The evolution of antral surgery shows clearly that openings made through the external sinus walls, away from intranasal ventilation, have proved a failure, and are now obsolete, because they are contrary to the principle which maintains air function in the sinuses and restores its loss when absent. The early Caldwell method or those of Cowper and Kuster have gone this way. The Caldwell-Luc operation, as now performed, still holds its place for cases complicated by gross oedematous changes in the lining, such as those just described, but in the absence of this complication, and for ordinary recent suppurative, the intranasal antrostomy—the really functioning portion of the Caldwell-Luc operation—must continue to be the method of choice.

I frequently make a second opening in the hiatus semilunaris by enlarging the anatomical ostium region, as recommended by Harmer and Gerber. This provides thorough ventilation of the cavity and the additional very important service of affording a continued portal of output for ciliary activity. Horgan carries his intranasal antrostomy opening high into the middle meatus, but this is for cases complicated by ethmoidal disease. It is excellent as a combined operation, and is planned on sound principles of ventilation.

PRESENT POSITION OF CAESAREAN SECTION IN OBSTETRIC PRACTICE *

BY

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When Numa Pompilius, Consul of Rome, promulgated the *Lex* he did so to the end that the opening of the uterus of the dead woman might save the child and so help in some measure to check the falling birth rate. When the operation was performed upon Henry VIII's consort, Jane Seymour, in 1537 it was done as a last resource in the struggle to produce a live heir to the throne. Later the very high mortality of the operation was faced as an alternative to the certain death of both mother and child: it was an attempt to avoid an inevitable catastrophe. In these days it would almost seem that Caesarean section is done because it is the easiest way in which the surgeon can deliver the woman of a child.

That all is not well nor has been for some years is shown in the written opinions of several authorities. The late Dr. Whitridge Williams, in the fifth edition of his *Obstetrics* (1921), says: "Many practitioners in urban districts have been led astray by the teaching of those who regard labour as a pathological rather than a physiological process, with the result that interference upon insufficient indications is frequently undertaken by those who do not fully appreciate the risk involved." He further quotes the conclusion of the Massachusetts State Medical Society in 1921, that next to puerperal infection Caesarean section was, in that State, the commonest cause of death after labour.

In the final report of the departmental committee of the Ministry of Health appears the polite but disturbing statement: "The committee's observations lead them to believe that in some cases there may be a tendency to resort to Caesarean section as a treatment for complications of labour, perhaps without due consideration of other methods of obstetrical treatment."

The New York Academy of Medicine Committee in its report upon maternal mortality in New York City (1933)

* Read in opening a discussion in the Section of Obstetrics and Gynaecology at the Annual Meeting of the British Medical Association, Melbourne, 1935.

concludes that "the data reveal an excessive use of the Caesarean section, and, as a result, a great increase in the mortality." The committee goes on to the most important conclusion "that a sharp reduction in the number of Caesarean sections performed is to be strongly recommended. Only by the definite narrowing of its use to the legitimate occasions demanding it, as well as by the provision of capable operators, can a decrease in these deaths be achieved." Holland animadvertes (*Lancet*, April 27th, 1935) upon "the increased opportunities given to local practitioners who may possess neither the requisite judgement nor skill of performing Caesarean section" and remarks that "the number of Caesarean sections has increased in an astonishing manner."

These statements suggest that the operation of Caesarean section occupies an unjustifiable position in obstetric practice to-day, that the incidence of the operation is far too high, that the indications for its use are at present too wide, and that it is attended by a mortality which makes it suspect among measures that should have for their aim the diminution of a maternal mortality which is at present too high.

Some Recent Figures of Caesarean Section

All these contentions are, I submit, abundantly borne out by a consideration of a series of cases, the result of which I present to you to-day. The series contains 3,486 cases of Caesarean section, 1,763 of which are taken from the reports of five large maternity hospitals in the British Isles during the years 1922-32, and 1,723 cases which occurred in the Borough of Brooklyn in the years 1921-26, and are analysed in the *American Journal of Obstetrics* (September, 1928). A study of these cases does, I fear, make it certain that the strictures upon the present place occupied by Caesarean section are not undeserved.

The enormous increase in the incidence of the operation will be obvious when we remember that in 1910 the late Dr. Amand Routh, in a monograph read at the Cinquième Congrès International d'Obstétrique et de Gynécologie at St. Petersburg, and published the next year in the *British Journal of Obstetrics*, had collected 1,282 cases as the complete experience of over 100 obstetricians practising in the British Isles who were living in 1910. Compare this number with 1,723 operations which were done in one American borough in five years, or with 609 operations in a single English maternity hospital of under 100 beds during a period of ten years.

Indications for the Operation

Turning to the indications for the operation we also see a very marked contrast between the conditions obtaining in 1910 and those in evidence to-day. Dr. Routh (loc. cit.) gives in a summary of the indications present in the cases the following:

Obstruction to Labour:

1. Contracted pelvis.
2. Fibromyomata.
3. Cancer of cervix or vagina.
4. Ovarian tumours.
5. Other pelvic tumours (osteomata, enchondromata, cancer of rectum, hydatid, bicornuate uterus).
6. Stenosis of vagina or cervix.
7. Miscellaneous (previous ventral fixation, tonic contraction, hour-glass contraction, prolonged gestation).

Uterine Haemorrhage:

1. Concealed accidental haemorrhage.
2. Placenta praevia.

Constitutional Crises:

1. Eclampsia.
2. Miscellaneous (chorea, advanced heart disease, obesity and anasarca, myasthenia gravis).

In all there are twenty-four different indications.

In the series under review there are fifty-five separate indications for the performance of the operation, including such diverse states as failure to progress (twelve cases), advanced age of mother (twenty cases—average age 39), breech presentation (thirty-eight cases), previous repair of perineal tears, and unwillingness to undergo the pains of labour. In no fewer than 2,212 cases the indication given is contracted pelvis, surely an unwarranted slur upon modern feminine physique.

And now as to the risks of the operation. Can it be defended upon the grounds of safety? In these 3,486 cases there were 231 maternal deaths, giving a maternal mortality of 6.6 per cent. This mortality must be compared with the gross maternal mortality following childbirth at present occurring in England and Wales, which may be taken at somewhat about 0.45 per cent. It follows that Caesarean section has a mortality sixteen times as great as the mortality attending all obstetric cases. When, moreover, we remember that the Registrar-General's figures include some 170 deaths following Caesarean section (1932), the increased danger of the operation is abundantly obvious.

It will no doubt be argued that it is not fair to consider this mortality *en masse* of the operation as an argument against its so frequent employment, and that it is unfair to results which may be expected in the hands of competent operators. It may be said that these results include cases in which the Caesarean section is done as a last resource—in infected cases or in grave maternal states. All this is true, but may I point out that the mortality rate in 1,763 operations performed in famous maternity hospitals by experienced and distinguished operators amounts to 5.8 per cent. The figures are published and open to all to read, and are probably much better than those which obtain over the length and breadth of the land.

Factors Responsible for Increase

It is not within the scope of this paper to adduce reasons or excuses for the high mortality attending the operation, but it is perhaps germane to to-day's discussion to point out any factors which appear conducive to the enormous widening of the indications for its performance, which widening in its turn is the cause of the amazing frequency of the operation.

First and foremost may I express my profound conviction that the purely surgical outlook upon obstetric problems lies at the root of this upas tree at present flourishing in the fair garden of obstetrics. The dictum of Hilton in the management of pent-up pus is being adopted as the rule for the release of the often only apparently pent-up baby. "Let it out," say the surgically wise but obstetrically foolish, and so it is done. With the knowledge that a uterus can be so easily emptied by a Caesarean section comes a contempt for nature, with her more deliberate, painful, but infinitely safer technique. This is especially noticeable in the modern treatment of cases of disproportion, where Caesarean section is employed either without giving nature any chance at all or after a travesty of the trial labour. It is the experience of all of us that nature's power of overcoming moderate degrees of disproportion is infinitely greater than we imagine to be the case; while to believe that a trial labour can be truly so called until true second stage pains have been present for some hours, is to be ignorant of the fundamental facts of the mechanism of labour.

A second factor which has produced this orgy of operations is one almost wholly educational. It is the failure to appraise by full and complete examination the exact conditions obtaining in a given case. The indication "failure to progress" is a good example of what I mean, for the use of such an expression is tantamount

to an admission that the operator is ignorant of the local obstetrical condition present.

Such an appreciation of a difficult case is only made possible by a prolonged practical training in obstetrics and in the conservative practice thereof, and the responsibility for improved conditions in this respect lies upon other shoulders than those of the teachers of obstetrics who have laboured for years to effect improvement. It is essential that the practice of obstetrics be in the hands of obstetricians and not in the hands of surgeons who do obstetrics.

A further factor which is responsible in part for the present condition of things is the increasing value given to the life of the baby in the marshalling of the facts which are to decide the treatment. This is inevitable in view of a falling birth rate and deliberate limitation of families, but I am confident that too much stress is being laid upon the infant's life, to the sacrifice in many cases of the mother.

Lastly, in this connexion it is, I think, a fact that we do not sufficiently realize that when we subject a woman to a Caesarean section we shoulder the risk of an abdominal operation the mortality of which, if we put it at 1 per cent., is still five times greater than that 0.2 per cent. which most of us regard as an almost minimal mortality in childbirth. We also add "previous Caesarean section" to the difficulties of those who may have to order the management of a future labour.

It is my firm conviction that, as at present practised, the state of Caesarean section is a prostitution of what, under proper conditions, is a beneficent operation to a desire for speedy delivery in cases where the only real requirement is skilled obstetrics.

TREATMENT OF CHRONIC NON-SPECIFIC ARTHRITIS WITH INTRAMUSCULAR INJECTIONS OF SULPHUR

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Substances producing febrile reactions have a recognized place in the treatment of chronic arthritis. While personal experience with intramuscular injections of sterile milk, casein, and similar preparations has been disappointing, improvement has occasionally followed the intravenous injection of T.A.B. vaccine. The constitutional reactions with this substance were so variable, however, and in some instances so severe, that it was seldom practicable to give more than two or three injections, thus restricting improvement.

In 1921 Meyer-Bisch¹ claimed good results from the intramuscular administration of suspensions of sulphur in oil. In this paper the results obtained in fifty cases of chronic non-specific polyarthritis similarly treated are given. A 1 per cent. suspension of sulphur in oil was used, as introduced by Schroeder² in 1927 under the name of "sulfosin" for the treatment of neurosyphilis. Intramuscular injection of this preparation is followed in from ten to twenty-four hours by a febrile reaction, of such degree that it can readily be controlled and varied to suit individual patients.

General Therapeutic Considerations

It is extremely difficult to assess the value of any treatment in chronic arthritis, for, excluding such specific conditions as gout and gonococcal infection, striking im-