Observations

ON THE

CÆSAREAN SECTION AND ON OTHER OBSTETRIC OPERATIONS.

BY

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CHAPTER VII.

The Means of Delivery by Destructive Operations.

I.—*The Induction of Abortion.* The induction of abortion has been proposed for the purpose of superseding the necessity of the Cæsarcan section; but, in general, the woman has passed the period when it could be advantageously performed. In the great majority of such cases, she has arrived at the full period of pregnancy, and in many cases labour has actually commenced before the obstetrician has become acquainted with the malconformation of the pelvis. Sometimes he becomes acquainted with the pelvic deformity from the difficulty he has experienced in a former labour. It occasionally occurs, although very seldom, that the presumptive evidence of a malformed pelvis may be so strikingly observable in the early months of a first pregnancy as to induce the woman or her friends to apply to an obstetrician. But tumours of different kinds and exostosis may exist in the pelvis, without affording any indications whatever which might lead to a suspicion of their existence.

Whenever it is ascertained, after a most careful investigation in a first pregnancy, that the pelvic capacity is either positively or relatively too small to permit a viable infant to pass, then it would be justifiable, if possible, to perform this operation. But, if the woman again become pregnant, a question arises, whether it is justifiable again to adopt this plan. My opinion (which I submit with great deference to the profession) is, that it ought not a second time to be performed. If such a practice be admitted as sound, it establishes a principle totally at variance with the laws of God and man. The remarks to be made hereafter on the comparative value of maternal and fetal life will, I hope, be fully considered before such steps are a second time followed.

It has been remarked, that some teachers of midwifery in this country have asserted that this operation should be only once performed, after which the wretched woman should be left to take the fearful chance of the Cæsarcan section. To say this, was to assume the position of the Supreme Judge. Just as well we ought to cure syphilis once only. It is said to be "a moral dogma, absurd and immoral, to prefer an ovum of four or five months, dependent for its existence on the mother." I shall not attempt to refute these remarks; but, after I have fully put my opinions before the profession, I shall content myself to leave the subject in their

hands, with a desire that they will carefully weigh all the contingent circumstances, and consider whether there is any validity in my observations.

It is not on moral grounds alone that I object to the induction of abortion in order to supersede (as it is said) the Cæsarcan section. It is not so safe an operation as it is usually represented. On the contrary, sometimes great danger has succeeded, and in some cases even death has ensued. Great difficulty has frequently been experienced in its performance, and in some cases it could not be accomplished. When the pelvis is highly distorted by mollities ossium, its entire character is changed; its cavity becomes altered in its shape, and all its diameters are very much diminished, whilst the depth anteriorly is very considerably increased. The position of the viscera which are normally contained within the pelvis is changed according to the degree of distortion. The uterus is especially altered in its relative position; it stands obliquely above the brim; and, in most cases of extreme deformity, the os uteri cannot be felt. (See preceding remarks.) Under such circumstances, it is utterly impossible to perform this operation; and, in many cases, great risk is incurred by making the attempt. It is true that, by rash and rude manoeuvres, so much mischief may be done that the expulsion of the ovum follows, although there has been no direct entrance into the os uteri, but solely in consequence of the injury inflicted upon the uterus or upon some contiguous organs, which is succeeded by great constitutional irritation, fever, etc., and sometimes by death. An experienced practitioner unsuccessfully attempted to destroy the ovum. The woman died from the effects. The pelvis is in my possession, and is an example of very great distortion from mollities ossium. Similar cases are also elsewhere recorded. In pelvis distorted from the effects of rickets, in which the brim is elliptical, and the cavity and outlet comparatively more capacious, the difficulties above mentioned would be found considerably less.

I may be told that the difficulties and risks of attempting to induce abortion by passing an instrument through the os uteri, for the purpose of destroying the ovum, may be almost altogether avoided by the employment of the douche. From all the information which I have been able to obtain upon this subject, this measure has very frequently failed to produce any effect when employed in the early months of pregnancy.

II.—*Craniotomy.* Craniotomy is recognised in these kingdoms as an operation of election, and is most extensively and frequently performed. It is employed in those cases of difficult labours in which the women cannot be delivered by the forceps, long or short, by the vectis, or by turning. It is also often had recourse to in many contingent accidents which happen during parturition, as in some cases of accidental and unavoidable hæmorrhage, in some cases of convulsions, in some cases of rupture of the uterus, and also in those cases of protracted labours in which, from the neglect or ignorance of the practitioner, the pelvic organs and tissues are brought into such a state from pressure as to render delivery by other means hazardous to the life of the woman.

It has been proposed in cases of osseous deposits in the pelvis, on the grounds that it is impossible to estimate their density, and that most likely the structure would yield or even break down under the

pressure made upon it during the extraction of the reduced head. This is, however, an unwise proposition, and ought not to be entertained upon such a presumption alone.

Now, when we contemplate the aggregate amount of infants destroyed by craniotomy in these countries for one year, the thought must be truly appalling. The facts of such a case cannot be, unfortunately, accurately arrived at. Reports of lying-in hospitals may in some degree show the force of this remark. Dr. Collins reports that, during his mastership at the Dublin Lying-in Hospital, 16,414 women were delivered, during which time craniotomy was performed in seventy-nine cases. Dr. Joseph Clarke reports that, in 10,387 cases of labour, craniotomy had been performed forty-nine times.

Now, assuming, in the first place, that craniotomy was performed relatively as frequently in the aggregate amount of labours in England and Wales which occurred in one year, as it was under Dr. Clarke's management in the aggregate of his cases, we should have 2,834½ infants annually destroyed by this operation; and, by making a similar relative computation of Dr. Collins's cases, there would be 2,887½ infants destroyed in one year. But, if a true statement could be obtained of the number of craniotomy operations which are annually performed in these kingdoms, the aggregate amount would far exceed either those of Dr. Clarke or those of Dr. Collins.

As it is so difficult—nay, I would say, quite impossible—to ascertain with arithmetical accuracy the real condition of the apertures and the cavity of the pelvis, we ought, in all cases of slighter degrees of distortion, as far as possible, to endeavour to save the infant, by first making a cautious and judicious trial of the forceps or turning, before we have recourse to craniotomy.

Then, as we have craniotomy performed in all cases in which the pelvic apertures or its cavity are either relatively or positively diminished, so as not to allow delivery by other means; as we know that most of the obstructing causes to labours progressively increase in size,—it must be evident that craniotomy must be much more difficult and dangerous to perform in some cases than it is in others. On this account, I shall treat of it under two heads.

The first division includes those cases in which there is relatively no very great disproportion between the pelvic measurements and those of the head of the infant. In some of these cases, the mere perforation of the skull will suffice to set it free. In others, it will also be necessary to break up the brain, and then either partially or entirely to remove it from the cranial cavity; after which, it may be expelled by the uterus, or drawn out by the hand alone, or by the aid of the crotchet, or by that of the craniotomy-forceps.

The second division embraces those cases in which there is relatively greater disproportion between the pelvis and the infant's head. There is, however, even in these cases, more difficulty experienced, and more danger attending the operation, in some than is found in others.

The pelvis may be distorted by malacosteon or rickets, or its cavity may be so much diminished by exostosis or tumours that a question may arise whether a mutilated child can pass through it. The opinions of different writers vary as to the space necessary to exist in the pelvis in order that a crani-

otomised infant can be dragged through it. Some state that a free space of one inch and a half in the antero-posterior diameter of the pelvis is quite sufficient; others say an inch and three-quarters is required; whilst others, again, affirm that, unless there be a space equal to two inches in this diameter, a mutilated infant cannot be drawn through the pelvis. One writer, however, has had the boldness to declare that he has delivered a woman when there was only one inch and a quarter space in the antero-posterior diameter.

These discrepancies of opinion as to the required space for crotchet-delivery are difficult to understand; but the different characters which pelves assume may in a measure account for them. But there has, doubtless, been some mistake made in either the accuracy of the measurement or in the age and development of the infant, as it is quite impossible to deliver a full-grown infant when such a contraction of the pelvis exists as the minimum above mentioned. There is an unchangeable mechanical law which cannot be averted in these cases; that is, a body of a definite or given size cannot be drawn through an opening whose diameters are less than itself. Then, in order to reduce the infant's head, the vaulted part of it must be removed by taking away the two parietal and the frontal bones. Dr. Osborne reduced the head of the infant as far as possible, and then placed the base in (as he thought) the most favourable position by turning it so as to bring it sideways first through the pelvis. He succeeded after great efforts, and delivered the woman, whose pelvis measured at the brim, in its antero-posterior diameter, only (as he says) one inch and a half. Dr. Osborne was doubtless mistaken in his conclusions, which has been so ably and clearly proved by Dr. Hull and Dr. A. Hamilton.

The measurement of the side of the base of the skull corresponds with Dr. Osborne's estimation of it; but, in his anxiety to astonish the profession, and to prove his great achievement, he overlooked the fact that the other side of the head had to follow; and that the bulk must, therefore, be necessarily greatly increased by the addition of the cervical vertebræ and the soft part of the infant's neck, which must lie upon it and pass at the same time.

Now Dr. Hull has experimentally and indisputably proved the fallacy of this assertion; and has shown that the least measurement of the head, when it has been reduced to the utmost, after dragging away the frontal and the two parietal bones, is from the root of the nose to the chin; and, therefore, in order to bring the head (after craniotomy) through the smallest possible pelvic space, the face must be brought first. Dr. Hull, in Plate xii, Fig. 1 (*Observations*, etc.), gives a representation of the reduced head, placed over a sketch of the brim of a distorted pelvis; as well as the outline of that of Eliz. Sherwood. So that, in such cases, it is most desirable to convert the case from a vertex, if that were the original presentation, to a face case. After this change has been accomplished, the crotchet should be fixed in that situation, so as to turn the chin towards the pubes; and the extractive force should be directed so as to draw down and keep the chin in the anterior part of the pelvis, as the natural flexion of the head with the vertebræ facilitates the passage of the chin under the arch of the pubes. Great care should be taken to prevent injury being

done to the uterus or the vagina by the sharp edges or points of the bones of the skull, by placing over them the scalp-integuments.

Dr. Davis says the necessity for Cæsaean section may be reduced to zero by craniotomy; and, using his osteotomist, he asserts that he has succeeded in bringing the reduced skull of the infant through the space existing in the pelvis of Elizabeth Thompson.

This operation was undertaken on a block of wood, in which the pelvis was carved, etc. I had (now in St. Mary's Hospital) similar blocks; but I could never accomplish the extraction. However, it is one thing to operate on an inanimate machine, however accurately formed, and another to operate in the pelvis of a living woman. I had different preparations made of the base of the cranium, with the vertebræ lying over the side and over the occiput, to show their relative measurement to the brims of different sized pelvis, which were cut in wood.

But a practical question suggests itself: Will the performance of craniotomy meet all the difficulties arising from distortions of the pelvis? or can a woman be delivered by this operation, however greatly contracted the brim of the pelvis may be? Notwithstanding the great reduction which may be made in the head of the infant, and however favourably its base may be placed, I most unhesitatingly assert that it is sometimes utterly impossible by any means whatever, either by the use of the osteotomist or of the cephalotribe, to deliver the woman. We ought never to disguise from ourselves that, in a great number of cases of extreme distortion, it is not possible to attempt delivery, as neither the os uteri nor the presentation of the infant can possibly be felt. This was found to be the case in many of the women whose cases are tabulated. (*Vide* remarks on the necessity.)

But, in many cases in which this information has been obtained, the head of the infant has been opened, and in some instances it has been reduced to its utmost limits, and yet the practitioner has been unable to drag it through the pelvis. Dr. Hull states in his *Defence* (p. 222) that ten women, upon whom embryulcia had been performed, lost their lives. He also relates three other cases, in which both the mothers and the infants perished. In one, neither the os uteri nor presentation could be reached; the uterus ruptured, and the infant escaped into the abdominal cavity. In another, after great difficulty, the breech was found to present. An attempt was made to pass the hand to lay hold of this part; but it failed, on account of the great pelvic contraction. After a second trial, the blunt hook was with great difficulty fixed; but, "notwithstanding all my exertions, the presentation could not be brought lower than the brim of the pelvis." She, therefore, died undelivered. In the third case, Ellen Gyte, who had been in labour sixty hours, the head was opened, and the crotchet applied; but, after the most strenuous exertions, it could not be brought through the pelvis. The vagina ruptured, and the infant escaped into the abdominal cavity. The pelvis was highly distorted; the diameter of the largest circle that could be formed in the superior aperture was two inches and one-twelfth. The pelvis now belongs to me.

In a case in which the pelvis was highly distorted, under the care of the late Mr. R—, the head was perforated; but, after the most powerful efforts, he was unable to bring it down. The uterus ruptured,

and the child escaped into the abdomen. She died undelivered. A cast of the pelvis is in my possession. The cause of distortion in all these cases was mollities ossium. I have known several other cases in which the same melancholy events happened; and doubtless, if the grave could unfold the mysteries contained within it, very many more horrible terminations of pregnancy would be brought to light.

But, even granting that, in some extreme cases of distortion, there may exist sufficient pelvic space to permit an infant, whose head has been reduced to the utmost, to be dragged by great force through the pelvis, yet it must not be forgotten that such an operation must be extremely hazardous to the life of the mother. It is one thing to deliver the woman, and another to do so safely. It is much to be deplored, that this operation is still permitted to be so unconditionally performed; especially so when the injuries which are frequently inflicted on the pelvic organs, and when its comparative mortality, are considered.

The statistics of craniotomy are in a very unsatisfactory state. After a very minute search, I have been quite unable to draw out such tables as I wished. Feeling strongly the importance of deductions which are to be drawn from an accumulation of well authenticated facts, I published a letter (*Provincial Medical and Surgical Journal*, vol. xviii, p. 494, 1849) requesting that the members of the Association would transmit me a statement of all the cases which had happened in each of their practices; but my appeal did not elicit much information. Not having been successful in this attempt, I could only avail myself of the statements already published by my worthy and esteemed friend Dr. Churchill of Dublin, in his *Theory and Practice of Midwifery*. The following is a copy of his tables.

Authors.	No. of cases.	Mothers died.
Dr. Smellie	44	4
Mr. Perfect	3	0
Dr. Joseph Clarke	49	16
Dr. Granville	3	3
Dr. Ramsbotham	34	5
Dr. Maunsell	5	2
Mr. Gregory	2	1
Dr. Collins	79	15
Dr. McClintock }	52	8
Dr. Hardy }		
Dr. Beatty	3	0
Dr. Churchill	11	1
Mr. Warrington	1	0
	286	55

Or about 1 in 5.

"Independently of the abuse of this operation (craniotomy)—of its unjustifiable frequency—let us for a moment look at its relative fatality, when compared with the Cæsaean section.

"According to the above" (Dr. Churchill's) "statistics, British practitioners resort to craniotomy once in 219 cases; the French, once in 1,205½ cases; the Germans, once in 1,944½. The average, therefore, of these three nations, will be one in 896½. In 252 cases, 50 mothers died, or about one in every five. As regards the Cæsaean section, the same author states that he has collected 321 operations since 1750, from which 149 mothers recovered; and in 187 cases, where the result is mentioned, 130 children were saved, and 57 lost.

"Hence, then, we have a calculation showing that in craniotomy, where of necessity all the children must be sacrificed, one woman out of every five died; while, in the Cæsaean section, one mother recovered out of two and a fraction, and the success to the child was certainly most fortunate."

The destruction by craniotomy of a number of infants in different women, in successive labours, both in the practice of other obstetricians, as well as those which happened to myself; the ignorant and groundless adoption of this operation; the unprofessional and disgraceful manner in which I have known it performed (in one case, the head was opened by a pair of scissors, which were obtained from some part of the family; in another case, by a penknife); and the operation being frequently performed without a consultation,—these circumstances, and deep reflection on the social and moral right to destroy life, convinced me that the present recognised practice in these cases ought to be modified.

In a course of lectures delivered to the members of the profession, I strongly denounced craniotomy as an operation of election; and I recommended it to be performed generally as an operation of necessity, and that it should only be conditionally accepted as one of election. These opinions I then expressed, and have ever since advocated and in every way promulgated. (*Provincial Medical and Surgical Journal*, and *British Obstetric Record*, etc.)

Such, then, was my proposition in 1843; and now, in 1865, after long reflection and matured experience, I am, if possible, more strengthened in my convictions. The remarks of Dr. Bedford, which I afterwards found in his translation of Chailly, bear so forcibly upon the subject, that I do not hesitate to quote them. He says:

"The Cæsaean section is undoubtedly a dread alternative for the accoucheur to choose; but I cannot agree with Dr. Chailly, that its fatality is so great as he represents; nor am I disposed to adopt the opinion (unfortunately too general) that craniotomy is always to be preferred to the Cæsaean section. In truth, it needs some nerve, and, for a man of high moral feeling, much evidence as to the necessity of the operation, before he can bring himself to the perpetration of an act which requires, for his own peace of mind, the fullest justification. The man who would wantonly thrust an instrument of death into the brain of a living fetus would not scruple, under the mantle of night, to use the stiletto of the assassin; yet how often has the fetus been recklessly torn from its mother's womb piecemeal, and its fragments held up to the contemplation of the astonished and ignorant spectators as a testimony undoubted of the operator's skill. Oh! could the grave speak, how eloquent, how momentous, how damning to the character of those who speculate in human life, would be its revelations!"

The facility of its performance has led to its abuse. Its recognition in the British obstetric code reflects no credit on the country, especially when its frequent performance is compared with the practice in France and Germany. It cannot be denied that craniotomy is a cruel operation; for surely no obstetrician ought to be so ignorant as to suppose that the infant *in utero* is void of sensibility. Yet there are some parties (if judged by their estimate of its life) who either professedly or actually believe it does not feel. This is, however, either a moral or a physiological

fallacy; for there is not a doubt that it is endowed with this faculty in a very eminent degree, and consequently it must endure great bodily suffering from this practice. There are some practitioners who admit the existence of this principle; and, with the view of avoiding the infliction of pain caused by the perforator, delay opening the head until after its death. Craniotomy and embryotomy are the only operations which are recognised and justified by the British profession for the purpose of destroying life; but, although they are admitted into our obstetric code, they are not to be found in that of the law, and are only sanctioned by custom, and, through this usage, considered as "justifiable homicide".

There is no difficulty in understanding why so low an estimate of foetal life is entertained, when we consider what the doctrine is which is taught *in cathedra* and *extra cathedram*—"that, to save the life of the mother, it is justifiable to destroy the infant." From the early inculcation of this principle, the student becomes hardened to the performance of this dreadful task, and does it without compunction, and, no doubt, sometimes without reflection. My experience warrants me to make the above declaration, having met with many cases in which this operation has been most unnecessarily, and in some cases has been most unprofessionally, nay, most unjustifiably, performed.

Having now very fully expressed my objections to the recognition of craniotomy as an operation of election, I shall proceed to state my opinion in what cases it might be considered right to perform it.

When the infant is ascertained by the stethoscope to be dead, and the time for delivery has arrived, then craniotomy is justifiable; but the labour ought never to proceed a moment longer after delivery is required, in expectation of this event happening. The destruction of the infant from procrastination differs very little in principle from taking its life by the perforator; and, therefore, timely and other appropriate measures should be employed to prevent this event. Such are the long and short forceps, turning, and the Cæsaean section.

When some serious accident happens, such as rupture of the uterus, it would sometimes be admissible to perforate the head; and little compunction need be felt, as the infant is nearly if not always dead.

In a first labour, in which the pelvic cavity is so diminished that a mature unmutated infant cannot be delivered, and also in those cases in which this mischief has taken place after the woman has naturally borne one or more children, the operation may be performed.

Embryotomy is justifiable in cases in which turning is quite impracticable. In these cases, the infant is nearly always dead.

In some cases of protracted labour, in which the pelvic organs or tissues have already sustained such great injury from pressure, and in which it would be extremely hazardous to the woman's life to deliver with the forceps, embryotomy may be practised. This event, however, will seldom or never happen in the hands of a judicious practitioner.

In some cases of hydrocephalic enlargement of the head, its size must be diminished by letting out the water by means of the perforator, or by a trocar. If this latter instrument can be successfully used, it is to be preferred.