The record of a case as successful as this encourages one to think that Porro's operation is that which should be resorted to when delivery cannot be effected *per vias naturales* without considerable risk to life. There is, however, great difficulty in selecting between it and Säger's modification of the old Cæsarean operation. Having myself had two such satisfactory results with Porro's operation, and seeing no reason why the third should not have been equally successful had the operation been performed twenty-four hours earlier, as it might have been, I have naturally a leaning in favour of it. At the same time I recognise fully the merits of Säger's operation, and its excellent results. In the *Centralblatt für Gynäkologie*, No. 1, 1890, Dr. Säger records his seventh successful case in succession. On the other hand, Professor Breisky, of Vienna, formerly of Prague, and his two assistants have performed eleven Porro operations with no death, and Reidinger, of Brunn, seven with no death. This proves to my mind conclusively that either operation, undertaken under favourable conditions by a skilful operator, may be looked upon as almost certain to be successful. It is, therefore, a mere matter of selection according to one's bias between the two operations.

At first it was advocated in favour of Porro's operation that it possessed the great advantage of preventing any subsequent pregnancy. Since then, however, it has been demonstrated that the same result may be attained in Cæsarean section by cutting off the communication of the Fallopian tubes with the uterus. This is now generally effected by ligaturing near the junction of their outer and middle thirds; but the idea is not a novel one. Dr. Blundell, in a lecture delivered at Guy's Hospital, published in the *Lancet* of November 29th, 1828, says: "To some women impregnation is death; the pelvis is so contracted that without the Cæsarean operation delivery cannot be effected by any artificial means. In such women sterility might be ensured by the division of the tubes, as formerly advised.....If the Fallopian tubes are divided to ensure sterility, a small piece—say of a line or two in length—ought to be removed, lest the divided portions should again fall into apposition, the canal becoming renewed."

But we have not always experienced operators, and patients under favourable conditions, as I gather to be the case from the Italian statistics. Professor Truzzi last year published the results of 59 Porro operations performed in Italy between October 23rd, 1884, and November 24th, 1889, with a mortality of 21=35.5 per cent.; and Professor Calderini, of Parma, has recently recorded the results of 28 Cæsarean operations after Säger, performed in Italy from 1886 to 1890, with a mortality of 10=35.7 per cent.—the two almost identical, but slightly in favour of Porro's operation. It is not fair to compare the whole of the Porro operations and the Säger operations that can be collected together to draw a conclusion as to the superiority of one over the other, for Porro's operation is of earlier date, and there is a great difference between the earlier and the later results. Dr. Harris, of Philadelphia,² states that there were 29 deaths in the first 50 and only 9 deaths in the last 50 operations. In comparing, therefore, with the later operations it would be but fair to take the last 50 (that is, 18 per cent. mortality) instead of the first 50 (58 per cent. mortality)—which, curiously enough, is that I find recorded in a paper read by Dr. Galabin before the Hunterian Society on March 25th—as against 23 per cent. of Säger's.³

I believe that Säger's operation has been performed by much fewer surgeons and by much more experienced men, and generally under much more favourable circumstances. Take for instance Dr. Murdoch Cameron, of Glasgow, who operated on ten patients between April 10th, 1888, and February 16th, 1891, with a mortality of but 1 per cent. His were cases of Cæsarean section and stitching the uterus after his own method, not after Säger's. It would be interesting to know whether Dr. Cameron's cases are included in the Säger statistics. I pass now to the consideration as to which or era-

tion—Porro's, or Cæsarean section with uterine sutures—is likely to be the best in the hands of the general practitioner, inexperienced in abdominal surgery, in cases of emergency; and I give the preference to the former, for it is generally accepted that it is more simple, and can be performed more quickly. Dr. Säger writes that "he does not regard Cæsarean section as a simple and easy operation, and he denies that it can be successfully performed by those not familiar with the anatomy of the parts, and antiseptic surgery." I see no reason why every accoucheur should not possess a Kœberlé's *serre-nœud* and a long pin: a common knitting needle will do very well. [Dr. Godson here showed one sent him some years ago by Professor Porro himself as that which he used.] But if the accoucheur has not a *serre-nœud*, a bit of elastic tubing will answer the purpose quite well. I observe in the discussion that ensued at the Hunterian Society, after Dr. Galabin's paper, that Dr. Horrocks said he had found it very difficult to apply the elastic ligature. If a piece of wire be passed through it before it is applied, which can be afterwards withdrawn easily, this difficulty should be got over. This is a very useful hint, which was given me by Mr. Lawson Tait, to whom I believe it was told by a general practitioner who had performed the operation.

I hold the strongest opinion that every accoucheur should be prepared to perform Porro's operation, and not resort to craniotomy as a matter of course, in a case of pelvic obstruction in which delivery cannot be effected by the forceps, and especially when the fœtus is living. I believe that Porro's operation is less dangerous to the mother than difficult craniotomy. Only recently I was called to a primipara to assist two excellent practitioners who had used one forceps after another, and pulled, first one and then the other; the cervix uteri had been extensively lacerated, but the head had never moved. The fœtus was dead. I managed to deliver the woman by craniotomy, but the extraction was very difficult; after I got the head out I thought I should never have extracted the shoulders. It was a large fœtus. I made out the conjugate to be about 3 inches. This woman would probably have recovered had abdominal section been performed early; as it was she died on the fourth day. It is very sad to think that here a woman and a fine child were sacrificed, both of whom might have been saved. I do not for a moment mean that Porro's operation or Cæsarean section should be undertaken impetuously or without proper consideration and preparation, but I am convinced that it should often be undertaken by the general practitioner in place of craniotomy, and I hope this will in course of time be recognised by every accoucheur being prepared to perform the operation in case of need.

TWO CASES OF AMPUTATION OF THE UTERUS DURING LABOUR.

Read in the Section of Obstetric Medicine and Gynæcology at the Annual Meeting of the British Medical Association held in Bournemouth, July, 1891.

By JAMES MURPHY, M.A., M.D.,

Surgeon to the Sunderland Infirmary; Assessor in Clinical and Operative Surgery University of Durham; President-elect North of England Branch of the British Medical Association.

CASE I. Complete Removal of the Uterus during Labour at Term.—At 9 P.M. on Wednesday, December 12th, 1888, my friend Dr. Norie asked me to see with him a woman, aged 33, the mother of four children, who had been in labour at term since the previous Sunday, under the care of a midwife; and as no advance had been made in the labour, and as the woman was getting exhausted, his advice had been sought. Finding that she had cancer of the cervix, he kindly invited me to see the case. On arrival at the house I found the patient in a very great state of exhaustion, she having had severe hæmorrhage for some days, and having strong labour pains, which she informed me she had endured for four days. The os would admit the tip of the finger, and through it the membranes could be felt strongly protruding with each pain. The whole cervix was a hard solid mass of cancer, which seemed to encroach on the body of the uterus, but the vagina was quite

² BRITISH MEDICAL JOURNAL, March 30th, 1889.

³ These figures are, of course, taken from the whole of the published cases, and show much the same rate of mortality as given by Dr. Harris recently in the *American Journal of Medical Sciences*:

Porro operations ... 272, with 150 deaths=55.1 per cent.

Säger " " 212 " 50 " =23.5 "

Mr. Lawson Tait's protest—with which I agree—is that it is not fair from these mere figures to draw conclusions as to the merits of the two operations.

healthy. We decided, after anxious deliberation, that it would be useless to attempt removal of the mass, and that to avoid rupture of the uterus the fœtus must be speedily removed; and as the disease was limited to the uterus and did not encroach on the vagina, total extirpation was preferable to Cæsarean section or Porro's operation. She and her husband having consented to the operation, she was at once removed to the infirmary. A careful and prolonged examination was made for evidence of life in the fœtus, but no such indication was found.

Operation.—The vagina was thoroughly flushed with a solution of perchloride of mercury, and a silver catheter introduced into the bladder; strict antiseptic precautions, with the use of spray, were used, and chloroform was administered. The abdomen was speedily opened by an incision from a little above the pubes to 4 inches along the umbilicus, and the uterus drawn out of the abdomen. A further examination failed to show any life in the fœtus, so instead of using a temporary elastic ligature and at once removing the fœtus, I decided to husband all blood, and to save time by at once securing each broad ligament completely by three silk ligatures. I then made a transverse incision a little above the junction of the bladder, and easily peeled it off, opening the vaginal roof; in doing so the left ureter was exposed, recognised, and left unharmed; the right was not noticed. A similar method was performed posteriorly, and the rectum carefully separated, all bleeding points being secured with Péan's forceps. The uterus was then cut away, and but very little oozing occurred; the forceps were removed one by one, each vessel being securely tied with silk. The toilet of the peritoneum was carefully attended to, and the ligatures on the broad ligaments cut short. As the opening into the vagina was so very small it was left for drainage, and a glass tube passed down to it from the abdominal wound, which was then closed and dressed with iodoform and wood wool.

The patient rallied well and had a good pulse. In an hour's time she looked much better than before the operation; she had a fair night, with some sickness. Next day she was dressed at 10 A.M. and the vagina carefully flushed with a perchloride solution; temperature 99.5°; pulse 110; aspect excellent; not much pain, and but little sickness. At 2 P.M. vagina again irrigated; pulse and temperature the same; sickness better. At 4 P.M. she was not so well, and at 10 P.M. there was a decided change for the worse. She rallied a little during the night, but died next day of exhaustion. At the *post-mortem* examination the abdomen was found perfectly sweet—no pus, a very little serum, two small clots, and, after a most searching examination, not a particle of cancer could be found.

CASE II. Porro's Operation.—On the morning of July 11th, 1891, I was asked by my friends, Drs. Beveridge and Blair, to see Mrs. P., aged 30, married, one miscarriage at the fourth month, second pregnancy at full time, who had been in labour with strong and regular pains for the preceding ten hours. On examination, I found the lips of the os protruding through the inlet of the pelvis, the membranes unruptured protruding through these lips, but no presentation could be felt; the promontory of the sacrum approximated so closely to the pubes that my two fingers placed side by side could not pass between, and the promontory of the sacrum was higher than and projected upon the pubes, so that if a line were drawn from one to the other and another line erected at right angles to it at its centre, it would pass through the abdominal wall an inch or less above the pubes instead of through the umbilicus—in other words, the conjugate diameter was about an inch and a half; and to our minds, therefore—even if we had wished to do it—craniotomy was excluded. We could not satisfy ourselves that the fetal heart was audible. The mother declared the child had moved a little time before.

Our course was clear. We were bound to deliver the child by abdominal section. She consented, and was at once removed to the Sunderland Infirmary. She was placed under chloroform, and with full antiseptic precautions, including the use of the spray, I opened the abdomen from an inch above the pubes to some three inches above the umbilicus. I then turned the uterus out of the abdomen, and getting one of my colleagues to protect the intestines and to keep the edges of the wound together, I placed an elastic ligature

round the cervix. I then directed my colleague, Mr. Morgan, to hold the ligature lightly and the instant I cut into the uterus to tighten it. This he did. I made a small button-hole incision into the centre of the uterus, introduced both index fingers, rapidly tore the uterus transversely across, seized the fœtus by the neck, and had it out in less time than it has taken to write this. Dr. Beveridge attended to the child, and to his kind attention it owes its life. Tait's clamp was then applied below the elastic ligature, the uterus cut off, and the abdomen closed. The wound was dressed in two divisions with iodoform and wood wool. The upper portion was not touched till the sixth day, when the wound was healed and the sutures removed. The lower portion was dressed every second day, and the clamp tightened. It came away on the fourteenth day. The after-history of the case is uneventful. She had a practically normal temperature, never vomited, passed flatus in thirty hours after operation, and never had a symptom to cause any anxiety. She and her child are now alive and well. The operation, unknown to me, was timed: from first incision to extraction of fœtus, 8½ minutes; to completion of operation, dressing, etc., 35 minutes.

Remarks.—The first case is, so far as I know, the only case hitherto operated on in the manner I have described during labour; one or two cases have been done during early pregnancy.

The second case, although the first done in my district, is now a justly recognised operation. It is one of the easiest in the whole course of abdominal surgery. I am not prepared to say whether it or Cæsarean section should be the operation of election. I do not think the time has yet arrived for us to definitely decide this; I have a perfectly open mind on the subject, as I have a perfectly closed mind on another question, and that is that the day for doing craniotomy on a living fœtus is gone; I would submit as forcibly as I can, that we are not now justified in doing a craniotomy on a living fœtus, when such excellent results can be obtained by abdominal section. There will still be a place for it on dead children where the pelvis is not too narrow, and one would be justified in tapping a hydrocephalic head.

I am happy to say that in a somewhat extensive consulting midwifery practice of several years' duration I have never been present at a craniotomy on a living fœtus.

NOTE ON THE TREATMENT OF MYXŒDEMA BY HYPODERMIC INJECTIONS OF AN EXTRACT OF THE THYROID GLAND OF A SHEEP.

*Read in the Section of Therapeutics at the Annual Meeting of the
British Medical Association held in Bournemouth, July,
1891.*

By GEORGE R. MURRAY, B.A., M.B.CAMB., M.R.C.P.LOND.,
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MYXŒDEMA has until recently been considered an incurable disease. Since the pathology of this remarkable condition, however, has become more fully understood, hopes of the possibility of greatly relieving the symptoms, if not of curing the disease entirely, have been entertained. The observations of the symptoms which followed the removal of the thyroid gland in man made by Professor Kocher, of Berne, and the results of the experimental removal of the gland in monkeys obtained by Mr. Victor Horsley¹ have firmly established the view that this disease is due to the loss of function of the thyroid gland. It was found by Dr. von Eiselsberg that if the thyroid gland was successfully transplanted from the neck of an animal to some other part of the body, it was capable of continuing its functions, and so preventing the onset of the symptoms which would otherwise have followed its removal from the neck. Mr. Horsley then suggested that grafting a healthy sheep's thyroid gland into a patient suffering from myxœdema should be tried as a means of arresting the

¹ Brown Lectures, 1885.