some synovial thickening; in tubercle, definite synovial thickening and no fluid.

It is impossible to discuss the treatment of these cases fully, but, when difficulty arises, be on the safe side and rest the joint for a time. When it is impossible to exclude tubercle with certainty, though a diagnosis of another infection is favoured from the local signs and the presence of infective tonsils, arrangements should be made for enucleation of the tonsils without delay, and for removal at the same time of a fragment of synovial membrane through a small incision. Even when the tonsils have been removed this exploration of the joint may occasionally be advisable, but it is more often necessary in older patients when fluid is more likely to result from tuberculous infection, and the diagnosis is more difficult. Microscopic examination of the synovial membrane, and injection of a portion into a guinea-pig, appear to be more reliable tests than examination of fluid withdrawn from the joint, when this is possible.

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CAESAREAN HYSTERECTOMY.

WITH THE REPORT OF A CASE OF PRE-LABOUR SEPTICAEMIA,
AND OF CARCINOMA OF THE CERVIX IN LABOUR.*

BY

BETHEL SOLOMONS, M.D., F.R.C.P.I.,

MASTER, ROTUNDA HOSPITAL, DUBLIN.

ALTHOUGH the indications for this operation are extremely limited the time has come for a reminder of the occasional necessity for its performance. The operation, although not very recent in discovery, is not very ancient; several workers adopted various procedures before it was really brought to public notice by Porro in 1877. Of his 138 cases 77 were fatal—that is, a mortality of 55 per cent. To Sanger and Leopold credit must be given for drawing attention to the fact that hysterectomy is usually unnecessary, and for making the modern Caesarean operation the "comparatively safe" procedure that it is at present. One of the reasons for this communication is to deprecate a certain tendency to radical measures, when milder methods are safer both as immediate and as remote risks.

The following have been suggested by different obstetricians as possible reasons for performing Caesarean hysterectomy:

1. Fibroids, with or without degeneration.
2. Carcinoma.
3. Sterilization.
4. Accidental haemorrhage.
5. Placenta praevia.
6. Rupture of the uterus.
7. Contraction ring dystocia.
8. Bad contraction of uterus after Caesarean section.
9. Neglected shoulder presentation.
10. In the presence of a faulty Caesarean scar.
11. Osteomalacia.
12. Decompensated cardiac disease.
13. In association with section after a ventral fixation.
14. Sepsis.

Fibroids.

It is a golden rule, so far as fibroids are concerned, not to interfere with them if possible in pregnancy, labour, or the puerperium. Sometimes, however, because of acute and unbearable pain, it is necessary to remove uterus and foetus at any time, usually about the sixth month; this, of course, must only be done after very careful thought. If the pain is so severe that something must be done, the alternatives are an endeavour to remove the tumours in the hope that the patient will carry on to full term, and we have carried out this procedure with success on several occasions; if this is impossible, the uterus should be emptied of the foetus; two or three months later myomectomy is done, in the hope that a further and successful pregnancy will occur at some future time. The removal of the foetus, however, is seldom indicated.

* A paper read before the Royal Academy of Medicine in Ireland.

When a patient comes under observation at full term, if vaginal delivery appears impossible because either of the possibility of tumours low down causing definite dystocia, or of the number of upper segment tumours which may cause inertia, it may be necessary to perform the Caesarean operation. The question "to leave or not to leave" the uterus is urgent. If we do not remove it another operation will be necessary later, or the tumours may degenerate in the puerperium; if we remove it we are adding to the danger of the operation. Caesarean hysterectomy for fibroids is an operation to be approached with extreme caution; many tumours are infected, and our experience in this class of case has not been pleasant. We prefer to adopt temporary measures, either allowing the woman to deliver herself, or performing a simple lower segment Caesarean operation with or without drainage, with the idea of removing the tumour or tumours at a later date.

Nyhoff¹ reports 19 hysterectomies in 250 Caesarean sections, and to our mind some of these hysterectomies are very deserving of criticism; three were for myoma uteri, but in his lengthy paper, which was very kindly translated from the Dutch for me by Mrs. Van Stockum, he does not give full data.

Anderodias and Loubat² reported an interesting case where pregnancy with fibroids was carried to term under great difficulty. At the Caesarean operation stinking liquor amnii was encountered, so hysterectomy was performed. It seems to me that the lower segment operation in this type of case should be perfectly safe without hysterectomy if the upper abdomen is not touched.

Carcinoma of the Uterus.

From a really practical point of view carcinoma of the body of the uterus need not be considered. To my mind the correct treatment of carcinoma of the cervix in the early months is hysterectomy without opening the uterus; if the condition is discovered near viability the cervix should be kept as clean as possible until the child is viable, when a true Caesarean hysterectomy should be done.

Recently at the Rotunda Hospital a woman, aged 28, a 5-para who had had four healthy children, was admitted complaining of a foul-smelling discharge. She appeared ill. The foetus was about 28 weeks, and the foetal heart was audible. On vaginal examination a freely bleeding cauliflower mass was discovered springing from the cervix. The os was about four fingers dilated and the membranes were ruptured. Believing that the haemorrhage which occurs in this type of case when delivered vaginally would kill the patient, Caesarean section was decided on. The uterus was opened, after which it was intended to remove the infant and then the uterus with the placenta *in situ*; but the latter presented; it was speedily removed, after which a live baby, weighing 2 lb. 13 oz., was delivered. The head showed a marked caput succedaneum, caused by the definite disproportion set up by the enormous growth. It was then found that the tumour was of a size larger than a clenched fist, and that it had retracted high over the head, and total hysterectomy was quickly done, for the patient was in a very low state, the pulse rate reaching 190 on occasions. Drainage was effected by gauze in the parametria and a cigarette drain in the cul-de-sac. She recovered from the immediate effects of the operation and has left the hospital. The infant has put on weight and appears likely to live. The pathological report was as follows.

Macroscopically.—The uterus is enlarged, and shows a recent operation wound on its anterior aspect; it corresponds to the post-partum uterus. There is a large cauliflower-like mass springing from the external os; on opening the cavity the uterus is full of blood clot, but presents no other abnormality. The tumour at the cervix is white in colour; on section it is outlined from the cervical tissue; the proliferation appears to be entirely exophytic.

Microscopically.—Sections show solid columns of rather large cells closely packed together and infiltrating the surrounding tissues. There are no cell nests present, but from the appearance of the cells and their arrangement there can be no doubt that they originated from the squamous epithelium of the portio; the line of cleavage between the malignant process and the cervical tissue is well marked, and is surrounded by a zone of small round-celled infiltration. The cervical tissue towards the uterus shows scattered areas of round-celled infiltration.

When the patient is at or near full term before labour starts Caesarean hysterectomy should be performed. We believe this is the best treatment, although section followed at a later period by the application of radium may certainly be considered; but the application of radium to the cervix before the birth of the child must be approached with caution. Goldstein and Murphy,³ in a recent com-

munication, draw special attention to the possibility of great danger for the child after radiation. Among thirty-eight unhealthy or defective children born after post-conception irradiation therapy, sixteen microcephalic idiots were found. Only two of the mothers in these cases received radiation in late pregnancy. The mother in the special case reported was six months pregnant, and received 150 mg. of radium filtered with 1 mm. of brass and 5 mm. of aluminium for twenty-four hours. The history of the microcephalic idiot up to 12 years of age is given. Murphy⁴ in another paper concludes, from the examination of 625 pregnancies in women subjected to irradiation, that because of defects in offspring, the pregnant uterus should never be subjected to radio-therapeutic exposures. This excludes α -radiation for diagnosis.

Sterilization.

Caesarean hysterectomy has been suggested as a means of sterilizing a patient when this is indicated. In the masterly review of this subject given by Muret⁵ it is not recommended. In our practice, when we decide that sterilization is necessary, we adopt much simpler means: after doubling the tube it is tied with a silk ligature. Audebert and Fournier⁶ recommend hysterectomy, while Nyhoff reports a case of abdominal fistula and hernia from a previous Caesarean operation for which he performed hysterectomy. Many writers suggest sterilization by hysterectomy because of a weak scar. There should be no weak scar; if it is weak, it can be resected; hysterectomy should not be done.

Accidental Haemorrhage.

During the past decade, and even up to recent years, obstetricians still recommended Caesarean hysterectomy for this condition. We believe that such drastic treatment is utterly unnecessary. We have participated in the radical and palliative measures for this disease. We have gone through the mill, starting with Caesarean hysterectomy for concealed haemorrhage; we have assisted at the first Caesarean section without hysterectomy for concealed haemorrhage, and have seen success follow its performance; we have arrived at the far more successful results which follow the simple methods at present in use at the Rotunda, and we are of the absolute and dogmatic opinion that while there may be a minute place for Caesarean section there is no place for Caesarean hysterectomy in the treatment of accidental haemorrhage; the same remark applies with stronger force to placenta praevia.

Toxaemias of Pregnancy, including Eclampsia.

Caesarean section is practically never done at the Rotunda for this complication of pregnancy, and there is therefore no reason for doing Caesarean hysterectomy. Those who advise section suggest that the uterus should be removed in some instances because of its atonic condition; as we have stated, we do not concur in this opinion.

Rupture of the Uterus.

This is one of the true indications for the operation. As is well known, after removing baby and placenta, we practise "plugging the rent" when possible—that is, when the rent is consonant with the possibility of plugging and when the baby is not altogether or nearly entirely in the abdominal cavity. If the baby is completely or nearly completely out of the uterus, we advise its removal by the abdomen, followed by hysterectomy and drainage of the parametria by the vagina, in addition to abdominal drainage. This operation must be speedily done, and the subtotal operation is usually sufficient. Among our cases, all of which survived, may be mentioned the last, which occurred in a 10-para. The signs of threatened rupture had not been recognized, and rupture occurred by attrition through the lower portion of the posterior wall. The plug failed to stop the haemorrhage, so laparotomy was performed, and a quick hysterectomy with drainage was followed by recovery after a somewhat stormy convalescence. The total operation is scarcely ever necessary.

Contraction Ring Dystocia.

One of Clifford White's cases was treated by this method. Our opinion on this subject has been voiced in a recent paper.⁷ If Caesarean section is necessary at all, we can-

not see the need for increasing the risk by suggesting hysterectomy in addition. A lower segment operation will relieve the "uterine cramp," and even if infection has occurred, drainage will prevent the occurrence of any serious complication.

Unsatisfactory Contraction of the Uterus after Caesarean Section.

This is mentioned by Nyhoff as an indication, but here again we cannot agree to place this on our list. Hot towels, haemostatic drugs, and possibly, in a severe case, plugging of the uterus, will obviate the necessity for such a radical procedure.

Neglected Shoulder Presentation.

It has been our custom to teach students that if the baby is alive, version can be done; if dead, decapitation; but it must be remembered that in the latter operation great caution must be exercised. Manipulations of too violent a nature will rupture the uterus when the lower segment is very thinned.

What is the procedure when the baby is alive in neglected shoulder presentation? The answer is: If such a state of affairs should arise (and we have never seen it) the lower segment Caesarean operation would be our choice. Is hysterectomy ever indicated in addition? Our answer is in the negative. A neglected shoulder presentation occurred in our practice⁸ in which hysterectomy was necessary later because of puerperal sepsis. This might be taken as showing a definite place for Caesarean hysterectomy in the treatment of this condition, but we do not agree. Most cases of neglected shoulder will not require hysterectomy afterwards; therefore, why do it at all?

Other indications may be mentioned. Nyhoff, already referred to, had a case of a woman of 42 who had had sixteen confinements. He did Caesarean hysterectomy to avoid recurrence of rupture which had occurred in a previous labour. Surely, if section were indicated, sterilization would have been more simply accomplished by tying the tubes.

Osteomalacia.

For osteomalacia Caesarean hysterectomy has often been done, but several patients who seemed to require hysterectomy were treated simply by removal of the ovaries. Van Veltz had a case where the haemorrhage was so severe from the uterus at the time of section that he removed the organ. We do not meet with osteomalacia in Ireland.

Decompensated Cardiac Disease.

If section is indicated for this disease, hysterectomy in addition will lessen the chance of uterine sepsis, and will remove any discomfort or strain associated with the puerperium. Falkiner⁹ has recently mentioned a very successful case of this kind, and it is certainly most practical.

Occasionally after a badly performed suspension, fixation with *posterior sacculation* of the uterus occurs, and Morris¹⁰ has reported to the Academy a fatal case in which we believe the patient might have been saved if hysterectomy had been performed in addition to section.

Sepsis.

Sepsis in the uterus before labour may be regarded as a definite indication for Caesarean hysterectomy. It is extremely rare, and a case which recently came under our notice is of such great interest that it is reported in full here. Septic organisms may invade the uterus, before the end of labour and after the membranes rupture, from infection already in the vagina (autogenous infection) or from a septic cervix, especially with gonorrhoea as the cause. The uterus may also get infected from vaginal manipulation of any sort, and coitus has been regarded in the past as the chief offender. Instrumentation of any kind must be viewed with suspicion, and in the case about to be reported the question as to whether coitus or instrumentation was blameworthy will be discussed.

The patient was a woman aged 38, a 2-para. At her first confinement the infant died *in utero* without apparent cause. She had marked inertia afterwards. Perforation was done, followed by extraction twenty-four hours later. The baby weighed 6 lb. 14 oz. The Wassermann reaction was negative.

On June 4th, 1929, she was admitted at thirty-eight weeks because of free head and pendulous belly. On June 5th, under

ether, the following data were elicited: promontory not reached, the head pushed to the level of the ischiatic spines. Three bougies were inserted. On June 7th, as labour had not started, the bougies were removed and four fresh ones inserted, but in spite of this, as well as oil and quinine, there was no labour. On June 10th she left the hospital against our wishes. She was normal in every way.

On June 21st she was readmitted, and said she had felt quite well until 9 p.m. on June 20th, when she had a rigor. She had another at 9 a.m. on June 21st, when the temperature was 102° F. On her readmission she appeared ill, and as it was thought possible she had influenza, aspirin was administered every four hours.

On June 22nd, soon after midnight, she had a very severe rigor, which lasted five minutes. Temperature 101.2°, pulse 110, respiration 24; profuse sweating, no oedema. The tongue was clean and there were no chest or abdominal symptoms. Blood was taken for culture, and 20 c.cm. of antistreptococcus serum and 7.5 grains of quinine were administered intramuscularly. No history of vaginal discharge could be elicited. The foetal heart was 165 to 170, but there were no pains or history of labour. About an hour later the membranes ruptured, solid meconium came away, and she complained of sudden abdominal pain. On examination the uterus was tender. Careful interrogation elicited the fact that coitus had taken place on June 12th—that is, five days after the second insertion of bougies. A diagnosis of coital sepsis along the track of the bougies was made, and in order to save her life and that of the child, who showed danger signs (meconium, quick foetal heart), Caesarean hysterectomy was decided on. At 2.35 a.m. on June 22nd an abdominal incision long enough to allow exteriorization of the uterus from the symphysis upwards was made. The abdominal wall was protected by coverings, and the intestines by large wipes. After the uterus had been delivered outside the abdomen, the infant was delivered alive; the placenta was left *in situ*, the uterus stitched, and a speedy total hysterectomy done. The parametria were drained by the vagina, and a tube was placed in the cul-de-sac and brought out through the lower abdominal incision.

The temperature and pulse were normal from the time of the operation, but the baby developed a streptococcal rash and died on the twenty-fourth day.

Sections from the placental site, which was rather low, showed dense infiltration with inflammatory cells. Here and there oedematous areas and old interstitial haemorrhages were found, especially near the cervix. There were enormous numbers of plasma cells in all the sections. No organisms were found, but there was marked inflammatory reaction. There were no spirochaetes in the placenta. The blood and uterine cultures were negative.

An examination of the husband revealed pus cells in prostatic smears.

This was evidently a case of true infection from coitus along the track of the bougies. It must not be regarded as necessitating the abolition of the bougie method of inducing labour; it should be regarded as a warning not to allow hospital patients to be discharged after bougie failure; if the patient persists in leaving, she should be warned that she will not be readmitted.

The treatment carried out was drastic, but it was life-saving; there was no doubt about the diagnosis, and if heroic measures had not been taken death of both mother and child seemed to be a certain outcome; in fact, in true pre-labour sepsis, where the upper segment becomes involved, the only treatment is Caesarean hysterectomy with thorough drainage.

A curious coincidence was elicited in this case. The husband of the patient had been married before; his wife had died after Caesarean hysterectomy for accidental haemorrhage at the time when this treatment was the most customary.

The notes of the cases reported were taken by my assistants Drs. Taylor and O'Donel Browne; the pathological data were recorded by the pathologist to the hospital, Dr. F. S. Bourke.

It is sometimes customary to give statistics at the conclusion of a paper such as this. As the number in the Rotunda reports is so small we do not propose to enter into this phase of the subject.

Summary and Conclusions.

1. The indications for the performance of Caesarean hysterectomy are given.
2. The place of the operation for fibroids is small, but for carcinoma is very definite. A case of the latter is reported.
3. Sterilization by hysterectomy is seldom indicated, for other simpler methods are preferable.

4. Ante-partum haemorrhage and the toxæmias do not rank as indications at the Rotunda.

5. Rupture of the uterus sometimes demands its performance, but contraction ring dystocia and neglected shoulder presentation are not indications.

6. Sepsis pre-partum sometimes demands this radical procedure. An interesting case of coital sepsis is described in detail.

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MEASLES IN A MAN OF FIFTY-SEVEN.

BY

ARTHUR J. HALL, M.D., F.R.C.P.,
 PROFESSOR OF MEDICINE, SHEFFIELD UNIVERSITY.

In any country in which measles is more or less constantly prevalent its occurrence in an adult is as rare as its occurrence in childhood is common. The outbreak of measles in the Faroe Islands, recorded by Panum of Copenhagen, showed that adults are as susceptible as children. It was conveyed there in 1846, after an interval of sixty-five years, and 6,000 out of the 7,782 inhabitants were infected. Age was no bar; practically no one escaped who was exposed to it. In this country it occasionally affects young adults, but such cases are not common. The case here briefly narrated of a first attack of measles in a man in his sixth decade is so unusual that it seems worth recording.

On December 24th Mr. X, a married man aged 57, began to be feverish and out of sorts. Catarrhal symptoms, though not particularly noticeable at first, were present. The case was thought to be one of influenzal type. The temperature was slightly raised. On December 27th it fell somewhat, and he seemed rather better; also on the morning of the following day. The attack was thought to be passing off. In the evening of the 28th, however, the temperature rose to 103°, and a rash was noticed. On December 29th the rash was much more extensive, and the temperature 104°. There was also considerable bronchial catarrh. His medical attendant, Dr. Parrett of Thorne, recognized the nature of the disease as soon as he saw the rash. He was naturally surprised and a little anxious, because the patient had for some years been subject to bronchitis in the winter months.

On December 31st, as the temperature was still high, the pulmonary symptoms increasing, the pulse rate going up a little, and as there was also some cyanosis, Dr. Parrett asked me to meet him in consultation. The patient was mentally quite clear and alert. There had been no delirium at any time. The cough was very troublesome, and rhonchi were audible over the lungs, but there was no real dyspnoea. The pulse was 88 and regular. The face was dusky red, slightly cyanosed. The conjunctivae were injected, the tongue was an intense fiery red with whitish patches here and there. The rash was more marked on the face,