

ON THE MEANS EMPLOYED FOR
REDUCING THE HEAD OF THE CHILD
IN
CASES OF DEFORMED PELVIS, &c.,
DESCRIBED IN A MEMOIR
By M. BAUDELLOCQUE, *Paris*.

THE two last numbers of the *Gazette Médicale* contain a memoir on the above subject, by M. Baudelocque, nephew of the late celebrated professor of midwifery, in which we find a detailed description of an instrument which he has invented for crushing the head of the fœtus in cases of deformed pelvis. The *cephalotribe* of M. Baudelocque (the nephew) obtained a prize of 4000 francs from the *Academy of Sciences* last year, and has been employed by him with success in five cases where the head was detained above the brim of the pelvis.

It may be laid down as a general rule, that embryotomy, and indeed all operations on the fœtus, have become less frequent in proportion as the art of midwifery has been improved: during a practice of thirty-five years, Professor Baudelocque did not employ the crotchet more than four or five times; and if we consult the statistics of the *Maternité*, we find twenty-six cases of embryotomy in 37,895 deliveries during a period of sixteen years, or one in 1184. In the great midwifery hospital at Vienna the operation is somewhat more frequent: during the space of nine years, in which 9581 women were delivered, the head of the child was perforated thirteen times, or one in 737 cases. The means hitherto employed for diminishing the head of the fœtus are extremely varied and numerous.

In a thesis sustained by Dr. Charles Sadler in 1826, there are no less than sixty instruments represented, all of which have been at different times proposed for this object. We shall not enter into a consideration of all these instruments, most of which have now fallen into disuse, and we cannot help thinking with the author, that in many cases they have been employed without sufficient necessity. Thus, what advantage is gained in many cases by simply opening the upper part of the skull, and removing a portion or the whole of the brain? When this operation has been performed, and the expulsion of the fœtus takes place by the effort of nature, there is strong reason to believe that the woman would have been delivered as well by the forceps, and that the disproportion between the head and pelvis is very slight indeed. If we take the biparietal diameter of the head at three and a half inches, the transverse diameter of the base of the skull must be estimated at three inches; the diminution of the skull arising from the pressure of the uterus may be taken at three or four lines; hence, when we remove the brain, we can only obtain a reduction of two or three lines, and this trifling diminution may surely as well be obtained by the forceps as by Smellie's scissars, or any other instrument: the truth is that the *base* of the skull, and not the bulk of the brain, is the main obstacle to be overcome.

The *lance* and *tire-tête* of Mauriceau are well known. Instead of a cutting instrument, Peu generally preferred the blunt crotchet. Smellie's scissars, differently modified, or the forceps of Mr. Holmes, are the instruments generally used in England.

It is manifest that the manner of employing all these instruments must vary according as the fœtus may present the summit of the head, the face, the abdominal extremity, &c.: these are questions which M. Baudelocque examines at some length, and then proceeds to a consideration of the case where delivery is impossible on account of the disproportion between the base of the skull and the sacro-pubic diameter, which does not exceed two inches and a half or two inches eight lines.

In this difficult and dangerous case, most accoucheurs use the sharp crotchet; others invented instruments expressly adapted for reducing the base of the skull, such as that of Dr. Davis, the extractor of Burton, and the forceps of Böer, which bears some resemblance to that used in lithotomy: finally, M. Duges of Montpellier has lately proposed an instrument worked by a screw, with which

he splits in pieces the bone of the skull, fixing it in the sphenoid bone. M. Baudelocque rejects the use of all these instruments, because they require frequent introduction into the uterus, and are liable to occasion severe inflammation &c. of the generative organs, if not more fatal results. An examination of the cases in which embryotomy has been proposed at the *Maternité* in the practice of Baudelocque, Dubois, and Madame Lachapelle, seems to justify the above conclusion. In a total of twenty-one operations, seven were followed by death, eleven were perfectly cured. The vitiations of the pelvis varied from three inches to nineteen lines. The author gives a very interesting analysis of all the operations, from which we may observe that in the greater part of the cases version had been employed either before or after the reduction of the head; and that in general the operation was extremely long and difficult: in one case the manœuvres lasted three hours and a half; in another four hours; two of the children only presented signs of maceration.

As the obstacle to delivery in cases of deformed pelvis depends particularly on the base of the skull, it becomes a matter of necessity to break up the bones composing this part of the head, after which, unless the deformity exist to a very great extent, the body of the child will be expelled by the contractions of the uterus.

For the purpose of reducing the base of the skull without danger to the mother &c., M. Baudelocque has invented the *cephalotribe*, which is simply a peculiar forceps composed of two branches joined together by an axis, and approximated in case of need by a strong screw, which is moved by a lever. The weight of the instrument is four pounds; the length of each branch is twenty-one inches; that of the blades, measured from the axis, ten inches; the latter part is solid, without an opening; each is sixteen lines broad, and three or four lines thick.

The *cephalotribe*, like the ordinary forceps, is curved in both directions; the curve of the edge measures three inches and a quarter; that of the flat surface half an inch; hence, when the two branches are united, the upper and lower edges of the blades are separated by an interval of an inch; the blades are joined like those of Smellie's forceps, except that the female branch is the right one; the length of the screw is eight inches and a half, and of the handle of the lever which turns it four inches. The power of this instrument is to the resistance which may be offered to it, as 165 to 1.

The *cephalotribe* is applied to the head

of the child in the same way as the forceps, care being taken to apply the branches well on the head, so as to comprehend the base of the skull; when once applied, the operator has nothing to do but confide the branches to an assistant, and introduce the skrew through a perforation which traverses them; the lever is now turned, and the head powerfully compressed; the scalp gives way first; the brain is discharged through the vulva as the force is increased; the bones composing the base of the skull give way, and ride one upon another without producing any splinter, and the head being thus reduced, the child is extracted as with the common forceps.

When the head has been well seized, and the base of the skull, consequently, perfectly crushed, the interval between the middle of the blades after extraction is found to be twenty-three or twenty-four lines, thus the head of the foetus is reduced by the instrument from three inches and a half or three inches to one inch in transverse diameter.

The circumstances under which the *cephalotribe* is employed are absolutely the same as those in which perforation of the head is had recourse to. It is, therefore, unnecessary to refer to them; we shall rather conclude this notice by analyzing three cases in which the instrument of M. Baudelocque has been successfully applied.

CASE 1.—February 5, 1829. A woman of scrofulous constitution, with deformity of spinal column. The pains came on at nine in the evening, and waters were discharged.—7th. Os uteri but very little opened; acute pains; head of foetus presented. At this stage M. Baudelocque was called in; he found the antero-posterior diameter of brim only two inches and three quarters; the form regular; the os uteri had eighteen or twenty lines in diameter, and was several lines thick.—8th. Abdomen tense, *ballonné*, fever, &c.; the os uteri now dilated to two inches.—9th. Soft parts neither more supple nor dilatable; uterine contraction more violent; symptoms of peritonitis appeased by bleeding, but pain in uterus and loins; seventy-three hours since the waters were discharged; operation agreed upon; the *cephalotribe* was introduced, and caused so little derangement, that the woman would scarcely believe the operation was finished; the perineum remains intact; the foetus, which had begun to putrify, weighed six pounds. Symptoms of metritis set in again, but were successfully combated, and on the 16th the woman was convalescent.

CASE 2.—November 10, 1830. Woman

forty years of age; eight years ago had a child of the natural size, extracted with the forceps with great difficulty; was in labour for nineteen hours when seen by author, and various attempts to deliver had been made during last three hours, either with forceps, or by the version of the child; fœtus evidently dead. The impossibility of deliverance by ordinary means being acknowledged by the physicians present, the author proceeded to crush the head, which was in first position below the brim; the child, weighing eight pounds and a half, was quickly extracted; no rupture of perineum. Delivery followed by severe accidents; metritis; typhoid fever, with gangrene of soft parts on sacrum; involuntary discharge of urine and feces; state began to mend after three weeks, and in a few months the woman was perfectly restored; the antero-posterior diameter of the inlet was two inches and three quarters.

CASE 3.—Woman, 31 years of age; on the 6th of May, 1831, the author called to see her in one of the hospitals; several attempts to extract head by forceps had been made; version then tried and the trunk extracted, but head remained in pelvis at the brim; these attempts had lasted several hours, and the perineum was lacerated: proceeded to crush; the left branch of the instrument easily introduced, but great obstacles to the adjustment of the right branch. Author at last succeeded by passing up the blade in front of the face, and bringing it into position between the head and the right cotyloid cavity. The head was compressed and extracted; fœtus weighed eight pounds and a half; antero-posterior diameter two inches and three quarters. Symptoms of peritonitis succeeded, and inflammation of vagina; the emission of urine involuntary; the accidents disappeared and the woman was cured on the 12th of July.

Since this operation M. Baudelocque has performed reduction of the base of the skull in ten other cases, with equal success and facility.