REMARKS ON CÆSAREAN SECTION, WITH NOTES OF A SECOND SUCCESSFUL CASE.¹

By MURDOCH CAMERON, M.D., F.F.P.S.G.,

Assistant to the Professor of Midwifery, Glasgow University; Obstetric Physician and Lecturer on Obstetrics to the Glasgow Maternity Hospital; Dispensary Physician for Diseases of Women, Western Infirmary.

In a previous paper read at Glasgow last year, I gave the particulars of a successful Cæsarean section, and this year it has fallen to my good fortune to be able to report a second successful operation.

The patient, B. B., aged 18, primipara, was admitted into the Glasgow Maternity Hospital on March 12th, 1889. She was markedly rachitic, and was very small, thin, pale, and delicate looking. She stated that she was pregnant, had menstruated last about the end of July, 1888, and had first felt the movements of the child towards the end of December. On auscultation, the foetal heart sounds were distinctly heard, and abdominal palpation revealed a breech presentation. The measurements were as follows:—Height, 48 inches; intercostal diameter, 8½ inches; interspinous diameter, 9½ inches; external conjugate diameter, 5½ inches; diagonal conjugate diameter, under 2 inches; true conjugate diameter, 1 inch.

A consultation was held, at which were present Drs. S. Sloan, Reid, Black, Oliphant, and Ritchie. Opinion was divided as to whether craniotomy at the time or Cæsarean section at full term ought to be performed. A second consultation was held next day, at which Professor Leishman attended, in addition to the others. He strongly advocated Cæsarean section, and this was finally agreed to.

The patient was kept in the hospital and put on a liberal diet. Labour began on the evening of May 7th, about the 280th day of pregnancy, when I was sent for. On arriving at 11 P.M., the os uteri admitted the tip of the forefinger, and accordingly operation was determined upon. Invitations to the staff and others to be present were sent out.

At 3.15 A.M. the patient was put under the influence of chloroform, but subsequently ether was used to keep up the anaesthesia throughout the operation. Dr. Wright, the indoor accoucheur, assisted, Dr. Ritchie attended to the instruments, Drs. Williams and Gray gave the anaesthetic, whilst a staff of nurses attended to the sponges, etc. A mesial incision was made from the umbilicus to a little above the pubes.

There was very little bleeding from the abdominal parietes. The uterus, steadied in the middle line and held well forwards, was then opened. The sinuses bled freely, but not to any alarming extent, and none of the blood, nor, in the subsequent stage of the operation, any of the amniotic fluid entered the abdominal cavity. The amniotic sac was opened, and the child extracted by the head, which lay at the fundus. The placenta was attached to the posterior surface, and was easily detached and removed. After making sure that the cervical canal was patent, the uterine incision was closed by means of thirteen silk antiseptic sutures, passed through the outer two-thirds of the uterine wall. Both Fallopian tubes were ligatured at the junction of the outer and middle thirds, and, finally, the abdominal cavity having been carefully sponged out, the external wound was closed by antiseptic silk sutures.

From the time of the first incision, at 3.30 A.M., till the delivery of the child only eight minutes had elapsed, and the operation was completed at 4.15 A.M., thus occupying forty-five minutes. A hypodermic injection of Tanner's solution of ergotine was given and the wound dressed. A half-grain morphine suppository was then administered; but, in spite of that, patient complained of pain in the abdomen for about an hour after the operation. She then, however, fell asleep, and did not waken till the forenoon, when her temperature was found to be about 98.4° F., her pulse

104, and the abdominal pain gone. She remained quiet and drowsy all day, and in the evening her temperature had increased to 101.2° F. and her pulse to 115.

Four 10-grain doses of quinine were given at intervals of two hours. The first at 7.30 p.m. For the first 36 hours she got nothing internally but sips of hot water and milk. The urine was drawn off every six hours. The child was a boy, weighed 7lbs. 13ozs., and measured 22½ inches. The placenta weighed 1lb. 4ozs., and the cord was 23 inches in length. The measurements of the child's head were as follows: Occipito-frontal diameter, 4¾ inches; occipito-mental diameter, 5½ inches; biparietal diameter, 3½ inches; bitemporal diameter, 3¼ inches; sub-occipito-bregmatic diameter, 4 inches; circumference, 14 inches.

May 9th. Patient slept nearly all night. In the morning she complained of a slight pain chiefly in the back, and was given a half grain morphine suppository, which relieved it. In the evening she complained of a cough, which was relieved by a mixture.

May 10th. Rather restless during the night. After taking a little milk and lime water in the morning she was troubled with a slight feeling of sickness, but this soon passed off. In the evening she felt and looked very well. The cough was much better, and she took a little tea with relish.

May 11th. During the night she complained a little of flatulence. The temperature at 4 A.M. was 103.4°, and the pulse 110. Ten grains of quinine were administered, and at 9 A.M. the temperature had fallen to 100°. During the day she was fed on milk and tea. Her abdomen was distended with flatus and she complained of pain, but this soon passed off. Cough entirely gone.

May 12th. During the night she was pained, and had a half grain morphine suppository, which greatly relieved her and allowed a little sleep. She remained well till the afternoon, when sickness and vomiting set in and the tympanites returned. Sips of hot water with a few drops of peppermint were tried and gave relief, but, the sickness continuing, four-minim doses of glycerinum acidi carbolici were administered every two hours up to four doses.

May 13th. She was rather restless during the night, but, the sickness ceasing towards the morning, patient fell into a refreshing sleep, which lasted for a few hours. The lochia was slightly foetid. During the day, as she was troubled with tympanites, an enema of six ounces of soap and water, with one ounce of glycerine, was followed by a free action of the bowels, but, the flatulence still continuing, a turpentine enema was given at 7 P.M., with the result that she felt much relieved.

May 14th. Had a half-grain morphine suppository, after which she slept well. During the day she complained of no pain, no flatulence nor sickness, and the lochia was normal.

May 15th. At noon patient was placed under chloroform, and the wound dressed; it looked very well. After the dressing she complained of slight pain, but there was no sickness. The breasts, which were slightly engorged, were exhausted.

May 16th. She had slept for three hours. At 7 P.M. she had an enema of glycerine, with the result that the bowels were freely moved.

May 17th. She had slept well during the night.

May 18th. Lochia ceased, but there was a slight discharge of pus *per vaginam*.

May 19th. She complained of a little pain in the abdomen, and a few drops of pus were observed at the lower part of the dressings. There was no rise of temperature nor rigor. The dressings were removed, and the wound at the lower part was found gaping superficially to a slight extent, no doubt due to the strain of coughing. The deep portion and the whole of the upper part of the wound were healed by first intention. All the stitches were removed, three strips of plaster applied, and fresh dressings put on.

May 20th. She had a good night and was looking well. Wound dressed.

May 21st. Only a few drops of discharge on dressing. She passed urine.

May 22nd. No discharge *per vaginam*.

June 15th. To-day a sanguineous discharge, very small in quantity, appeared *per vaginam*, accompanied with pain in the back and the other usual symptoms of menstruation.

June 16th. Patient allowed out of bed.

Several points in this operation offer themselves for our consideration. To begin with, I do not hesitate to rank myself with those who refuse to attach any single operator's name to this operation as at present so generally performed, as I think its present success is due more to the labours of several than to any

¹ Read in the Section of Obstetrics at the Annual Meeting of the British Medical Association held in Leeds.

Patient in Dorsal Position under Chloroform.

special procedure as claimed for Sænger. As evidence of the marked progress, I have only to direct your attention to the

Anterior View.

literature of the subject a few years ago and you will find no mention made of the various steps in the operation which now

command our best attention. We have, for instance, arguments for or against the turning out of the uterus before removing the child, varied opinions regarding the material for stitching the uterus, some preferring silver, whilst others use silk or catgut. Again, opinion is divided as to whether Cæsarean section should alone be performed, or that in addition the Fallopian tubes should be ligatured, the ovaries removed, or the uterus itself extirpated.

Concerning the first point, namely, the turning out of the uterus before emptying it, and the use of a ligature to control bleeding, I have not in either case done so. With sufficient care the uterus

Portrait of child taken on the second day.

can be emptied without being turned out of the cavity, and I may say that the extension of the abdominal wound for three or four inches above the umbilicus, in my opinion, adds to the danger.

In opening the uterus any bleeding that may occur is easily controlled, and should it be troublesome after the child is easily extracted an elastic band could then be very easily applied, as its earlier application is not without danger to the child. In my last

case very little blood was lost, not more, in fact, than in any normal labour. In extracting the child I prefer to do so head first rather than by the feet as taught in textbooks, as, the head once removed, the body follows easily when no time is given for the uterus to contract. In the case just reported this procedure was followed, as only eight minutes had elapsed from the first incision in the abdominal wall till the child was extracted. Owing to the high position of the head, the presentation being breech, before rupturing the membranes I carefully turned the child somewhat by pressing upon its right shoulder till I got the head immediately under the incision, when the membranes were opened and the child speedily extracted. The patient was sterilised by tying both tubes with antiseptic silk, a procedure at once simple and not very likely to be followed by any ill effects. The removal of the ovaries by some is now looked upon as being an operation almost likely to be followed by grave results, mental or otherwise. In any case it has yet to be shown that evil results will follow the tying of the tubes. Should this procedure eventually be free from any bad effects, I think no one looking at the results now attending the improved Cæsarean section will for a moment hesitate to perform it in preference to the modification of Porro.

To stitch the uterus I used straight needles about three inches in length with silk prepared in carbolic acid. The threads were passed from the wound outwards, and grasped only the outer two-thirds of the uterine wall, avoiding the endometrium. The number of stitches must vary according to the judgment of the operator; in this case thirteen were inserted, whereas in my first case only seven were used. In both cases no difficulty was experienced in getting complete apposition of the peritoneal surfaces. With regard to the use of silver wire and catgut, I question the safety of leaving wire in the uterine tissue, and catgut has proved untrustworthy.

Concerning any interference with the internal surface of the uterus, I may state that in neither case was the cavity washed out; and as to sponging the surface with liq. ferri perchloridi, or dusting it with iodoform, I am thoroughly opposed, as either procedure would favour the formation of clot, which would be sure to set up irritation. On no account should a drainage tube be placed in the cervix, not only because, as Garrigues alleges, it may become a source of infection, but because it acts like a foreign body, and is apt to excite hæmorrhage, with distension of the uterus and gaping of the uterine wound.

In conclusion, I may state it as my firm conviction that the time is speedily approaching when this operation will take the place of craniotomy where the child is alive, and that it only remains for each one who has occasion to perform it to faithfully follow up the work with the same spirit as Sir Spencer Wells and others, in order to sweep from our practice an operation which is antagonistic to our own feelings, and which demands the life of the child whilst it imperils that of the mother. As in this case, let us, when possible, decide beforehand if Cæsarean section is to be performed, avoid unnecessary manipulations or attempts at delivery by other means, and secure the strictest antiseptics before, during, and after the operation, which should be performed at an early stage.

Note.—Since writing the above I have had a third successful case, notes of which will be read at the Birmingham Meeting.

EXTRACTS FROM THE MILROY LECTURES ON THE ETIOLOGY AND PREVENTION OF PHTHISIS.

Delivered before the Royal College of Physicians of London.

BY ARTHUR RANSOME, M.A., M.D., F.R.S.,

Physician to the Manchester Hospital for Consumption and Diseases of the Throat.

LECTURE III.—PREDISPOSING CAUSES OF PHTHISIS.

Universal Distribution of the Bacillus.—Numbers Ejected by Consumptives. a. Reasons for Immunity, Mechanical and Physiological.—Dosage of Bacilli.—Varying Susceptibility.—Mitral Stenosis.—Lithiasis.—Copper and Wool Workers.—b. Predisposition to Infection.—The Tuberculous Constitution.—Hereditary Tendencies.—Direct Infection.—Latency.—Vulnerability.—Age, Sex, Race.—Influence of Previous Disease.—c. Modes of Infection: by the Skin, Generative Organs, the Digestive Tract, the Lungs.—Food, Flesh of Tuberculous Animals.—Milk.—The Atmosphere.—Direct Contagion.—Sputum.—Dust.—Infected Houses.—Convents.—d. Conditions enhancing Infectiveness of Bacillus.—Foul Air.—Dampness of Soil.—Organic Vapours.

It has been calculated by Bollinger that one phthisical person may eject from his body in the course of twenty-four hours no fewer than 20 millions of bacilli. The sputum thus ejected has been found by Koch to possess a marvellous tenacity of life, being still alive and virulent in the dried up sputum after a lapse of several months. It is certain that the germs of the disease are almost everywhere present, and that we all of us inhale some of them in the course of each day or week. The presence of phthisis in our midst ought not, then, to be difficult of explanation; we should rather in the first place seek out the reasons for the exemption of so many from the results of infection.

Reasons for Immunity from Tuberculosis.—Amongst the conditions necessary for the growth of the bacillus there is yet one that was mentioned in the first lecture, and which is of great significance, namely, that it requires a sojourn of one or two weeks, and sometimes more, in a suitable medium before it can take root, so to speak, and develop into a colony. Now, from Mr. Watson Cheyne, and Dr. Kidd, and others we learn that the epithelium of the ultimate portions of the air passages is usually the first point of attack by the organism. We may therefore suppose that it is necessary for the organism to effect a lodgment somewhere in this position. Or, again, it may perhaps make its way into the interalveolar lymphatics by means of the prolongations of the branched cells of the alveolar septa, called by Dr. Klein "pseudostomata," which he has shown to be capable of taking up foreign bodies, such as oxide of iron, silica, and even carmine (Likovski), but there are in the healthy body various impediments, mechanical and physiological, which it is difficult for it to overpass.

1. We have the difficulty with which minute bodies such as the bacilli could reach the ultimate air passages.

It is true, as Professor Tyndall has shown by means of his illuminated tube, that the lungs possess a sort of filtering action, due to the entangling of the dust by the mucus lining the air passages. That this filtering action is not complete, however, I have myself proved, both by the microscopical examination of the aqueous vapour of the breath, in which there were numerous epithelial scales and other objects, and by the detection of a few very sparsely scattered bacilli in the breath of certain consumptive patients.

In some forms of lung disease, also, accompanied by copious bronchial secretion, the probability of this event is increased, especially if the accompanying cough prevents the lodgment of mucus in any of the air tubes. As has been shown in the research mentioned, the organic matter of the breath is always less when there is much secretion. The proportionate amount of this sub-