Mr. Renton on the short mid-wifery forceps / John Renton.

MR. RENTON ON THE SHORT MIDWIFERY FORCEPS.*

To the Editor of the Medical Gazette.

Sir,

If the following observations on the short midwifery forceps, especially in reference to the mode which I have long practised in their application, appear to you of sufficient practical importance, their early insertion in your valuable and widely circulated journal will much oblige, Sir,

Your obedient servant,

John Renton. M.D

Penicuik, 25th Feb. 1819.

It is almost unnecessary for me to premise, that the cases, in which, the application of the short midwifery forceps is called for, comprise all those usually included in the second order of laborious labours, where mechanical means for assisting delivery are resorted to, in consequence of the inefficiency of uterine action, to propel the fœtus through the inferior aperture; it being understood, that there does not exist any actual disproportion, between the pelvic passages, and the size of the infant's head, or at least to such an extent, as to prevent the child being born alive. It is also taken for granted, that the continuance of labour, without artificial interference, would prove injurious, though not perhaps in an equal ratio, to both the mother and the child.

The use of the short or common forceps of this country, says Dr. Davies, "always supposes that the head of the child shall have previously entered, and reached a considerable depth within the cavity of the pelvis. This rule is considered as being perfectly well understood and established in the practice of this country; and our instrument is accordingly adapted to this more limited object only, and never used for the purpose of bringing the child's head from above the brim into the cavity of the pelvis."—(Obst. Med. vol. ii. p. 1113).

It will be found, if the parturient action has advanced the child's head so far, as to form what is called the perineal tumour, the easier will be the application of the instrument, and *vice versa*. When this takes place, it is presumed that dilatation of the os uteri has proceeded, so as to have effected obliteration of the cervix.

It requires so much care and caution to introduce the

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blades within the orificium uteri, and the difficulty of guiding them by the fingers is so great, when the pelvic passages are filled up by an almost impacted head, that the only safe practice is to wait for these conditions, before having recourse to the instrument; all earlier attempts being, in my opinion, not only hazardous and uncalled for, but generally ending in the failure of adjusting the blades, until uterine contractions have propelled the head to the extent I have described, or, in other words, until the os uteri has receded so far over the head, that there is no danger of grasping the former, in applying the instrument, over the ears of the latter.

To prevent such an accident, the finger is generally recommended to be used as a director. On such occasions, this advice, I believe, will be found to be impracticable. Dr. Hamilton, from experience, was well aware of this, when he stated, "that it is not necessary that the ears be felt," and that, "during the last thirty years he has had occasion to use the forceps, he has never even endeavoured to feel the ear of the infant."—(Pract. Observat. vol. ii. p. 111.)

I apprehend, where there is space enough left for the introduction of the forefinger, between the head of the child and the sides of the pelvis, in order to guide the forceps, that there will generally be little or no necessity for the use of the instrument. Under such circumstances, time, and the exercise of a little patience, and good management, will be quite sufficient to enable the natural powers, to complete the delivery, without instrumental aid.

Cases of malposition of the head certainly form exceptions to this rule. I agree, however, with Dr. Davies, that though it may not be necessary to wait, in all cases, for what is called total obliteration of the uterine aperture, "yet even the exceptions to these cases," (where immediate delivery becomes indispensable, in consequence of symptoms of great urgency and imminent danger arising from hæmorrhage, exhaustion, convulsions, rupture of the uterus, &c. &c.) "are to be allowed, without prejudice to the general rule of practice, which requires a sufficient development of the os uteri, to admit the child's head to pass through it, without incurring the risk of laceration."

I am the more particular in stating, that the ear of the infant can seldom be reached by the finger, in natural presentations, where the forceps can be safely employed, because a line of practice, (as appears to me altogether unwarranted,) has been recommended to be followed in such cases. In proof of what I have said, I could cite, if it were necessary, the details of many cases of protracted labours, in

which I have been consulted, where compression formed the only source of danger, in which it was impossible, by examination with the finger, to ascertain the exact position of the ear, in consequence of swelling of the scalp, and of the soft parts within the pelvis, and from the size of the infant's head, and the general depth of the cavity of the pelvis itself; and, notwithstanding, I have succeeded with the forceps, in saving the life of the child. How unjustifiable would it have been, to have used on such occasions the crotchet, as has been proposed, for the purpose of reducing the size of the head! I perfectly coincide with Dr. Hamilton, if the rule was to be adopted (where the disproportion between the head of the child and the pelvis is so great as to prevent us reaching the ear with the finger,) that the only measure for affecting delivery is by embryotomy, "the forceps could not be employed once in twenty cases, where" he from experience "knows it to be both safe and useful."—(Pract. Obser. pt. ii. p. 110.) If the use of the forceps was limited by such a rule, in place of being, what I consider it to be, an invaluable instrument, it would become a comparatively valueless one.

Although an advocate for the timely application of the forceps, I would plead strongly against their indiscriminate employment. One general cause of failure is, that they are often used too soon. In the hands of those, whose heads are guided by apprehension, impatience, and ignorance, I need scarcely add, that this useful instrument is converted, into a weapon of the most dangerous kind.

I shall not now enter into the debated question, as to the precise time when instrumental aid becomes necessary. This must in a great measure be left to the discretion and good sense of the practitioner, whose conduct will be regulated by the symptoms of every individual case. "Although," says Gooch, "a precipitate use of instruments is never justifiable, it is better for one, who is familiar with the application of the forceps, to deliver his patient after waiting a moderate time, than to permit the continuance of fruitless pains, or hazard the more serious evils of protracted labour."—(Pract. Compend. p. 205.) Dr. G. might have added, that when one is not familiar with their use, the first trial should never be made except in the presence, and with the assistance of him who is so, in order that the lamentable and incurable accidents, which so often result from rashness and inexperience, may be avoided. Nothing, as Dewees has remarked, "but a careful experience upon the living subject can ever make a man adroit in their use."

Between cases of impaction, eventually requiring decided interference, and those of simple arrest, which the natural powers may terminate favourably without aid, a prompt discrimination must be made. One may be too late in affording assistance in the first case; but in the latter case, when the labour is tedious, and the spirits of the patient depressed or exhausted, if you be cautious, you seldom can be too soon, provided the head be far enough advanced; for it is a fact consonant to every day's experience, that the introduction of the instrument (sometimes even of a single blade) acts as a uterine irritant, by renewing suspended action, and exciting fresh contractions, and will greatly expedite delivery, without much traction or compression having been employed.

As the mode of using the forceps forms the more immediate object of this communication, I shall now briefly state how this is to be done.

Since the days of Chapman, when this "noble instrument," as he calls the forceps, was so rudely constructed as to have its blades fixed by a screw, to the present time, when Dr. D. Davies has strained invention in carrying mechanical improvements on it perhaps too far, the common and universal direction given for its introduction was slowly and carefully "to glide or slide, with a slight wriggling motion," each blade repeatedly, during the absence of a pain, between the two forefingers and the head of the child, either by the side of the pelvis, or towards the pubis. Thus Dewees advises, that "we take hold of the male branch of the forceps with the left hand, and hold it as we would a pen when writing, while we introduce two or three fingers into the vagina against the child's head, and under the edge of the uterus, if practicable; we then hold the handle or blade nearly perpendicular, but inclining to the right side of the mother, then insinuate the blade between the labia," &c. &c.—(System of Midwifery, p. 319.) The following authors give almost similar instructions; see Gooch's Compend. p. 208; Conquest's Outlines, p. 100; Blundell's Lectures, p. 125; Burns' Midwifery, p. 448; Merriman on Difficult Parturition, p. 166; Ryan's Manual, p. 546; Denman's Midwifery, p. 277; and Baudelocque's Midwifery by Heath, vol. iii. p. 43. "The blades of the forceps," says the last author, "ought always to be applied on the sides of the head."

I practised this plan for some years, but I experienced so much difficulty in the application of the instrument, that I was more than once fairly foiled, and almost on every occa-

sion when I used it, was engaged fully half an hour before I adjusted the blades. It might be said, that so much time could not be occupied, if I had possessed the requisite manual dexterity; but I have witnessed the same tardy process under the hands of practitioners, to whom want of practical skill could not be imputed, when this part of the operation was performed in a similar way. It was a matter of deep regret to me, that the patient was either to be exposed to the alternative of prolonged and unassisted suffering, if I declined, which, I acknowledge, I sometimes did, having recourse to the operation, from fear of not succeeding; or of having much unnecessary pain inflicted in the performance of it.

The great obstacle, which I always experienced in the introduction of the instrument, lay in the first application of the extremity of the blades to the head. When the instrument was pushed forward in the lateral direction of the pelvis, its progress was liable to be arrested by folds of the scalp and the vagina, before the concave part of the blade reached the cranial convexity. But when it was introduced by the perinæum, I found this difficulty was perfectly obviated. When this difficulty is once got over, and the instrument is moved slowly onward till it rest, we will find, as Dr. Burns observes, that it has almost gone, *suâ sponte*, in a right direction. But before this can be safely, easily, or successfully effected, it is taken for granted, that the head has descended far enough into the pelvis, and the os uteri receded (as I have already stated) far enough over the head, so that the extremities of the forceps can be passed over, and embrace the base of the skull in their grasp. As necessary preliminaries to the operation, I need scarcely add that the vesica urinaria and rectum should previously be emptied of their contents. To the neglect of this simple but useful precaution, I consider that the distressing lesions inflicted upon these organs, by the incautious use of the forceps, are in a great measure to be attributed.

"In performing a delivery by means of the forceps, every attention," says Dr. Dewees, "should be paid to delicacy, that it should not be wounded; and every care should be exerted, that the patient be not subjected to unnecessary pain. The operator must become familiar with the introduction of the instrument without the aid of his sight, more especially as this cannot serve him, and must, if employed, be highly offensive to the patient."—(Midwifery, p. 314.)

In order to attain these very desirable ends—that the operation may be both in appearance as in reality as little formidable, and performed with as much ease to the patient

as to the operator, I object to Dr. Dewees' position of the patient, when he says, that "the woman, about to be delivered with the forceps, is constantly supposed to be placed upon her back."—(Midwifery, p. 318.) She ought always, in my opinion, to be placed upon her side, as in natural labour; and no preparation should be made to appear to the patient, that the accoucheur had any extra duty to perform. The assistance afforded by the instrument should seem as if the operator, in using it, had only added to the length and strength of his natural digits.

Although by the mode, which I follow in the introduction of the instrument, the blades can be applied with equal celerity as safety, I would on no pretext whatever hurry on the delivery; for the time to be occupied in effecting the traction of the head must wholly depend on the degree of difficulty to be overcome. I have known not a few instances, in which I was persuaded, both serious injury and fatal mischief were done to the infant by compression of its head with the instrument, occasioned entirely by the impatience of the practitioner, in unduly expediting its extraction. To prevent the occurrence of such accidents, manual force on the blades should be gently exercised, and their handle ought never to be tightly secured by tape. Artificial aid must be made to imitate the natural process of parturition. Not only is much experience required how to attain the power which is necessary neither to injure the mother, nor to destroy the offspring; but much discretion becomes indispensable, in not abusing or misdirecting that power, after it has been placed in our hands. Although we may not be disposed to deny what Merriman asserts, "that it is much better to introduce them (the forceps) slowly and safely, than hastily and dangerously;" we see no reason why speed may not be advantageously combined with safety in the proper application of the forceps, any more than that danger will not accompany slowness, if the operation be not skilfully performed.

The blades of the instrument should be heated to the natural temperature of the body; and it is a more useful point than is generally admitted, as tending greatly to facilitate its introduction, that the blades, as well as the internal passage and the scalp, should previously be well anointed with lard or oil.

It is almost unnecessary for me to state, that the instrument, to the application of which, all my remarks are referable, is not the straight but the ordinary double curved forceps; vide plate XXXII. in Davies' Obstet. Med. p. 1098. The

instrument there delineated and described is very similar to the one I have used for upwards of twenty years, the only difference being in the width of the fenestræ, which is an inch and a quarter greater than in mine. I am satisfied that from two to three inches added to the length of the handle would be a decided improvement, by adding greatly to its power; the only danger that could possibly arise would be, that the blades might be introduced too far up the pelvis, or that traction and compression might be too forcibly exerted without it, especially in the hands of a rash practitioner.

After all the necessary precautions have been adopted, I introduce the two forefingers of the left hand into the lower part of the vagina, carrying them backwards towards the rectum, and on the plan, thus formed, the instrument is to be conducted. Holding with my right hand the upper or right blade, (which I always introduce first), its broad and round extremity is gently pushed forward, in the direction of the coccyx, and turned gradually forwards in apposition to the head of the child, between which and the pelvic concavity it is moved upwards, until it encompasses the parietal protuberances. The left or under blade is introduced in a similar way. There is no difficulty in making the blades lock, for introduced in this mode, they can be made to traverse the whole circumference of the pelvis; and in order to effect a speedy adjustment, all that is necessary is to keep them opposite to each other, (which I usually do in a lateral direction, except in cases of malposition, where the locking must vary according to the position of the head,) and to preserve them of equal lengths. If they slip, one blade must be pushed forward and upwards, and the other perhaps withdrawn a little, or moved round, until the handles lock.

The forceps used in this way are so easily, and so soon introduced, that the patients often are not aware, that they have been applied. This facility is readily explained, when we examine that part of the mechanism of parturition, relative to the occupancy of the child's head in the hollow of the sacrum, as it makes its exit through the outlet of the pelvis—positions in which the double curved forceps is usually employed as an extractor, and where its utility, both in regard to traction and compression over the straight forceps, becomes at once apparent.

In first labours, and in cases of simple arrest which often occur in these, after the termination of the first stage, and especially when that has been mismanaged, the instrument used with the direction I have given, and under the limita-

tions prescribed, will save many hours of suffering to the patient's body, and anxiety to her mind. It will also greatly abridge the period of attendance on the part of the accoucheur—a consideration of subordinate importance certainly, but one which ought not altogether to be overlooked, in estimating the general advantages of an operation, by the safety and efficiency of the means employed.

I am almost tempted to refrain stating how soon the blades can be locked, lest it should induce any to throw away all caution, and to substitute "the deed for the well-doing of it,"—an evil very apt to be committed when the movements of dexterity are calculated merely by moments of time, and security inconsiderately sacrificed to celerity.

I may mention, however, that I have adapted the instrument in bad cases in two minutes; and that I almost never require more than the interval between pains recurring at the ordinary period of three minutes to fix both blades exactly. I have done this repeatedly before some of my neighbour practitioners, who have since adopted my plan.

In conclusion, I cannot fortify these discursive observations on the important manual operation of speedily, easily, and safely applying the forceps more appropriately than by the following quotation from Dr. Burns:—"The mere introduction of the forceps, if gently accomplished, can scarcely be more hazardous, than the introduction of the finger, for no force is or ought to be exerted. If there be hazard, it must be in the process of extraction, and this it is evident can arise only either from pressure of the instrument on the soft parts, or from the head and instrument lacerating the perinæum. The last event must in general be the consequence of want of caution, and the first can never be carried to any dangerous degree, in a case of arrest, if the operator knows how to direct his efforts."

EDINBURGH, 39, *Northumberland Street, July* 11, 1839.

Since the publication of the preceding paper, I have had an opportunity of witnessing the application of the forceps, by Professor Paul Dubois, in the "*Maison d'Accouchement*," in Paris. The patient was a healthy young woman, about twenty. The protraction of labour (a first one) arose from simple arrest, in consequence of slight malposition of the fœtal head, which was, I believe, in the "*position occipito-anterieure, au detroit inferieur*. The mode of applying, and the order of introducing the blades, were precisely the same as I have recommended. It was very gratifying to me to see my practice so fully corroborated by an accoucheur, possessing the practical skill and dexterity, for which Dubois is so justly celebrated, in the operative department of midwifery.