method being adopted for the aftercoming head, and the fracture in both cases was in the frontal bone.

One case of hydrocephalic head had to be perforated and $2\frac{1}{2}$ pints of fluid were evacuated. Another had a meningocele through the occipital bone nearly as large as the head, which prevented the head engaging, and was extracted as a breech. An infant operated upon for intestinal obstruction showed complete failure of development of the large intestine, but there was an inch of anal canal.

The case of triplets was composed of a fully-developed term child associated with two very compressed fetuses which appeared to be of about 16 weeks' development, which came away with a separate placenta and set of membranes.