

Practical remarks on obstetric instruments : with suggestions for the employment of belladonna in some cases of protracted labour / by J.T. Conquest.

Contributors

Conquest, J. T., 1789-1866.
Royal College of Surgeons of England

Publication/Creation

London : [publisher not identified], 1820.

Persistent URL

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COMMON SCHOOL REPORT

MARCH 1873

THIRD ANNUAL REPORT

OF THE

COMMON SCHOOLS

OF THE

CITY OF

NEW YORK

FOR THE

YEAR

1872-73

BY

JOHN

W. B.

AND

JOHN

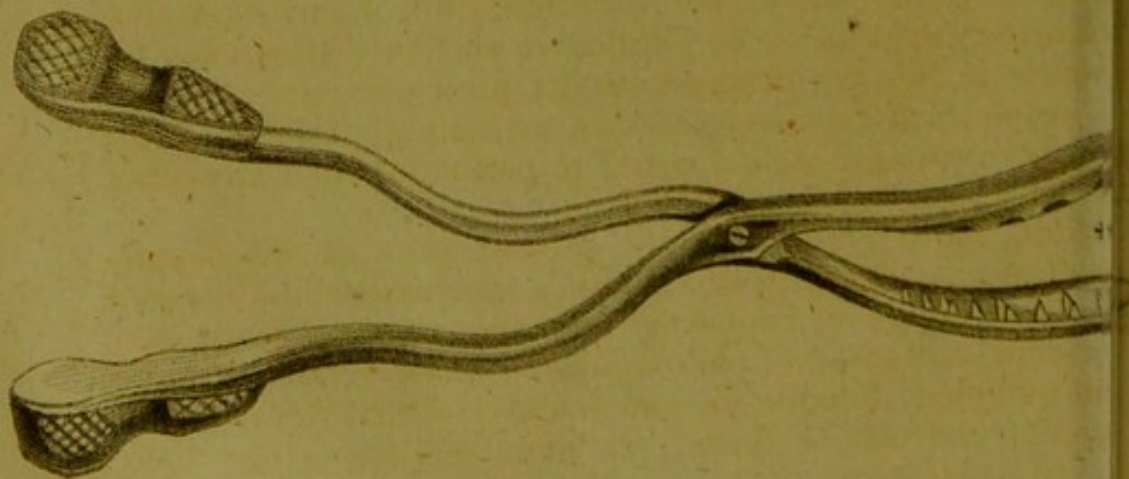
W. B.

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D^r Conquest's Obstetric Instruments.



THE
LONDON MEDICAL
REPOSITORY.

No. 75. MARCH 1, 1820. VOL. XIII.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Practical Remarks on Obstetric Instruments; with Suggestions for the Employment of Belladonna in some Cases of Protracted Labour. By J. T. CONQUEST, M.D., F.L.S., Member of the Royal College of Physicians of London, Lecturer on Midwifery, &c. &c.

NOTHING can be more gratifying and instructive to the philanthropist, or to the man of science, than those comprehensive retrospects by which he causes to pass before him, in close review, the origin and progressive advancement of important inventions; and by which he connects, in his thoughts, the early dawn, and present improvement of subjects conducive to the welfare of his fellow-creatures. *Midwifery* appears to be entitled to such a distinction: for though it has not attained, in its principles and practice, to geometrical certainty, or to a mechanical problem, yet it has, perhaps, approached nearer to perfection than any other branch of medical science.

Still, whilst contrasting the present state of this department of medicine with what it once was, and whilst cheered by the triumph of knowledge over ignorance, of truth over prejudice and error, of philosophical demonstration over wild and ridiculous hypothesis, and of experimental research over fanciful and useless theory, we must not forget that there

yet remains much in structure, function, and disease, so obscure, as to leave a large uncultivated field open for the exertion of genius and industry.

I hesitate not, therefore, frankly to avow my solicitude and determination (at least to attempt) to do something towards the perfection of one of the most interesting and important branches of the medical Profession: but let it be most distinctly understood, that I do not assume to myself the merit of inventing the obstetric instruments about to be described: I merely venture to suggest to the candid consideration of my professional brethren some alterations which appear to me, and which are considered by several respectable men, to be important practical improvements of instruments which have been already long in use.

These proposed alterations have not been sketched in the closet, but have had their origin at the bedside of patients who were delivered with difficulty, and whose sufferings were protracted in their duration, and augmented in their degree, under the employment of ordinary instruments.

It would be altogether irrelevant from the object of these pages to present even a cursory history of the modern obstetric instruments; because, independent of "*Historia Literaria et Critica Forcipum et Vectium Obstetriciorum*," Auctore Johanno Mulder, Lugduni Batavorum, there are extant several detailed accounts of the almost innumerable modifications which they have undergone since their invention. The following observations will, therefore, be purely practical, and will extend but very little beyond an explanation of the Plate which accompanies them: and as comparisons are always odious, other instruments will be noticed only as their excellencies justify a favourable allusion being made to them.

Of the Short Forceps.

The *short forceps*, which are submitted to the consideration of Accoucheurs, are characterized by the simplicity of their mechanism, and their easy adaptation to practical purposes.

The *fenestræ* are so wide * as to admit the protuberances

* We are indebted to Dr. Haighton for this very important improvement in the short forceps: and this acknowledgment affords me peculiar pleasure, because it is impossible to mention the name of that truly respectable man without expressing sentiments of the highest respect for his character. But it will be perceived that the forceps in the appended Engraving have much narrower shoulders, and are less in all their dimensions (except in their length), than those known as "Dr. Haighton's."

of the parietal bones to pass through them, by which two very important objects are secured.

The *first* is, *diminution of bulk*, because the alæ of the blades lay along the sides of the parietal bones, instead of adding to the size of the head, by being directly on, or over them, as is inevitable with Smellie's and all similarly constructed forceps, the alæ of which approximate too closely to permit any part of the cranium to pass through the fenestræ: in consequence of which, the difficulty of parturition (presuming it to consist in disproportion between the head and pelvis,) is materially augmented: and, *secondly*, instead of having the hard unyielding metal opposed to the soft parts of the mother, by which their safety is endangered, the prominences of the parietal bones passing through the fenestræ, when the forceps are well applied, will be in contact with the vagina; by which, it is obvious, there is much less probability of its sustaining injury, than from the blades of the forceps in ordinary use.

A *second* distinguishing feature of these short forceps is the curvature of the intermediate part between the blade and the handle, and which is intended to save the perinæum from pressure and laceration. It is familiar to every practical man, that in many cases which require the employment of the forceps there is great danger of the perinæum being torn, notwithstanding the utmost precaution on the part of the Practitioner. I particularly allude to those cases in which the occiput, instead of being opposed to the symphysis pubis, is found descending along the hollow of the sacrum, (or, in other words, the face opposed to the pubis); and this, it need scarcely be observed, is one of the most common causes of protracted parturition, demanding the aid of the forceps, presuming that the malposition of the head has been omitted to be rectified in the early stage of labour. If, in this malposition of parts, the forceps are well applied, the points will be directed forwards to the pubis, and the handles backwards towards the rectum, endangering, by their pressure, the safety of the perinæum. Now, the simple contrivance of a curvature in the shanks fully meets this serious evil, independent of the permission which it gives to the handles to be carried much further back than they could otherwise be, by which a firmer and more favourable hold is obtained of the child's head; and for want of which, in many instances, the points of the blades, instead of being directed over the cheeks and towards the chin, pass on, and even wound the neck of the infant. This one illustration must suffice, though others might be adduced in confirmation of the correctness of the preceding observations.

The *last*, although very far from the *least* peculiarity in these forceps, to which reference will be made, is the construction of the handle of the blade, which is usually applied last and uppermost.

It is only necessary to appeal to any one who has introduced forceps, with their convex surfaces opposed to the sides of the pelvis, the ears of the child being in their most natural situation, or from side to side, and such an one will at once acknowledge that extreme difficulty often presents itself to the introduction of the upper blade, in consequence of the bed and mattress below preventing that depression of the handle which is essential to the elevation of the point of the blade, to carry it over the vertex. Indeed, the accomplishment of this object is almost impracticable, without changing the position of the woman, or introducing the blade in the hollow of the sacrum and afterwards bringing it over the cheek. But there is a decided objection to either of these alternatives, because women, during labour, always attach importance to the most trifling departure from the ordinary mode of proceeding, so that the mere proposal of turning them on their backs, (which, by the by, is a disgusting and indelicate position, because the woman must stare her Accoucheur in the face,) or even the act of bringing the nates over the edge of the bed, usually excites considerable apprehension; otherwise I am aware that either of these changes would meet the difficulty.

With respect to the other alternative, or the introduction of the upper blade by the circuitous course of the sacrum. This expedient is often impracticable, and always difficult, because the concavity of this bone may be so completely filled up with the head of the child, so as not to allow of the requisite movement of the instrument, without the employment of an injudicious degree of power. Accoucheurs, alive to this circumstance, have long since had their levers made with reflecting or moveable handles; and it is to the latter expedient that I am indebted for the suggestion which led to the simple contrivance of a moveable handle, by a screw, which is so clearly exhibited in the engraving; and there can be now no difficulty in introducing the upper blade of the short forceps directly over the vertex, without changing the position of the patient. After the blade is fixed, of course the handle is to be screwed on, and the instrument used as any other.

Such are the forceps to which is solicited the candid attention of every medical man who is anxious to practise midwifery with pleasure to himself, and whose solicitude for the welfare of his patients prompts him dispassionately to

examine every proposal which may promise to advance so desirable an object.

Of the Craniotomy Forceps.

Although thirteen years have elapsed since I first attended the instructive lectures of Dr. Haighton, I well recollect the strong impression made on my mind by the exhibition of a pair of lithotomy forceps, a little altered, and which he represented as a very valuable substitute for the crotchet, in some cases of difficulty in parturition, arising from the impaction of the cranium at the superior aperture of the pelvis, after the operation of cephalotomia had been performed. It forcibly struck me, that these forceps, somewhat modified, possessed all the advantages of the crotchet, without having appended to them any of those flagrant defects which fully justify the exclusion of that vile and dangerous instrument from obstetric practice in all those cases which require the application of considerable extracting force to bring down the perforated cranium.

Midwifery is indebted to several continental writers for very similar suggestions; and gentlemen who have attended the lectures of Dr. Hamilton, of Edinburgh, must be familiar with Dr. Lyon's forceps, which are so strongly recommended by him. But it is to Dr. D. D. Davis that the Profession is laid under the deepest obligations for the craniotomy forceps; and I hesitate not to express my conviction, that he has conferred a lasting benefit on society, by the very great improvement which this instrument has attained under his direction. The progressive steps by which it arrived at its present improved construction are detailed in the Eighth Volume of the *LONDON MEDICAL REPOSITORY*, and the instrument itself exhibited in an engraving contained in the same volume. By comparing the craniotomy forceps there sketched with those represented in the engraving which accompanies these remarks, the mechanism of the two will be seen to be different, whilst their principle of action is the same. To the instrument used by me I give the preference merely on account of its simplicity, easy application, and adaptation at once to ordinary cases, and to such as require peculiar management.

Some such contrivance as this must, ere long, altogether supersede the crotchet, with every scientific Practitioner, though for some little time it (the crotchet) may be continued in use, to the manifest danger of both patient and operator. That the craniotomy forceps must soon be generally sub-

stituted for the crotchet, I infer from the following important data.

First, because with them the Accoucheur may obtain so firm a purchase or hold of the foetal cranium, as will enable him to rectify any thing that may be unfavourable in the presentation of the head; and also to regulate the degree of power which it may be necessary to employ for its extrication—two highly important advantages, which it is evident the crotchet can never confer.

Secondly, because with this instrument there is no danger of injuring the vagina, even should it slip from its hold, whilst considerable extracting power is being employed. On the contrary, not only is the crotchet much more likely to slip, but many most deplorable instances are recorded in which it has torn the soft parts of the mother, or lacerated the fingers of the Accoucheur. And,

Lastly, because it is essential to the security of the vagina and contiguous organs, that whenever the crotchet is used, the precautionary measure of keeping a hand in the passage should always be had recourse to; a precaution extremely painful to the patient and Practitioner, and one altogether needless when the craniotomy forceps are employed.

Of the Long Forceps.

It was my intention to have entered fully into another subject which is of very great importance. I allude to the substitution of an instrument well known in the shops under the name of "long forceps," for the perforator, in those cases of slight deformity at the brim of the pelvis in which, at present, the life of the child is usually sacrificed; and also in many cases of hæmorrhage, convulsions, syncope, &c. in which delivery is essential to the well-doing of the mother, although the head of the child may not have passed the brim of the pelvis.

It has already been my felicity to save *three* children; and my friend, Mr. Salmon, of Broad Street, has also saved three, whose heads were condemned to be opened, and on whom, consequently, nothing less than murder would have been committed, but for the substitution of this instrument: and although I am well aware of the prejudice entertained by the majority of medical men against their use, still I hesitate not to state it to be my decided opinion, that many children, whose lives might be preserved by the "long forceps," are annually sacrificed at the shrine of obstinacy and ignorance. But I purposely abandon my intention of

entering fully into this inquiry, because my friend, Dr. Blundell, will soon present to the Profession a detailed investigation of this interesting and important subject, when the result of his own, and of his uncle, Dr. Haighton's practice, will, I trust, materially tend to remove the prejudices, and obviate the objections which are at present opposed to the employment of the "long forceps."

I would avail myself of this opportunity to direct the attention of medical men to a very curious and not unimportant subject, inasmuch as it bears on the mitigation of human suffering. In a few of those perplexing and wearisome cases of protracted labour, arising from rigidity of the os and cervix uteri, and which often harass both patient and Practitioner through successive nights and days, I have seen decided benefit result from the introduction of about half to a dram of the *Extractum Belladonnæ*, by gently rubbing it about the mouth and neck of the womb. It has suspended unproductive uterine action, and produced relaxation of parts, so that on the recurrence of expulsatory pains, the os uteri has readily yielded, and permitted the head of the child to pass. But my observations on this subject have hitherto been by far too limited to justify any conclusive practical deduction; I therefore respectfully request Practitioners in midwifery to prosecute this inquiry, and shall be much obliged if they will have the goodness to favour me with the result of their experience.

I trust my medical brethren will also forgive me for seizing the facility thus presented to me of importunately soliciting from them any observations of a practical nature which they may not be disposed to publish, illustrative of the *diseases of women and children*, especially such as are the result of pathological investigations; and more particularly would I venture to solicit specimens of morbid structure, which, though scarcely valuable as solitary preparations, materially enhance the value of a museum.

Explanation of the Plate.

Figure 1. The short forceps — The short forceps measure, from the point of the blade to the extremity of the handle, *eleven inches*.

The *blades* are *five inches* in length, exclusive of the curve, Their greatest width is at the middle, and measures *two inches and an eighth*; the fenestræ at that part being *one inch and a half wide*; the opening at the points and shoulders being about *half an inch*. The *alæ* of the blades should not

exceed a quarter of an inch in width; and the widest part, between the opposite blades, ought not to measure more than two inches and a half, or five-eighths.

The *shank* of either blade is just two inches in length, extending from the shoulder of the blade to the locking part of the handle. The curvature of this part of the instrument is so faithfully represented in the plate, as to render any explanation unnecessary.

The *handles* are about four inches and a quarter in length. The one which, when viewed with the concavity of its blade upwards, and with the convexity of the curvature in the shank to the left hand, has the lowest three inches and a half of it so constructed, as to be moveable by a screw, as is clearly exhibited in the plate.

Figures 2 and 3 represent detached parts, or rather the two distinct blades of the same instrument, and can require no explanation.

Figure 4. The craniotomy forceps. — This instrument is *twelve* inches in length. The blades are constructed as Dr. Davis's. The one which is applied externally to the cranium, and which is hollowed out, has fixed into it *twelve* sharp teeth, not rising above its edges. This blade is four inches and a half in length from its point to the joint of the instrument, being most judiciously recommended by Dr. D. to be half an inch longer than the inner blade, to carry up any pendulous part of the os uteri, which might otherwise be included in the grasp. The opposite blade, which is to be introduced within the cranium, is only four inches in length: its hollow is filled up with a piece of steel, having a convex surface perforated with twelve holes to receive the angular points of its antagonizing blade; so that when the cranium is firmly pressed between them, the teeth transfix it, and secure a very commanding hold. The *shanks* are five inches in length, and curved, the concavity corresponding with the curve of the blades. This construction is intended to accommodate the instrument to the perinæum in those cases in which it must be endangered by pressure if the shanks were straight, in consequence of the necessity which may exist for carrying the blades over and anteriorly to the pubes: thus this one instrument becomes adapted at once to ordinary cases, and to such as present unusual difficulty.

The parts which may be strictly called the handles, are not more than two inches and a half in length.