PROVINCIAL MEDICAL & SURGICAL JOURNAL.

MEMOIR ON TURNING, AS AN ALTERNATIVE FOR CRANIOTOMY AND THE LONG FOR- CEPS, IN DEFORMITY OF THE BRIM OF THE PELVIS, &c. &c.*

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SECT. IV.—THE DURATION, AND CONSEQUENTLY THE DANGER, OF THE LABOUR IS DECREASED BY THE PROPOSED PRACTICE.

In the short summary which I gave in January last of the advantages of turning over embryulcio, I stated one strong reason in favour of delivery by the alternate operation to be this,—“*that it was more safe to the mother, because it could be performed earlier in the labour, and more speedily,*”† than craniotomy, or the application of the long forceps. And I have the most sincere belief that the practice I propose may be the means of saving much, both of maternal and infantile life, by enabling us in some cases to abridge the mere duration of a difficult labour, so that we may terminate in a few minutes a delivery, that, which under other plans of treatment, might still be protracted onwards for hours or even for days. At the same time I am fully aware that when I state my conviction that the mere degree of *duration* and continuance of a labour is, *per se*, dangerous both to the mother and child, and very often fatal even in its influence, I venture to broach a doctrine which stands up alike against the opinion and the practice of some of the highest authorities in the obstetric profession.

About half a century ago, when treating of the influence of the duration of labour in difficult and instrumental deliveries, Dr. Osborne observed,—“I believe it is confirmed by general observation, that women recover at least as well, after long, lingering, and laborious labours, the duration of which may have been extended to several days, as after the easiest, quickest, and most natural delivery.”‡ In making this remark, Dr. Osborne stated not his own opinion only, but, I believe, the general opinion of the accoucheurs of his time; and the same doctrine little or not at all modified, still continues to be taught and acted upon, down to the present day, in the great English and Irish schools of midwifery, as the able

and excellent writings of (for example,) Professors Davis and Murphy, in London, and Drs. Collins and Beatty, in Dublin, &c., fully testify.

That, *per se*, the duration of labour has no very direct nor decisive influence upon the degree of danger and fatality accompanying parturition, is a doctrine which probably originated in, and has been perpetuated by, an erroneous system of observation. In founding and supporting it, obstetricians have, I believe, drawn their deductions, not from the *whole* of their practice, but from *parts* only of it; they have not reckoned upon the certain results of their *general* collection of facts, but depended upon the fallacious results of isolated and *individual* instances; they have not, in short, counted up the terminations and consequences of *all* their protracted cases, but have relied upon the evidence of some *single* striking case or cases of perfect, and it may be, rapid, recovery after labour of a very prolonged duration. In proceeding thus, obstetric authors have not followed a course altogether different from that pursued in the study and investigation of many other similar questions in medical science and practice. For confessedly, the medical mind has ever been too apt to recollect and found upon those facts only which are in favour of any preconceived opinion or opinions it may chance to have adopted; and the cases of failure are too often forgotten amid the more agreeable remembrance of the cases of success. It is on this account that the numerical method of reasoning and investigation, by obliging us to count up *all* our cases, and *all* our results, whether good or bad,—whether instances of recovery or instances of death,—is no doubt destined to revolutionize, in a great degree, our modes of inquiry, particularly in surgery and midwifery, by imparting infinitely more precision and certainty to our present deductions and precepts where they are true, and shewing us in language that cannot be misunderstood, the erroneousness of our doctrines where they are not true.

The question of the duration of labour in relation to its effects upon the danger and mortality accompanying parturition will be found, in my humble opinion, to afford an apposite example of the truth of these remarks,—for when this question is examined, as it can alone properly be examined,—by the numerical or statistical method, the results that are thus yielded, assuredly directly *gain say* and contradict the accredited

* Continued from page 5.

† “Monthly Journ. of Med. Science” March, 1847, p. 718.

‡ Essays on the Practice of Midwifery in Natural and Difficult Labours, p. 66.

impressions and common belief of the profession upon the subject. With the exception of Dr. Collins, of Dublin, few, or indeed no writers have, in their obstetric reports of hospital or private practice, furnished us with data shewing the duration of labour either in their natural or in their operative cases of midwifery. In his "Practical Treatise on Midwifery," (a work, the great value and candour of the facts contained in which it would be difficult to overpraise,) Dr. Collins has given the result of the cases which occurred in the Dublin Lying-in Hospital during a period of seven years, commencing November, 1826, and he has published throughout the work, and especially at the end of its individual chapters, tables, and data, from which the duration of the labour in most cases and complications can easily be calculated and compared. I shall state briefly some of the results regarding the influence of the duration of labour which I have obtained by summing and counting up the individual facts and data which Dr. Collins has published. And the results which I have in this way obtained, will, no doubt, be regarded by some as the more valuable and trustworthy, seeing that the data from which they are calculated have been collated by Dr. Collins, and given by him to the world under the generally prevailing idea that the mere length of the labour was no guide or test of its danger or mortality.

During the seven years that Dr. Collins had charge of the Dublin Lying-in Hospital, 16,414 women were delivered in it; and of these 164 died, or one in every 100 of the mothers was lost. In 15,850 of these cases the duration of the labour has been marked and published; in 1 in 29 only was it not noted. Out of the 164 fatal cases, in 138 the duration of the labour has been marked and published; in 1 in 6 it was not noted. Now, if in relation to the duration of labour as bearing upon the maternal mortality, we calculate the proportion of the 138 maternal to the whole, 15,850 labours, I find that the interesting result is that which is shewn in the following table. Let me merely premise that the table reads as follows:—Out of all the women delivered within one hour, 1 in 322 died; out of all those in whom the labour continued from two to three hours, 1 in 231 died; and so on.

TABLE II.
Shewing the Proportion of Maternal Deaths in relation to the Duration of Labour in 15,850 cases of Delivery.

Duration of Labour.	Proportion of Mothers Lost.
Within 1 hour	One in 322 died
From 2 to 3 hours	„ in 231 „
From 4 to 6 „	„ in 134 „
From 7 to 12 „	„ in 80 „
From 13 to 24	„ in 26 „
From 25 to 36 „	„ in 17 „
Above 36 hours	„ in 6 „

The preceding table affords ample evidence that, contrary to the general opinion of the obstetric profession, the mere length of the labour is a most serious and important element in reference to the degree of danger and fatality accompanying the process. For, in fact, as shewn by these calculations "*the mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.*" And this does not hold true with regard to the life of the mother alone. It equally holds true with regard to the life of the infant. For, exactly in the same way, as proved from the same collection of data, I find also that as a general fact "*the infantile mortality attendant upon parturition increases in a ratio progressive with the increased duration of the labour.*" Dr. Collins reports 1121 children as having been still-born. In 1045 of these cases the duration of the labour was noted. The following table shows the proportion of the children lost in labours of different degrees of duration. Like the preceding table, it reads thus:—Out of all the women delivered within two hours one in 20 of the children was lost; out of all the women whose labour endured from three to six hours, one in 18 of the children was lost; and so on.

TABLE III.
Shewing the Proportion of Infantile Deaths in relation to the Duration of Labour in 15,850 cases of Delivery.

Duration of Labour.	Number of Infants still-born.
From 1 to 2 hours	One in 20 was lost
„ 3 to 6 „	„ in 18 „
„ 7 to 12 „	„ in 11 „
„ 13 to 24 „	„ in 6 „
„ 25 to 36 „	„ in 3 „
Above 36 „	„ in 2 „

The two preceding tables refer to the proportion of maternal and infantile deaths as regulated by the duration of the labour. But many morbid complications and accidents may arise during parturition without necessarily proving fatal either to the mother or infant. The occurrence, however, of these complications and accidents is regulated by the same law of duration as I have above shown to regulate the actual deaths of the mothers and children. For, exactly in the same way, it may be laid down as a general proposition, that "*the mortality of most of the morbid complications connected with labour increases in proportion as the labour is increased in its duration.*" It would be easy to demonstrate for instance, that this holds good with regard to various obstetric complications taken individually—such as convulsions, rupture of the uterus, retention of the placenta, or hæmorrhage before and after its removal, puerperal fevers, puerperal inflammations, &c. The liability to each one of these complications and results certainly increases with the length

of the process of parturition. But, it may be enough for my present purpose to shew that taking these complications collectively, such is the result: the tendency to their general occurrence becomes greater and greater in proportion as the length of the labour is allowed to become greater and greater.

In his Treatise, Dr. Collins has recorded the duration of the labour in twenty-four cases of puerperal convulsions; in twenty-four cases of rupture of the uterus and vagina; in sixty-two cases of retention of the placenta; in 102 cases during and after the third stage of labour; in eighty-four cases of puerperal fever; in five cases of fatal pelvic abscess; and in five fatal cases of inflammation and sloughing of the vagina; in all 306 cases of complication occurring in 296 patients. The following table shews the proportion in which these 306 complications occurred in labours of different durations. It reads thus:—Of all the women who were delivered within one hour after the commencement of labour, one in 114 suffered from one or other of these obstetric complications; of all those whose labours were prolonged from one to two hours, one in 90 suffered from one or other of these complications, and so on.

TABLE IV.

Shewing the Proportion in which 305 Morbid Complications occurred in 15,850, Labours of different Durations.

Duration of Labour.	Proportion of Complications:
Within 1 hour	One in 114 was compli- [cated
From 1 to 2 hours	„ in 90 „
„ 2 to 3 „	„ in 69 „
„ 4 to 6 „	„ in 58 „
„ 7 to 12 „	„ in 32 „
„ 13 to 24 „	„ in 12 „
„ 25 to 36 „	„ in 9 „
Above 36 hours	„ in 5 „

The evidence which I have adduced in the preceding tables, affords ample proof that the proportion of maternal and infantile deaths, and of obstetric complications, becomes, as a *general law* gradually more and more numerous as the process of labour becomes more and more prolonged in its duration. But I have brought forward the facts principally for the purpose of shewing that out of them, and in connection with them, there is deducible another all-important principle, in reference to a practical and obstetric operative inquiry of the present nature,—viz., that when operative interference, such as the forceps, crotchet, turning, &c., is required, in order to terminate a difficult and morbid labour, the *time* of the labour at which that interference is had recourse to, regulates the amount of attendant danger much more

than the details and effects of the operation itself. In other words, in accordance with the general law already illustrated, the extent of danger or fatality attendant upon operative and instrumental delivery, is regulated in a direct and demonstrable degree by the previous length of time allowed to elapse before the artificial interference is had recourse to; the resulting mortality increasing in amount according as the period at which the operation is performed is proportionally more distant from the date of the first commencement of the labour.

It is not in my power to prove from Dr. Collins' Treatise that this law holds true in regard to the alternative operation of delivery by the long forceps, for his work affords no data on this point. In fact, in instances in which the head of the child is arrested at the brim, he and the profession generally in Dublin, prefer the use of the perforator to the use of the long forceps; and during the course of the seven years throughout which his report extends, this latter instrument does not seem to have been employed once in the Dublin Hospital, while craniotomy was, during the same period, employed above eighty times. During these seven years, however, the short forceps were used, to terminate the delivery in twenty-four patients in whom the head was sufficiently low down in the maternal passages; and perhaps the results in these twenty-four cases will be regarded as a sufficient illustration that in forceps' operations the general law holds good, that "*the operation is dangerous and fatal in proportion to the length of labour allowed to elapse before the artificial delivery is practised.*"

TABLE V.

Shewing the Maternal Mortality attendant upon 24 Forceps-Operations, to be regulated by the previous Degree of Duration of the Labour.

Date of Operation.	Results to the Mothers:
In labours terminated } within 24 hours. }	One out of 13 died*
In labours terminated } in from 25 to 36 hrs. }	„ „ 6 „
In labours terminated } in from 37 to 48 hrs. }	„ „ 4 „
In labours terminated } in above 48 hours. }	„ „ 2 „

Dr. Collins's data regarding the operation of craniotomy are more extensive, and hence more valuable. During the seven years included in his report, perforation of the head of the infant was practiced in

* In the single fatal case of forceps operation out of thirteen, in which the women were delivered before the labour had continued twenty-four hours, the mother became insensible after the pains had set in for a few hours, and the instruments were apparently used in consequence. The whole labour was only of eight hours duration. She died in three hours after delivery.

eighty-five cases in which there was extreme difficulty in the labour, or where the child was dead, and interference necessary for the patient's safety, or for the full completion of the delivery. In seventy-six out of these eighty-five cases, data are afforded for ascertaining the duration of the labour.

Out of the seventy-six women, fourteen, or one in every five and a half, died. The following table of the results of these seventy-six cases of craniotomy, as influenced by the previous duration of the labour, affords direct evidence of the proposition which I have already stated, that the fatality attendant upon this, as upon the other allied forms of forced or artificial delivery, is regulated by the date or period of the labour at which the operative interference is had recourse to.

TABLE VI.

Shewing the Maternal Mortality attendant upon 76 Craniotomy Operations, to be regulated by the previous Degree of Duration of the Labour.

Date of Operation.		Results to the Mothers.
	Hours.	
In labours under	24	One out of 19 died
„ from 25 to 48		„ 8 „
„ above	48	„ 3 „

The preceding body of evidence might easily be rendered more minute and detailed if it were necessary. But I hold that it affords proofs sufficiently strong and direct for our present enquiry. And the important relations which it has to that inquiry amount to this, that the facts adduced demonstrate—

1st. That as a general law the amount and proportion of maternal and infantile deaths accompanying parturition are regulated and modified by the length and duration of the labour.

2nd. That the liability to various morbid obstetric complications during and after delivery is modified and regulated by the same law; and—

3rd. That the mortality attendant upon obstetric operations, such as the use of the forceps and crotchet, is also strictly modified and regulated by it,—operative delivery being more and more fatal in proportion to the lateness in the course of the labour at which it is adopted; and, on the other hand, less and less fatal in proportion to the earliness in the course of the labour at which it is practised.

Now, the object of the present memoir is to propose that in cases of arrestment of the head at the brim of the pelvis, artificial delivery should be accomplished by turning, instead of being accomplished by the long forceps or craniotomy. And the operation which I thus wish to substitute has, as I have stated at the commencement of this section, this great and high advantage over both the two others, for which I propose it as an alternative, that, *ceteris paribus*, delivery

by turning can, and must, as a general rule, be practised far earlier in the labour, than delivery either by the long forceps or the crotchet; and in proportion as it is practised earlier, so far also will it be practised with greater safety and greater success. A few remarks upon the time at which the employment of the long forceps or perforator is usually adopted will render this deduction more evident. In our next communication we shall consider this point, and the value of auscultation in relation to operative delivery.

(To be continued.)

THE TAXIS.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

Your correspondent, "A Retired Surgeon of the Irish College," (*Provincial Journal*, 1847, p. 682,) deserves the thanks of the profession both for the courage with which he impugns the prevailing practice in the reduction of strangulated hernia, and for the perseverance with which he persists in calling attention to his own method, believing, as he evidently does, that its general adoption would prevent much suffering and save many lives. His sincerity and experience entitle his views to examination, and I gladly take the opportunity which is thus afforded, to call upon Hospital Surgeons, and those especially who are connected with the Association, to consider whether the prevailing method of using the taxis is the very best that can be adopted for the purpose.

It is much to be regretted that our lecturers and writers on surgery, too generally dwell with tedious minuteness on every step and stage of what is called "the operation" for strangulated hernia,—i. e., the operation *with the knife*, while the far more difficult and delicate operation *without the knife*, the *taxis*, is passed over cursorily and carelessly as though its successful performance were dependent upon chance rather than science and skill. "The moment that you find the tumour is hard, incompressible, not yielding in the slightest degree; that there is *no gurgling*, no diminution of the convexity and hardness, not the slightest appearance of *getting the contents of the intestine out*, urge with all your eloquence the propriety of the operation, for there is little danger if the operation be performed at the proper time,—the greatest danger if it be delayed after a certain time." (*Med. Gaz.*, vol. xij., p. 988.) These are the words of the lamented Sir Charles Bell, and they constitute a fair sample of the modern theory and practice of the London Hospitals. The late Sir Astley Cooper, who has left so splendid a contribution to the surgical anatomy of hernia, directs that the hernial tumour should be *kneaded by a successive motion of the finger and thumb*, "until you at last obtain a passage for a small portion of intestine or omentum through the strictured part." (*Cooper's Lectures*.) I agree with your correspondent that much of this is erroneous in theory and inefficient if not