Another evil consists in the plugging the cervix with a so-called drainage-tube, which simply acts like a foreign body. Every practitioner is aware how even a small clot in the cervical canal, if not expelled by the uterine contractions, excites hæmorrhage, and distension of the uterus results. In like manner drainage-tubes are apt to produce distension of the uterus, with gaping of the uterine wound.

There is much difference of opinion as regards the closing of the uterine wound, and according as a successful case is published with or without sutures do we find writers wavering in their opinions for or against. I am quite aware that Dr. Edmunds's cases have done well without sutures, but at the same time I desire to state that I began my operation intending, if possible, to do without sutures, but took the precaution to have them ready in case of need; and I am of opinion that in this case the sutures were not only beneficial, but necessary. Therefore I feel convinced that whilst there may be cases which, when left to themselves, do well, there must be a large number of cases where the sutures are necessary; and Dr. Edmunds's second case, where some alarming gushes of blood continued to take place for three or four hours, was one where sutures were called for, notwithstanding that the patient did survive the danger arising from the uterine wound having been left open. Dr. Edmunds has a curious notion that, if sutures were put into the uterus, it would writhe and writhe until it got itself free. If the sutures are made of pure silk and thoroughly antiseptic, I see no reason why the precaution of closing the wound should not be taken in all cases. Dr. Martin, in the *Berliner Klinische Wochenschrift*, 1876, No. 26, condemns catgut sutures, but recommends silken ones, although I think he wrongly advises that they should be passed through the whole thickness of the uterine walls. Zweifel applied sutures in seven cases, with only one unsuccessful result. Dr. Lébedeff also applied sutures in two cases with good results. Hofmeier published two successful cases in the *Zeitschrift f. Geb. u. Gyn.*, xiv; in both of these he applied sutures. Dr. Galabin, who has published two cases, is of opinion that sutures of some sort are useful as long as they hold fast. Carbolicised gut, in the experience of several, cannot be relied on.

I will not further take up your time with any remarks upon this operation, unless just to observe that a case has been recorded where the operation was performed for suspected carcinoma, and where the same patient was afterwards delivered by the ordinary course and no trace of malignant disease was found. I do this in order to impress more fully the great necessity of making a positive diagnosis before resorting to an operation which may imperil the life of the patient. As regards assistance I think the fewer hands the better, and in the majority of cases the operator and an assistant is quite sufficient in so far as the operation is concerned. Besides these principals, if I may so term them, a third should have entire charge of the instruments, a fourth of the chloroform, whilst a nurse with assistants should attend to the sponges and antiseptic solutions. As in this case, I think the staff and a few students should have the privilege of witnessing the operation if performed in a hospital.

I here take this opportunity to record my indebtedness to Dr. Reid for his able and skilled assistance, to Dr. Oliphant for his supervision of the instruments, and to Drs. Fox and Connal for their careful administration of the chloroform and also their deep interest in the case throughout whilst the patient was in the hospital.

In conclusion, I desire to record that much of the success of this operation was due to the matron, Miss Gordon, and to the nurses for their untiring attention to every detail in the after-treatment of the case.

Now, gentlemen, I thank you for your attention, and would like to hear your opinions, not only on this case, but also upon our duty in all such cases, namely: 1. When is the operation justifiable? 2. Whether Cæsarean section or Porro's operation is in your opinion preferable? 3. The treatment of the stump in Porro's method. 4. Whether the Cæsarean operation might not be accompanied or followed by the removal of the ovaries? 5. Any other points of importance.

NATIONAL REGISTRATION OF PLUMBERS.—Dr. Ewart, Chairman of the Sanitary Committee, Brighton, has been elected President of the District Council of Sussex for the current year. It has been arranged to open classes for plumbers in the Brighton Technical Institute.

CASE OF SUCCESSFUL CÆSAREAN SECTION (PORRO'S MODIFICATION).¹

By D. BERRY HART, M.D., F.R.C.P.E., F.R.S.E.,

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THE propriety of Cæsarean section in suitable cases is not now questioned, but much requires to be done to settle its indications and to perfect its *technique*. Thanks to the work of Porro and Sanger, we are now in possession of vastly improved methods and results, so that what is now chiefly necessary is the publication of all cases where such operations are performed, as a basis that shall be sufficient, in time, for generalisation. My case is briefly as follows.

Mrs. C., aged 25, had been five times pregnant. On two occasions craniotomy had been performed; once abortion was induced at the fifth month, and once premature labour between the sixth and seventh. The child was stillborn in the last instance and with difficulty. After the fourth pregnancy she was advised by Dr. Angus Macdonald to have Battey's operation performed, and was sent to me, after Dr. Macdonald's death, by Dr. Stewart Stirling for advice in the matter. I thought it better to advise Porro's operation, should pregnancy occur again, as this would give her a living child and ensure future sterility. The patient was specially anxious to undergo the risks labour brought her as seldom as possible. Her pelvis, when measured, had a conjugate diameter of 3 inches, and therefore a true conjugate of about 2½ inches. The transverse at the brim was also narrowed. The pelvis was a rickety one, with the narrow transverse found often when the disease comes on after infancy.

She soon became pregnant, and I therefore agreed to perform Porro's operation a few days before labour began. On March 25th last, I operated in a private nursing home, in the following manner. The ordinary details and preparations as for abdominal section I, of course, omit.

Chloroform having been administered by my assistant, Dr. Stewart, I made a six-inch incision through the abdominal walls, and opened the peritoneal cavity. The uterus was incised *in situ* to the same extent. Dr. Barbour keeping up steady pressure all the time. I speedily came down on the membranes in the lower third of the incision, and completed the incision with a probe-pointed bistoury, guided on the index finger. After rupturing the membranes with Péan's forceps, I passed my hand into the uterine cavity, brought out the child head first, and handed it to Dr. Stirling. While this was being done, Dr. Barbour had turned the uterus out of the abdominal cavity and held it so, grasping the isthmus firmly and pressing the abdominal wall round it. I passed an elastic tourniquet, held ready by Mr. Caird, round the isthmus immediately above Dr. Barbour's grasp, and tightened it. The opening of the uterus, and the procedure up to the application of the tourniquet, occupied only a few seconds, and the blood lost was trifling. The child was vigorous, and continues to thrive. I now passed Lawson Tait's modification of Koeberlé's *serre-nœud* round the uterus above the elastic tube, and tightened it. The uterus and placenta were amputated, the handle of the *serre-nœud* brought over the pubes, and thus the stump was pulled down accurately to the lower angle of the wound. The abdominal incision was closed in the ordinary way with silk sutures, after the peritoneal toilette, care being taken to close it firmly round the stump, which was dusted with persulphate of iron and iodoform. There was no shock, the patient made an uninterrupted recovery, and is now, along with her baby (a girl) in excellent health.

I have to thank the gentlemen already mentioned for their valuable aid, as well as Professor Simpson and Dr. Helm, who were present.

I now wish to make a few remarks based on this case and four others I have seen or assisted at. I performed Porro's modification in my case, as it was the patient's desire to have no further risk. The weak point in Porro's operation is the extraperitoneal treatment of the pedicle. In certain cases, however, notably in malacosteon, dead children with putrefaction, and in pregnancy with fibroids, it is the best operation. It is by no means formidable, if performed as I have described, and gives a good rate of recovery. The improved Cæsarean section according to Sanger and Leopold will, however, I am of opinion, be the

¹ Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association, held at Glasgow, in August, 1888.

cutting operation of the future, should it be ultimately shown that the uterine incision does not stretch and cause risk in future pregnancies.

Porro's operation should be performed before labour sets in. The advantages of this are great. The operator can make his arrangements and have skilled assistance at a definite hour. The idea that one should wait for labour, so as to have uterine retraction and less hæmorrhage, is an erroneous one, and leads the operator into difficulties. The waiting causes risk to the child's life, undue delay while assistants are being summoned, and should, therefore, not be deliberately chosen. A further point is that the development of the lower uterine segment, abdominal position of the bladder, and formation of the circular vein, force one to make the abdominal incision higher up, interfere with the formation of the pedicle, and may lead to serious hæmorrhage if the circular vein be wounded. There is little risk of hæmorrhage when the operation is performed before labour sets in, provided one operates quickly, uses the elastic tourniquet, has an efficient assistant, and, in fact, regards the whole operation as one analogous to a rapid surgical amputation.

Three points of scientific interest come up specially now, namely, the condition of the uterus and placenta in relation to the third stage of labour, the primitive shape of the child's head, and the condition of the patient's urine so far as any peptonuria was concerned.

On the second and third points I wish to make a few remarks, as I have considered the uterus and placenta in another paper. Before operation the child was found by palpation lying dorso-anterior, with head in the left iliac fossa. A few hours after birth a plaster cast of the upper part of the head was taken. This was found almost perfectly symmetrical, with no shear present.

The urine was tested daily during the puerperium for peptones, and none found. Fehling's solution in the cold was the reagent used.

It is remarkable that this case is, so far as I am aware, the first successful Cæsarean operation of any kind in Scotland.

ON OUR EXAGGERATED ESTIMATE OF THE VALUE OF BEEF-TEA.¹

By THOMAS LAFFAN, M.K.Q.C.P.I.,
Cashel.

It would not be easy to arrive at an estimate of the precise sum expended on beef-tea during a single year in these kingdoms. It probably may be reckoned by hundreds of thousands of pounds. If, however, the money expended be considerable, the responsibilities cast on it and the opportunities lost by it are more considerable still. Fashion is a despot while she reigns, and it is the fashion to prescribe beef-tea in the gravest as well as in the most trifling diseases. Nor does the fashion dominate a section of the medical army only. The bulk of the combatants seem to be obedient to it. From time to time voices indeed are heard, but they are as voices crying in the wilderness, and are as the passing wind which no man heedeth. I would not expect a different result, but that such a gathering as this offers exceptional opportunities for reconsidering important points in medical treatment.

I have headed this paper with the words, "Our Exaggerated Estimate of the Value of Beef-tea." Now, the value of beef-tea is to be viewed from a double standpoint: first, as a nutrient; secondly, as a mere stimulant and flavourer. It is in the first category that it has been placed by so large a number of us. There is too much reason to believe, especially in these days of expectancy, that with the ordering, and possibly with the making, of a certain quantity of this article, many conscientious physicians deem that they discharge most of the service which they conceive themselves able and bound to render to their patients.

With regard to its value as a nutrient, we may fairly take Liebig for our authority. His every interest was in favour of exaggerating its merits, and his eminence as a chemist specially qualified him to offer an opinion. He states that the greatest care is taken to exclude from his extract all fibrine, gelatine, albumen, and fat. He further adds, that its component parts do not give strength where there is none, and that it merely acts on our nerves so that we become conscious of our existing strength. The same authority confesses that "the extractives and salts is due all the value it pos-

sesses; that it is to be classed with tea and coffee; and that it neither economises carbon for our temperature, nor nitrogen for the sustenance of our tissues. As to the difference between ordinary beef-tea and his extract of meat, he merely claims for the latter that it contains less water than the former.

Another standard authority, M. Sée, tells us that beef-tea contains very little albumen and very little carbo-hydrates. That the glycogenic matter, the inosite, the sugar, and the lactic acid that belong to fresh meat are altogether altered in beef-tea. As to fats, they are almost eliminated.

We have in it kreatine, kreatinine, carmine, inosite, and other quaternary products, which so entirely resemble, or are so nearly allied to, those found in urine, that their small value hardly admits of question; and it is not matter for surprise that there should be so striking a family resemblance in odour between the two. Patients, to my own knowledge, have oftentimes rejected this alleged "nutrient," on account of the striking olfactory relationship between it and urine. The saline matters alone, *plus* the hot fluid, are therefore left to play the most considerable, if not the only, rôle in the value of beef-tea. Further, M. Sée admits that if with a convalescent the strongest beef-tea should replace milk, the result would be disastrous. Similar views have been advanced in this country, and the names of Hassall, Sibson, Wilberforce Smith, Brunton, Masterman, and others may be cited in support of them.

In connection with the discovery of Mühlheim, that peptones, when injected into the veins, produce a soporific effect, I may mention that cold beef-tea, when prepared so as to contain a percentage of albumen, has been found by me, when administered to sleepless patients, to produce a distinct narcotic effect. I do not aver that this result has been attained in every instance, but the effect has in some cases been too pronounced to escape note. Dr. Brunton found that the urine of a healthy man contained all, or nearly all, the albumen that he had ingested but a few minutes before. He added that the albumen in the case was simply absorbed by the stomach and intestines, that it passed without change through the portal system, and was then eliminated by the kidneys, just as sugar would be under like circumstances. He then goes on to raise the question whether, on this account, beef-tea may not be frequently injurious, or even actually poisonous.

Dr. Hassall long ago showed that 14½ lbs. of beef would be required to yield beef-tea enough to supply the nitrogenous daily waste of one individual, calculating that such waste amounts to 512 grains of urea and 21 of uric acid daily.

Experiments made on dogs have brought out the remarkable fact that they die sooner when fed exclusively on Liebig's extract than when left unfed.

Three leading methods may be set down for manufacturing the article under discussion, and the names of Liebig, Leared, Letheby, Hassall, and others, may be bracketed therewith. The essential differences between them are as follow: Under one method, the heat is kept below the coagulating point of albumen. The tea here is a mere infusion, and is consequently what its name purports it to be. Under the second method, the heat is carried above the coagulating point of albumen, and we have consequently to deal with a decoction and not with an infusion. Sometimes the makers of these two forms enclose their meat in a vessel distinct from the water; but in the majority of instances they do not resort to this refinement. Under the third method, the meat is merely macerated, and no heat at all is applied. This extracts a larger percentage of juice from the meat than is attainable by the application of heat. When treated by cold water, the meat yields up, according to Liebig, 60 parts per thousand, and, under boiling water, only 30 parts per thousand.

It is a curious fact, in my experience, that patients, as a rule, tire very soon of the best beef-tea, and that, no matter how well made it may be, they dislike or downright detest it after a few days. Observe that this applies to beef-tea given in quantities of a pint or two in twenty-four hours.

I now come to the method introduced by Mr. Jessop, and which seems to me to give promise of special utility. It proceeds on a different basis, the resultant of which is not properly beef-tea at all, but consists of crushed beef boiled and suspended in water. He lays down the proposition that the essence of the meat resides in its fibre, and not in its salts; and that this fibre must be thoroughly pulped and suspended in a large proportionate quantity of water, so as to suit the requirements of a patient who is incapable of mastication, and who can only swallow fluid food. He allows only one pound (or one-fourth the standard quantity) to

¹ Presented to the Section of Medicine at the Annual Meeting of the British Medical Association, held at Glasgow, August, 1888.