THE
Journal of Obstetrics & Gynaecology of India

VOLUME XVI, No. 3 JUNE 1966

# THE PLACE OF MANIPULATIVE OBSTETRICS IN MODERN PRACTICE

by

SIR HECTOR MACLENNAN, M.D., Ch.B., F.R.C.S., Hon. F.A.C.O.G., P.R.C.O.G.

I am greatly privileged to be invited to give the Dr. Dossibai J. R. Dadabhoy Bombay Obstetric and Gynaecological Society's Silver Jubilee Oration. Dr. Dossibai was one of the pioneers in our speciality. I am led to believe that she was one of the first to introduce radium into India. She was also the first woman gynaecologist to hold the London M.D. and was a Member of the Royal College of Physicians in London. With her associates, Dr. Jhirad and the late Doctors N. A. Purandare and De Sa, they formed a formidable triumvirate and did much to modernize obstetrics in your country. The large attendance here today is ample evidence of the honour in which they were held.

*The Dr. Dossibai J. R. Dadabhoy Bombay Obstetric & Gynaecological Society's Silver Jubilee Oration, February 3, 1966.*

*President, College of Obstetricians & Gynaecologists of United Kingdom.*

Some fifteen years ago, during my first visit to New York, the late Dr. Barrett said to me he thought that modern obstetric practice could be summed up in two procedures, namely caesarean section and prophylactic low forceps. At the time I remember feeling rather shocked to think that all the years of expertise, which many of us had acquired in some of the more esoteric and manipulative procedures would, if Dr. Barrett was right in his views, become useless and would quickly depart to the limbo of forgotten things. Indeed, today, it would appear that obstetric surgery is becoming more and more confined to these two simple procedures, caesarean section and low forceps.

I have, however, thought it useful to discuss with you what other obstetric operative procedures are worth preserving; how they should be taught, and where and when they should be applied.

The twentieth century has seen a

remarkable evolution in obstetric surgical procedure. It was as late as 1888 that Professor Murdoch Cameron startled the world by performing three successful caesarean sections consecutively. He had been one of Lord Lister's surgical dressers and he carried out the operation under the carbolic spray. The anaesthetic used was chloroform and Cameron, himself, was a lightening operator. The anaesthetic, his speed, and the antiseptic technique achieved what had hitherto been impossible.

At the turn of the century, the classical caesarean section was recognised as a proper procedure in cases of grave dystocia, but there was considerable argument as to whether it was safer for the mother to have a craniotomy performed than to have a caesarean section, and it was not until 1908 that the number of caesarean sections exceeded the number of craniotomies performed in the Glasgow Royal Maternity Hospital.

The lower segment caesarean section, as opposed to the classical operation, was popularised by Munro Kerr and others and it undoubtedly added to the safety of the operation by reducing the incidence of infection, or by limiting it to pelvic peritonitis.

At this point it cannot be too strongly stressed that, prior to the introduction of chemotherapy and antibiotics, death would follow caesarean section all too frequently — from generalised peritonitis within a few days of the operation — from paralytic ileus within a week. This deadly threat hung over the heads of all who were rash enough to perform caesarean section on a potentially infected case — and these were many. I must define what we considered to be potentially infected cases. Patients whose membranes had been ruptured for more than twenty-four hours might well have an infected uterine cavity which, opened at caesarean section, would soil a parietal peritoneum. Multiple vaginal examinations would carry infection from the lower vagina to the upper genital tract, and were potentially dangerous on that account. Any kind of intra-uterine manipulation prior to caesarean section was regarded as highly dangerous; this was universally accepted.

There is no doubt that the genital tract was able to contain and combat infection following prolonged labour or intra-uterine manipulations infinitely better than the parietal peritoneum and, in the first half of this century, obstetricians were wise in their conservative attitude towards caesarean section, realising as they did the risks of infection. Two schools of thought emerged; those who were ultraconservative and carried out induction of premature labour as a prophylactic measure against dystocia, and those who carried out elective caesarean section at term, or a carefully conducted trial of labour followed by caesarean section.

It should, therefore, be appreciated by the younger members of the audience that not until anaesthesia had improved, blood transfusion had become commonplace, and chemotherapy and antibiotics were readily available, did caesarean section become anything other than a hazardous operation. Indeed, it was not until 1949, at the British Congress in

London, that obstetricians were prepared to accept a greatly increased caesarean section rate as a proper procedure in obstetric practice. To the late Macintosh Marshall of Liverpool we owe a debt in this regard.

*Incidence of Caesarean Section in Glasgow Royal Maternity Hospital*

| Year | Rate |
|---|---|
| 1930 | 2% |
| 1940 | 2.4% |
| 1950 | 4.4% |
| 1960 | 6.1% |

Having established that caesarean section was a hazardous operation, what alternatives were at the disposal of the obstetrician? There were, of course, the various types of forceps delivery by some form of axis-traction, or by Keilland's forceps. There was internal version and breech extraction. Again, internal version was used for transverse lie or shoulder presentation. Caesarean section would never be countenanced for breech presentation. De Lee stated "Let me watch a man deliver a primigravid breech and I will give you his obstetric rating." There was Baudeloque's manoeuvre, or Thorne's modification of this, in the treatment of face presentation. Where there were minor degrees of pelvic contraction, symphysiotomy or even pubiotomy found favour with some. This was particularly so amongst the Irish school. Dystocia occurring in the presence of a hydrocephalic, or even where the baby had died in utero, was terminated by perforation, and extraction was completed by means of the cranioclast and cephalotribe. In placenta praevia Braxton-Hicks bipolar version was frequently practised.

These were some of the manipulative manoeuvres devised to effect delivery without recourse to caesarean section.

Let it be clearly understood that in a highly civilised country with an affluent society, a high standard of antenatal care with adequate hospitals, well-equipped and properly staffed with experienced consultants, there will be very little place for any of these manoeuvres. Caesarean section under these circumstances is now one of the simplest and safest of operations while such conditions exist in the great cities of India. At the same time we must recognise that at least two-thirds of the world population do not enjoy these benefits — 70 million of a population in Pakistan, perhaps 650 million in India, who live in the villages and rural areas and possibly some 600 million or more in China, to say nothing of the African Continent and South-East Asia; for them the situation is very very different. Against this background, therefore, let us examine the old procedures which I have mentioned, to see in what degree they are applicable today.

First, let us take difficult forceps. Even by the 1930s high forceps with the head free above the brim had been condemned, but high mid-pelvic forceps was commonplace. The indications for such deliveries were maternal or foetal distress, and the desire to avoid the risk of caesarean section. Having made the decision to deliver vaginally, the doctor, in order to avoid the stigma of a failed forceps, would often use undue force to effect

delivery, with traumatic results to both the mother and child. Today there is no place for this type of obstetric assault. It was a subtle advocacy by Jeffcoate in the postwar era to advise 'trial of forceps', so that when force became necessary, forceps could be abadoned and recourse made to the now safer procedure of caesarean section.

Modern practice today frowns upon breech extraction, as opposed to assisted breech delivery. Where difficulty is anticipated, in a breech delivery, caesarean section has undoubtedly lowered the perinatal loss. Nonetheless, there are cases in which breech extraction would be infinitely preferable to caesarean section, for reasons which I shall refer to later.

Let us consider internal version. Has this satisfying manoeuvre any place in modern obstetrics? What are the hazards of the operation? To the mother, of course, there is a serious one — that of rupturing her uterus. But this risk is greatly lessened if the baby to be turned is a small one and if there is plenty of liquor amnii present. As an example of a relatively safe procedure where the mother is concerned, one could instance internal version with a second twin immediately after rupturing the amniotic sac. In such a case the obstetrician would require to be particularly ham-handed to injure the maternal tissues; the smaller the child, the more liquor amnii, the easier the version; equally and opposite, the larger the child, the less liquor amnii, the greater the danger of uterine rupture. Where this operation is contemplated, in circumstances which may be possibly adverse, it is important that it should be carried out really slowly and that under full anaesthesia the uterus should be as relaxed as possible. The danger to the child, of course, is that of asphysia, due to cord prolapse or undue pressure upon the cord or placenta.

Before leaving the manoeuvre of version, one must consider the place, if any, of Braxton-Hicks bipolar version in placenta praevia. Obviously caesarean section, under ideal circumstances, is the operation of choice and carries a much smaller risk than the operation which has now become all but outmoded in our country. But the question arises — do conditions ever exist when caesarean section for placenta praevia under ideal conditions is impossible — and one must answer that undoubtedly, from time to time, they do. I can recall a case, on an island in the West of Scotland, of Grade IV placenta praevia commencing to bleed very furiously for the first time. The patient was about thirty-five weeks pregnant and had gone into premature labour. Internal version was successful in staunching the haemorrhage, and it is questionable if any other procedure would have been as effective. I can recall an incident in my own practice when I examined a patient who threatened to go into premature labour at the thirtieth week. To my horror I found she was half dilated with a Grade III placenta praevia. She was bleeding profusely and Braxton-Hicks bipolar version was the operation of choice, in the circumstances in which I found myself placed. These are, of course, rare occurrences but I was grateful I had learned the method

and was able to employ it in the emergency.

*Internal Version*

| Indication | 1930 | 1940 | 1950 | 1960 |
|---|---|---|---|---|
| Malpresentation | 27 | 28 | 15 | 9 |
| Placenta praevia | 20 | 4 | 2 | — |
| Prolapsed cord | 1 | 4 | — | — |
| Accidental haemorrhage | 1 | — | — | — |
| | 49 | 36 | 17 | 9 |

With shoulder presentation or transverse lie in labour, again in ideal circumstances caesarean section is the operation of choice, but the operation of internal version on a small child can, on occasion, be comparatively simple, if it is carried out slowly, and may be preferable to caesarean section in the grossly premature case. Again, in certain backward areas of the world, the patient may be several days in labour with an impacted shoulder presentation. The degree of impaction will determine the manipulation. Occasionally internal version may be possible but, where it is impossible and especially where there is evidence of gross infection, then decapitation and extraction of the dead foetus is a reasonably safe and simple procedure. When it is undertaken, it is wise to sever the neck with cleidotomy scissors, having steadied it by traction on a hook; the so-called decapitation hook is a dangerous and useless instrument.

Another method which has been shown to be notably successful in the hands of professor Tow of Singapore, is to introduce a malleable copper wire into the vagina and round the foetal neck. This is then attached to the hook on a Gigli saw and subsequently the neck can be sawn through with comparative case.

With regard to symphysiotomy or pubiotomy, I must confess to having a limited experience, but my colleagues, Doctors Spain, Barry and O'Driscoll, in the National Maternity Hospital in Dublin, still practise it fairly extensively. It is indicated where the degree of pelvic contraction would be sufficient to cause considerable dystocia. In Ireland and in other large Roman Catholic communities, where contraception and sterilisation carry a religious bar, symphysiotomy obviates the necessity for multiple caesarean sections. Again, in countries where the inhabitants are nomadic e.g., certain parts of Africa, the patient disappears after a caesarean section and her subsequent pregnancies and labours may take place at a considerable distance from expert help. In consequence such a patient is liable to rupture of the uterus and here again symphysiotomy is preferable.

Face presentation, although comparatively unusual, is not rare in the practising life of an obstetrician. He or she will encounter a number of these cases. Where the chin is anterior, there is usually no cause for alarm, and spontaneous birth may be anticipated, or the application of low forceps may assist this procedure. On the other hand, when the chin is posterior, I can think of few more difficult deliveries. One has the option of manual rotation or forceps delivery or, of course, caesarean section but, if the case is diagnosed early in labour with the cervix half dilated and the membranes unruptured, or even if the membranes have

ruptured but the uterus still contains a reasonable amount of liquor, there is no more satisfactory manoeuvre than that of a Baudeloque's. Here the accoucheur inserts his hand or fingers through the cervix and, grasping the occiput, endeavours to flex it. With his other hand on the abdomen, he pulls the breech downwards in an endeavour to flex the body. Suddenly the head flexes completely and a right mento-posterior becomes a left occipito-anterior within a few seconds. The descent now occurs readily and spontaneous delivery is often effected within a few hours. How much more satisfactory is this procedure than caesarean section, or a forceps delivery, and yet how infrequently is it performed today! I myself have carried out a number of these cases and I think one of them was of sufficient interest to report—(Pomegranate.)

In my opinion an attempt at flexion of the mento-posterior should always be made before recourse to caesarean section or other operative procedures.

With regard to deep transverse arrest, no less an authority than de'Esopo has suggested that there is a place for caesarean section in such cases. With this, of course, I would agree but I would suggest to you, gentlemen, that early manual rotation, or Keilland's rotation, is more likely to be successful, and less traumatic, than the same procedure attempted after a deep transverse arrest has been allowed to proceed and mould in the hope — often vain — that spontaneous rotation will occur.

It is in these types of cases that errors of judgment can occur and it is, therefore, in such cases that the trial of forceps, as advocated by Jeffcoate, would be reasonable.

I cannot really see any place today for manual dilatation of the cervix or Durrhsen's incisions, with one possible exception, to which I have no time to refer. It would appear that the ventouse has supplanted this and should be used where caesarean section is deemed impracticable.

Of the various manipulative procedures, I have not mentioned destruction of the child by craniotomy or by the use of the cephalotribe. When we come to consider the delivery of the baby dead in utero, either before or during labour, or again the delivery of the malformed child such as the hydrocephalic, is there a place today for the destructive operations of yester years — perforation and the use of the cranioclast and cephalotribe? The answer really depends upon the community and circumstances in which the obstetrician carries out his practice. There is still, of course, a limited place for these procedures in the under-developed countries, where the baby is dead and where infection would render caesarean section dangerous, either from Welchii or other infection. These manipulative procedures can be difficult. The instruments themselves are heavy and coarse, but oddly enough the operation is not made easier where lighter tools are used. Most obstetricians would prefer to do a caesarean section, even with a dead baby, under antibiotic cover, rather than attempt a craniotomy and cephalotribe extraction, for the very good reason that they have had no experience of this method.

This brings me to one of the criti-

cal points in this discussion. How can we teach these manipulative procedures in a highly civilised community such as Glasgow, London or Bombay where modern surgical techniques are readily available? How can a young obstetrician learn without making mistakes, and how can these mistakes be justified when the mother's life is no longer at stake and the perinatal mortality rate must be lowered at all costs? The answer is, of course, that in such a community the opportunities are few and far between, and it is probable that the art and practice of these older manipulative procedures will become a lost one. However, there is one possible exception and that is the practice of performing internal version and breech extraction on the second twin. This is often justifiable, and it certainly gives the young obstetrician practice in a manoeuvre which may be most useful in an unexpected emergency, which he may have to face on his own at a later date.

There is, however, another field in which these manipulative operations may be learned and that is where obstetricians do part of their training in underdeveloped countryside or even underdeveloped countries overseas. Twinning of universities is becoming more and more popular; the University of Edinburgh with the University of Baroda, India; the University of Glasgow with the University of East Africa, in Dar-a-Salaam, Kenya and Tanzania; the University of Birmingham with the University of Salisbury, Rhodesia; London University was with the University of the West Indies. There are, of course, many other examples. It is not uncommon for young obstetricians to give service in the underdeveloped countries. In these countries caesarean section can be a high risk operation and here the opportunity presents itself, not merely to learn these procedures, but to practise them for the benefit of the patient.

Caesarean section on a patient who is in poor physical condition and already infected may be, as I have said, a dangerous operation. Again it carries with it an added hazard in that should the patient recover, she will often disappear from the ken of the obstetrician and, indeed, from the ambit of medical assistance. Many are nomadic, many are illiterate, and many will not seek medical care when next they become pregnant, with the result that the caesarean scar constitutes a perpetual danger to such women, and delivery per vias naturales is greatly to be desired. If there is greater foetal wastage by employing such methods, there is certainly less maternal wastage, and thus the older manipulative procedures can still be justified, as indeed they were justified in this country, when I or the older members of the audience practised them.

Finally, it must be remembered that in both your own city of Bombay and my own city of Glasgow, where maternal mortality has ceased to be a problem, or perhaps I should say it only remains for us to maintain by constant vigilance the present satisfactory position, this we can do with very little recourse to the older manipulative procedures, which were designed to safeguard the mother, admittedly at

the cost of a high perinatal mortality. The agonizing choice of risking the mother's life to ensure a live child is one which rarely faces us today in the cities. Nonetheless we must not forget that to lower the maternal mortality is still the target in many other parts of the world, where the assault on the perinatal mortality is yet to come. Thus the practice of obstetrics in the underdeveloped countries must have different priorities. They would do poor service to the community if they hazarded the life of the mother for the sake of a child whose chance of survival at the end of one year is only 40%. In consequence I would suggest, ladies and gentlemen, that we do well to consider, from time to time, not merely our obstetric practice as we know it in our own city or in our community, but the wider aspect of obstetric practice throughout the world.