

ORIGINAL COMMUNICATIONS.

ON DELIVERY OF THE CHILD
BY TURNING AS A GENERAL RULE IN
LABOUR.

By EDWARD GARLAND FIGG,

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"The Aphorisms in Midwifery have all of late been turned topsy-turvy."—
Dr. Robert Lee in *Medical Times* of Oct. 2, 1858.

No proposition is more universally entertained than that reproduction is, as a general law, opposed to the safety of the maternal parent employed in the process.

This fact, apparent in the vegetable and lower grades of the animal kingdom, is eminently manifest in the human female of civilised life, the evil being attributable to the tax on the individual resources of her system for a double maintenance during the periods of pregnancy and lactation; but associated with this to no small extent, it is due to the intricate and complicated mode of foetal expulsion for which she is distinguished amid the creatures of our globe. The physiologist and the patient are coincident in the opinion that it is effected with agony in the superlative degree, while the full employment of muscular structure justly entitles it to the designation of labour. These characteristics (the effort and the pain) are in the generality of cases increased or diminished in the ratio of the power of resistance of the maternal passages to the *vis a tergo* accomplishing the exit; and if we unite with these facts that the pernicious consequences in protracted labours are ordinarily in proportion to their duration, the inference naturally suggests itself that any artificial adjuvant, the application of which is consistent with safety, expediting the delivery, superseding the muscular effort, and allaying the pain, must curtail the risk in the degree in which it effects these objects. Avoiding for the present the consideration of the uterine stimulants, depletives, and sedatives, more or less available in delivery, let me examine the comparative merits of the long forceps, and the operation of turning in a case of inadequacy of the pelvic brim.

Let me suppose that you are summoned by a midwife to a patient, by whose side she has occupied a seat for eight hours consecutively, while a repetition of vigorous contractions at intervals of four minutes has not advanced the cranium into the pelvic cavity. An examination reveals a glove-like process of the membranes extending toward the concavity of the sacrum, or if the liquor amnii has escaped the substitution of a large caput succedaneum in the same axis; the pulse beats at 110; the muscles are strained, as if the sufferer had been just laid on the rack of the middle ages; the mouth is viscid with thirst, the throat hoarse with crying; and thus the patient, corporeally exhausted, and mentally excited, awaits your verdict of her state.

Does reflection indicate the long forceps, considering the circumstances previously to their application. The swollen scalp, obliterating the sutures, the caput succedaneum almost inducing the impression of a nates presentation, the difficulty of introducing the ponderous blades from the impeding bed-clothes, the difficulty of attaching them when introduced from the mobility of the head, the probability of their not locking when attached, or their liability to yield on traction, from the lambdoidal region of the cranium being alone encompassed are all so many obstacles.

Add the violent and prolonged concussion of the patient's frame, and the infant motionless, lacerated, and contused, when produced, and you have an array of evils requiring no small amount of professional fortitude to encounter.

Is the picture too highly coloured? Ask the Accoucheur of the ante-chloroform era, in whose memory it is vividly portrayed, coupled with the shrieks of agony or nervous excitement, rending the air in the still midnight.

Perhaps your guardian angel suggests turning—Simpson's expedient in lieu of the use of instruments in such cases.

The patient's anxiety, and that of her friends, is at once soothed by the information that the hand alone is to be the medium of extraction. The administration of chloroform to the extent of perfect anæsthesia, relaxes the uterus, abdo-

minimal, and perineal muscles, and renders torpid the vaginal and utero-cervical nerves.

The infant seized by the feet, and drawn in the axis of its own abdomen, effects an evolution with little if any effort on the part of the operator.

Why? Because there is nothing abnormal in the movement. The fœtus by the law of gravitation or other cause, had actually a month or so antecedently transformed a breech into the present cranial presentation, and often in the descent of the arm or shoulder. Nature rectifies the error, by substituting the feet in spontaneous evolution. Again, the ordinary position *in utero*, the arms crossed in the chest, the chin in close apposition to the sternum, the legs flexed on the abdomen, and the back describing the segment of a circle in its external periphery, offers extraordinary facilities for the execution of the project, which are actually increased by the nature of the womb itself in which the infant lies, as in an elastic bottle sufficiently flexible to admit of a transverse occupation of the revolving fœtus, but antagonistically contractile to co-operate with the Practitioner in instantly reducing it to the longitudinal axis.

The right hand (which I prefer to the left for introduction) is an instrument the perfection of mechanism; one that is not only exquisitely adapted for prehensile action, but furnished with nervous sensibilities, so as to discern by contact the character of objects in its vicinity. I never use the long forceps without a fear, lest the flattened extremity of the blade being insinuated externally to the os uteri, and internally to the bladder, should pierce the peritoneal process, investing the fundus of both, and run riot in the region of the intestines. Impossible (you exclaim), if you make the index finger of the left hand the pilot for conducting the instrument. Quite possible, I assert, as was once demonstrated at a post-mortem to Drs. Keiller, Zeigler and myself, the catastrophe having occurred in the hands of a really intelligent young gentleman.

With the hand there is no such risk. The vaginal avenue conducts into the large uterine cul-de-sac, the calibre of the fingers precluding an admission into the abdominal cavity by the course referred to.

Methinks I hear an opponent exclaim, The train of events is not quite so propitious as you represent it. Allowing that with a pulsating cord and unbroken arms you produce the trunk, it is but a mere inversion of the order of difficulties. We of the forceps' school direct our first effort to the extraction of the impacted or incarcerated head. You prefer making it the last measure; it alone constitutes the obstacle in delivery, and in either case physical force on the part of the Accoucheur is imperatively necessary.

Let me afford the objector all the weight that his argument deserves, its essence being, that under every circumstance a head inadequate to the dimensions of the pelvis occupies a position above it. The forceps by causing an imbrication of the frontal, parietal, and occipital bones, reduces the head to dimensions exhibited by the closed blades, quite irrespective of its capacity of diminution to a greater extent, and preclusive of all possibility of the cranium adapting itself, in making the exit, to peculiarities in the pelvic shape. It matters not whether the pelvis be infundibuliform, oval, cordate, or laterally capacious, the unvarying ellipse of the blades is compelled "*Vi et armis*" to run the gauntlet of obstructions.

Instead of compliance with an arbitrary law, delivery by turning is merely an artificial accomplishment of the suggestion of nature, who, with the view of obviating the impediment, assumes every available space to force the pliant cranial bones into while expediting their passage.

Who has not felt the parietal within the pelvis yielding and springing on pressure, like the side of a tin can? Or, who has not heard the exclamation of astonishment from assembled relatives at the length of an infant's head, the product of a protracted primiparal accouchement, a length out of all symmetry, and attributable to the elongated condition of the bones, and not merely the caput succedaneum? A short time rectifies the evil, the cranium reverts to the contour possessed before subjection to the ordeal of labour, and which it had only abandoned to pass through the pelvis.

Again, if the maternal tissues could be insured from injury in the operation, the forceps possesses a power of leverage admirably adapted for the removal of an impacted head. But civilised midwifery ignores such an application, for the objec-

tion which applied to, and almost rendered the *vecis* obsolete, bears here with double force, inasmuch that in the case of the *vecis*, one side of the pelvis becomes alone the fulcrum. In that case either blade of the forceps would be alternately used. The forceps, however, possesses a twofold legitimate function, a power of traction and ability to oscillate the head between the sacro-iliac synchondrosis and the obturator foramen.

With regard to the former, natural philosophy emphatically denies that the force in traction is increased in the ratio of the distance, the principle of leverage is excluded in this case. The muscular power of the practitioner antagonised by the resisting head, is neither increased nor diminished by the intervention of instruments.

In the rival operation of turning we can at all times increase the forceps traction in a double proportion, by enlisting the services of an assistant at the limbs of the infant, while your own efforts are directed to the liberation of the arms, protection of the cord, and oscillation of the head by the aid of the finger in the mouth.

But some one may sceptically exclaim, Dare you exhibit the power of two athletic men on so frail a structure as the body of an infant, without risk of decapitation, that calamity of which the older writers in obstetrics have given so many instances? I reply, that though the circumstances involving the necessity be rare, you may exercise such force with impunity. I have seen some of the most judicious men, inclusive of Simpson, exercise it without injury to mother or child. And, while I avoid a breach of Professional courtesy, by not treating the cases of Denman and the authorities of his age as purely apocryphal, I meet the difficulty by asserting that the art of procreation is keeping pace with the advancement of science in the nineteenth century. Our children's necks are more substantial in character than those of our ancestors, a fact which any one may verify by experiment, if he try the amount of force requisite to dislocate the neck of a still-born infant.

In one respect, I think all practitioners will coincide with me, viz. that chloroform to complete anaesthesia is only indicated till the forceps is attached or the infant inverted, subsequently to which events a state of semi-consciousness is preferred, inasmuch as it renews the uterine action suspended by the perfect influence of the anaesthetic.

We may form a just idea of the value of this immutual ally, by considering the amount of exertion we have been called on to expend in the removal of a head from its confinement between the tuberosities of the ischia, by the aid of a forceps of medium power. Yet the uterus alone would have effected the expulsion, by the effort of two or three hours' duration.

In what degree, then, it may be inquired, is either operation assisted by the *vis tergo* of uterine contraction? The information is at once afforded by considering the rationale of production in an ordinary unassisted labour. The uterus at first contracts at intervals of half hours, and with a single faint impulse. Why? Because it resembles a hand attempting to grasp a ball too large for its compass or constriction. The whole of the vigour of the organ is diffused over the membranes, distended with liquor amnii, and the included foetus, and its power is consequently less manifest.

Matters, however, improve with the lapse of a couple of hours. The contractions occur at intervals of four minutes, and with a double impulse. Why? Because the head has descended into the cavity of the pelvis, and the efforts of the uterus are solely appropriated by the trunk, which remains within its circumference; thus proving that the power of the organ is in proportion to the bulk of the object on which it acts. In extraction by forceps we secure the assistance of the uterus by an equal diffusion of its power over the foetal body. In turning we have that power concentrated on the comparatively small superficies of the head, which it closely invests. Without reference to assistance artificially by forceps previous to or manual traction after turning, the uterine power in either case may be thus arithmetically stated:—If the expulsive capacity of the organ be represented by the number six, the foetal power of resistance at the commencement of parturition being also six, the latter on a liberal calculation will have reduced one-third, on the head partially or completely entering the pelvic cavity. The expelling agency will then rate at six against four, two-thirds of the original resistance. But if the body of the foetus be

external to the uterus, and the head alone within its cavity we have an arithmetical as well as a physical inversion of circumstances. The expelling influence will still be six, but the object of resistance two.

It is almost superfluous to attempt proving that the uterus reduces its dimensions and increases its functional power in the proportion of the child's expulsion. Every student who has watched its gradual declension from the central point, between the *scrobiculus cordis* and *umbilicus*, the locality of the fundus at the commencement of labour, will testify to the former. And every Practitioner who has introduced his hand for the removal of an adherent placenta will testify to the latter, from his recollection of the firm pressure of the cervix on his forearm, which, like a tourniquet, rendered torpid the nerves of the hand and congested the part by arresting the venous circulation.

We repeat, then, the question, how far does this uterine power assist an artificial delivery? In a forceps case it does so imperceptibly. In case of version most evidently; I append one out of many instances of my experience.

In company with another Medical man I obeyed the summons of a midwife to a case three miles' distant from my home, a contracted pelvic brim had set her at defiance. We placed the patient under complete anaesthesia, turned the infant with ease, and extracted all but the impacted head. We pulled alternately and pulled conjointly without progressing in any appreciable degree. To my horror my companion announced the exhaustion of the chloroform, under which the patient during our efforts had insensibly slumbered: consciousness was gradually established, and with it her uterine contractions, the second of which with very little co-operation on my part completed the expulsion. The ideal danger of rupture is another conjuration of the professional mind with regard to this operation. The uterus is sometimes ruptured, so is the heart, and their organs present many points of similitude. But the heart never ruptures, save when there is something morbidly abnormal in its structure; neither does the uterus.

When consulted respecting the gymnastic performances of some young Titan, who for three months antecedently to his exit threatens the perforation of his mother's sides, and banishes sleep from her eyelids, do we ever dream that the uterine parietes will prove inadequate to the retention of their charge, though elbows, knees, head, and nates consecutively effected the assault? I fancy not: but yet with marvellous inconsistency we predict rupture as the calamitous consequence of artificial foetal evolution, the most gentle process in the whole catalogue of midwifery tactics, one that I have sometimes performed without anaesthetics, and without eliciting from the patient a single intimation of pain.

The impropriety of introducing the hand into the uterus was vividly and early impressed on my imagination by my instructors. But how in consistence with reason do they define the danger? Is it that the introduction of a foreign body, in which light we will view the hand, interferes with an organic function requiring instant performance, as in the air-passages, or circulatory apparatus? Experience says not. The uterine function may be suspended without injury, and in its state of quiescence the introduction takes place. Is it that the passage of the hand by the side of the head, as it lies *in situ* within a well-dilated os uteri, would effect a perilous laceration of the latter from its inability to expand? Experience says not. In the normal progress of the labour it must assume a circumference double the one it now exhibits to emit the foetus. Is it, that the extreme sensitiveness of the locality would render it liable to lesion in the act? Experience says not. No other organ but the heart presents such a contrast between its powerful action and its nervous supply, almost inducing the opinion that it owes its function to some other beside a nervous source. In the absence of chloroform some little pain might be experienced in the passage of the vagina and os, but the interior of the uterus is as torpid to manipulation as the cavity of a gutta-percha bottle. The muscular structure and internal aspect of the gravid uterus may, in one sense, be designated the connecting link between the maternal and foetal organisations, though I confess its relationship to the former to be of course closer than to the latter; yet, hæmorrhage excepted, I believe the mother's system to be as free from liability to shock on manipulation or abrasion of the internal surface of the uterine cavity as from injury to the foetal portion of the placenta. This opinion is

corroborated by the consideration of the natural progress of events in unassisted labour. How rarely is the structure of the organ or its lining membrane injured by the violent and incessant efforts of twelve hours' duration!

The peritoneal investment, the abdominal or lumbar muscles may suffer derangement, varying from simple pain to active inflammation. Decomposing animal matter may lie in contact with its internal surface, and by absorption into the circulation, produce ruinous results in distant localities. But a post-mortem examination of the uterus itself after a death from any of these agencies, presents no appreciable morbid peculiarity. Metritis is an extremely rare disease.

(To be continued.)

DISLOCATION OF THE
RIGHT FEMUR ON THE INFERIOR PART
OF THE DORSUM ILII—
SEVEN WEEKS' DURATION.

REDUCTION BY DR. REID'S PLAN.

By W. J. SQUARE;

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Pasco Prideaux, aged 30 years, farm-labourer, admitted into the South Devon and East Cornwall Hospital on March 24, 1858. On the following day he walked into the operating theatre with the aid of one stick, being very lame on the right side. He inclines toward that side in walking, and at each step jerks the body forwards. His right heel rests upon the ground, the foot is turned inwards, and the knee is directed towards the lower third of the opposite thigh. The anterior superior aspect of the thigh is wasted and flattened, and the limb an inch shorter than its fellow. At the lower part of the dorsum ilii, just above the ischiatic notch, the head of the femur is distinctly felt when that bone is rotated.

On the 4th of February last, he was thrown while wrestling, and his antagonist fell upon him. He immediately felt that he had sustained a grave injury. He remained in bed one week.

Reduction.—With the assistance of my colleagues, Messrs. Whipple and Fox, I at once attempted the reduction of the dislocation, which had now existed fifty days.

Chloroform used. Anæsthesia imperfect. The patient being placed on his back on a convenient table, the pulleys were applied, and extension kept up for twenty-five minutes. On slackening them, it was at first thought that the head of the bone was in the acetabulum, but during examination it slipped with a sort of snap into its old position. The pulleys being reapplied, extension was continued for twenty-five minutes longer, with the advantage of more complete anæsthesia, but reduction was not accomplished.

Mr. Whipple now suggested to me the employment of Dr. Reid's (U. S.) mode of reduction of the femur on the dorsum ilii, which I at once commenced.

The patient being still imperfectly under the influence of chloroform, I placed him on his back, grasped his ankle with my right hand, and his knee with my left.

I then bent the leg at right angles with the thigh, and the thigh with the body, slowly and firmly pressed the knee and dislocated femur upwards and inwards towards the patient's face, and then swept it outwards and downwards in a circular direction along the right side of the body. While this last movement of rotation was in progress, the head of the femur slipped with a jerk into its socket.

The limb instead of being directed inwards was now rotated outwards, with apparent elongation.

The thighs being bandaged together, with an interposed pad, the patient was placed in bed.

April 15.—Can walk without pain or lameness. The lower extremities are of equal length, and their axes alike. Some atrophy of the muscles about the hip-joint continues, and in walking he feels weaker than before the accident.

Remarks.—Several points of interest suggest themselves on a review of this case.

1. The long interval between the occurrence of the dislocation and its reduction, viz. fifty days.

2. The failure of the ordinary process of reduction by pulleys, even assisted by chloroform.

3. The very ready reduction by Dr. Reid's plan.

4. The peculiar position of the thigh-bone, and the apparent lengthening of the limb immediately subsequent to reduction.

Sir Astley Cooper's chapter on "Dislocation of the Femur on the Dorsum Ilia" is illustrated by twenty-two cases.

Of these five were not reduced, and in one of them, in which reduction was attempted thirty-five days after the accident, the use of pulleys, under his able superintendence, failed to restore the head of the bone to the acetabulum.

Ten were reduced within a short time after the occurrence of dislocation, and seven at various protracted intervals after the receipt of injury.

Thus:—

Case xxxvi. was reduced at the end of 28 days.

"	xxv.	"	"	28	"
"	xxii.	"	"	30	"
"	xxix.	"	"	35	"
"	xxiii.	"	"	42	"
"	xxiv.	"	"	49	"
"	xx.	"	"	54	"

In almost every instance, large bleedings, tartar emetic, the warm-bath, and pulleys were employed.

I believe that reduction of a dislocation of the head of the femur on the dorsum ilia has in many instances been effected at a later period than fifty days after its occurrence; but I am not aware that such a result has ever been obtained by the manual effort of one Surgeon, even when, as in this case, partially assisted by the imperfect anæsthetic influence of chloroform.

The use of this agent is of essential service in the reduction of old dislocations; but it is well worthy of note, that its employment and the use of the pulleys for fifty minutes, failed to replace the head of the femur in the acetabulum.

Still I have no doubt that the use of the pulleys was of essential value, by breaking down adhesions, separating new attachments, and wearying and elongating contracted muscles. Taking into consideration, however, the assistance derived from the previous employment of the pulleys, the ready and immediate reduction of the dislocation by Dr. Reid's process, under the unaided manual efforts of one Surgeon, must be regarded as striking and important.

Thence I would draw the inference, that it is desirable that this process should be at once adopted in all recent dislocations on the dorsum ilia, and that in old ones it is an important addition to the previously adopted means of reduction. The peculiar position of the thigh-bone "rotated inwards," and the apparent lengthening of the limb after its replacement, depended, no doubt, upon the filling up of the acetabulum by new structures, the eversion arising out of some particular disposition of the deposit, and the elongation on the occupation of the upper part of the acetabulum by the new deposit, whereby the head of the bone was prevented from actual contact with the cartilage of the upper part of the acetabulum.

The perfect cure of the poor fellow is a great gratification both to him and myself, and reflects high credit on Dr. Reid's ingenious and scientific method of reducing hip-joint dislocation.

Plymouth.

REPORT OF THE MEDICAL DIRECTOR-GENERAL OF THE RUSSIAN NAVY,

FOR TEN MONTHS IN THE YEAR 1857, VIZ. JANUARY 1 TO OCTOBER 31, 1857.

Translated from the *Morskoi Hornik*, a Russian Official Journal.

By JOHN MICHELL, Esq.

THE report of the Medical Director-General will in future embrace the period between the months of November and October following. Such an arrangement possesses the advantage of comprising a class of diseases, whose ordinary annual prevalence disappears in the autumn, while a new period succeeds on the approach of winter in the month of November. A new era of Medical activity commences, moreover, at the close of the navigation season.

Case 1, aged 22, was ruptured on the right side three months previous to his admission into this Hospital by a violent fall. At the time this accident happened he was serving in the militia, but was immediately discharged and ordered to use a truss, the application of which caused him great pain and annoyance, and entirely disabled him from following any occupation requiring physical exertion. Under these distressing circumstances he sought admission here, with the intention of getting his truss changed. A new truss was first tried, but he gained no advantage by the change, and he still remained in *statu quo*. The radical cure was proposed to him by Mr. Leather, as a *dernier ressort*, which he immediately sanctioned. This was a very promising case for radical cure, the ring being small and well defined; canal not much dilated and strong; the size of the hernia equalled an ordinary fist.

He was ordered a dose of castor-oil the previous night, and a glyster was administered in the morning, a few hours before the operation was done. Wutzer's instrument was used: no difficulty was met in effecting the invagination or discriminating the boundaries of the ring. After the instrument was properly introduced, the tendon of the external oblique could be tangibly felt under the finger. The needle was next fixed, and the plate screwed over the duplicature of the scrotal integument. The after-treatment consisted in rest in the recumbent position, with fever diet. On the following day there was a little tenderness and redness about the instrument. He feels tolerably easy—slept many hours last night. On the third day a little discharge issues from the puncture and also from the plug. On the fifth day the puncture increased a little in dimensions, with slight tumefaction about the instrument. No constitutional disturbance at all. On the eighth day the instrument was removed. The pressure was daily regulated. On the second day a little relaxation will be requisite from the swelling that generally follows; however, the feelings of the patient will serve as an index for modifying the pressure, the great object being to keep the opposed serous surface of the sac in mutual contact; and if too much pressure is exerted, the proximity of the puncture will be more likely to slough, because this is the spot upon which it is chiefly exerted; consequently the ultimate time required for granulation and cicatrisation will be prolonged. After the instrument is withdrawn, the scrotum should be supported by a figure of T bandage for about fourteen or twenty days, and the puncture dressed with a little ointment, etc.

As a rule the patient should remain in bed for seventeen or eighteen days, to prevent the gravitation of the scrotum and testicle from breaking the adhesions before they are perfectly organised. It will also be advisable to recommend the patient to use a truss for two or three months, until the plug is perfectly secured in the canal.

Case 2 was also the subject of inguinal hernia of the right side, caused eight years previously by undergoing forcible bodily contortion; but he did not suffer much uneasiness from it up to twelve months ago, when it descended, considerably increased, with symptoms of strangulation. He was admitted to one of the Dublin Hospitals, where it was reduced by taxis, and he was ultimately discharged with a truss; but four days after his dismissal the hernia descended in a similar manner, when he sought admission here. The hernia was reduced after long perseverance, and the radical cure was proposed, as the only alternative against the recurrence of the same misfortune.

This was not quite such a favourable case as the preceding, the rings were large and relaxed, and canal shortened and elastic.

The application of the instrument required great care, because the tube, without great caution, would slip above the margin of the ring, consequently render the operation abortive. Before the needle was transfixed, we satisfied ourselves that the tube was properly in the canal.

I think this misapplication of the instrument has been the cause of failure in one case I saw in this Hospital.

The ultimate progress of the case was identical with the one already reported. Both those young men have been passed into the army since the operation was done.

Case 3, aged 59. This case presented more difficulties than those already noticed; he is an attenuated and delicate individual, always suffering under bronchitis. Twelve months ago, he was ruptured on the right side by a fall; he tried to

wear a truss, but was finally compelled to leave it off on account of the pain it caused him: for the last three months he has been going about with his hernia hanging down, which incurred great deformity in his bodily appearance, also a great deal of dragging pain.

We thought this serious inconvenience which could not otherwise be relieved, justified trying the radical cure,—his emaciated condition made the application of the instrument easy. The instrument used in the above cases would not suffice to fill the canal and ring, consequently we increased the diameter by covering it with gutta-percha. Contrary to our expectations the suppuration at the puncture was exceedingly small, but the discharge from the plug was more plentiful than in the other cases; the instrument was left in the canal for eleven days, for on the ninth we had some apprehension that the adhesions were not sufficiently secure, the upper plate was kept quite loose after the ninth day.

The after treatment was similar to that adopted in the other cases. The discharge from the plug continued for eight weeks, and at first caused some excoriation over the scrotum, but this was soon cured by astringent lotion; he kept the bandage on for seven weeks, when it was replaced by a truss. There is not at present the slightest sign of a relapse; but he has not however been engaged in exerting himself much.

Case 4, a labourer, aged 55, was admitted into this Hospital four months ago with double inguinal hernia, which was caused five months previously by a violent paroxysm of cough. For the first five months he was confined to his bed with acute bronchitis, consequently did not require any support for his hernia; but as soon as he was convalescent and able to walk about a little, his hernia descended and increased considerably in size: at first he applied a truss, and commenced to follow his ordinary occupation, but the pain consequent on the use of a truss compelled him to give up his work, and his truss was changed several times, but with no benefit. By seeing this serious inaptitude and disqualification for work, caused by using a truss, and no chance of improvement by another change, the radical cure was recommended to him as the only means of compensation, which was performed first on the right side, and ten days afterwards on the left: we thought the application of the instruments to both sides contemporaneously would cause a great deal of pain. This was upon the whole a favourable case, the relation of the ring and canal being not much disturbed, consequently rendered the operations easy; no incidents occurred in the ultimate progress of this case different from those already noticed: this man is now perfectly well, and can toil at his usual work without any pain or inconvenience; he is at present engaged carrying heavy weights at one of the docks, and was exhibited at the Liverpool Medical Society, when the gentlemen present had an opportunity of making an examination, and satisfying themselves by ocular demonstration with the success of the operation.

(To be continued.)

ON DELIVERY OF THE CHILD BY TURNING AS A GENERAL RULE IN LABOUR.

By EDWARD GARLAND FIGG,

Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

"The Aphorisms in Midwifery have all of late been turned topsy-turvy."—
Dr. Robert Lee in *Medical Times* of Oct. 2, 1858.

(Concluded from page 495.)

Let me portray another illustration of my theory.

Amputation above the knee averages a mortality of one in seven cases. Traumatic delirium, hectic fever, and general constitutional disturbance, are but incidents in routine toward a favourable recovery. Yet every accoucheur is perfectly conscious that the ordinary detachment of the after-birth is virtually a natural amputation. The veins and arteries of the womb, which in digitating with the ramifications of the umbilical vessels, constituting the placental mass, are severed, as by the knife of the operator. The surface of the wound is not less extensive than in the case of the limb, while the debilitating influence of pregnancy—the muscular agency of labour—the feeble organisation of woman, would all

urge the practitioner to a verdict of evil. Why then does she bid defiance to fate, and rise in perfect convalescence on the fifth day? Simply because the organ immediately concerned is in a great measure defective of nervous sensibility; and the process is undergone with almost as great an impunity as if its structure were timber or stone.

But some opponent exclaims, there is surely some risk from depression of the circulation, on the rapid removal of the fœtus. I candidly acknowledge a little, necessitating a careful surveillance for the hour succeeding delivery; but yet nature affords us many precedents for the rapidity of the extraction. An artificial footling case, and the expulsion of a mammal quadruped, exhibit many points of analogy.

The foal presents by the nose, the level of the mare's gravid uterus is below the level of the pelvis. By a series of oscillations of the organ effected by the contractions of the corporalis muscle she raises it to the pelvic grade, when one contraction of the uterus expels the young animal. Here the actual process of delivery may be designated. The instant production of an animated wedge of which the foal's mouth is the conducting narrow end. If we recognise a parallel of similitudes in the two cases, for instance, that the foal's mouth represents the child's feet, the foal's shoulders the child's hips, the foal's hips with limbs posteriorly extended (decidedly the greatest transverse diameter of its trunk), the shoulders of the child with the arms thrown up into the uterus (equally its broadest part)—we conclude that one process is an imitation of the other, the only particular in which they are contrasted, being, that one is naturally effected, and the other artificially adopted.

Hitherto I have only adverted to the operation in cases where formerly the long or medium forceps would have been recommended. But the arguments proving the absence of danger peculiarly connected with the act of version in such cases could be enlisted in favour of its adoption as a general rule. The results derivable being an abridgment of the agony of the patient, the economy of her mental and physical energy, the prosperity of the infant, and the limitation of your own attendance.

An objector may, however, inquire, if in the average of ninety-nine per cent. of normal cases, Nature accomplishes a delivery, with a viable mother and child, are you warranted in opposing her plan of action?

If the interference proposed be definable as an opposition to Nature, I could exhibit an organised course of opposition in every department of science within her regime. The agriculturist interferes with her when he avails himself of the laws of chemistry in fertilisation of his fields—the merchant in importing the produce of tropical climes to our northern latitudes. Nature is not regnant in the world in such a sense that in all things her *modus operandi* is to supersede the rule of reason. The Physician confesses that her efforts are generally restorative, but her measures, not sufficiently prompt and applicable, may be judiciously substituted by his own. The Surgeon and Nature are coincident in opinion that amputation is the patient's only alternative. But he prefers the rapid and effectual excision to the exhausting suppuration and gangrene of the latter.

In cases where the observation is obscured by conflicting symptoms, excluding the possibility of an accurate diagnosis, prudence indicates a trust to Nature.

But where all is clearly manifest to our reason, as in an ordinary instance of parturition, we may safely carry out Nature's design by a rapid act, considering ourselves entitled to the gratitude of the patient and the approval of our own conscience.

Perhaps you produce another, and in its superficial aspect, a more formidable objection, *vis.*: That if the nates presentation were more propitious than that of the opposite extremity, such presentations would constitute the general rule in parturition. Reflection subverts this argument. Nature predisposes the circumstances of labour in consistence with the safety of the mother and her child, always, however, with the expressed consideration that the process take place under her individual superintendence being governed by her independent laws. Her calculation ignores medical alliance or rational interference, and arrangements are made as though her patient dwelt in the solitude of a North American forest, insulated from the sympathies of her species.

If accident or disease superinduce labour in the seventh month of gestation, the nates presentation will predominate

over the head. A child weighing four pounds is shot through the pelvic passage with a celerity in strict keeping with that debility and imperfect development incapable of enduring a more tedious exit. But when the normal period of pregnancy has imparted firmness and size to the infant structure, a head in close apposition with the internal circumference of the brim is first expelled. Why? Because the nates presentation would inevitably subject the cord to pressure between the cranium and the pelvic ring, and almost as inevitably effect the strangulation of the child.

Inductive reasoning on the particulars of the case, which I am about to detail, incontrovertibly decided my opinion in favour of the operation in all cases where it could be effected.

The sudden illness of a Medical man, placed me as his substitute, by the bedside of a parturient patient, where for the twenty-four hours previously he had been stationed. The waters had long escaped, the swollen scalp bent low between the sacral promontory and symphysis, above which, notwithstanding vigorous uterine effort, the cranium itself was incarcerated; and to darken the prospect I was informed of her delivery by perforation on three previous occasions. I at once applied the substantial long forceps left by my predecessor, and for twenty minutes the patient's frame vibrated under all the strength I could enlist on the occasion. From a conviction of absolute failure I desisted, and despatching a request for Simpson's attendance, inactively awaited his arrival. *Ad interim* a third party appeared, Dr. P., a gentleman called in by one of the officious relatives, without consulting me or informing him of my possession of the superintendence. We compromised the matter by acting conjointly, that is to say, we postponed all measures till Dr. Simpson's arrival, with whom a deliberation was held as to further procedure. Dr. P., an accomplished midwife, thought the long forceps indicated; I, from the fact of my recent discomfiture, deemed them inadequate to the emergency. Dr. Simpson, without affording a decisive opinion as to the practicability of delivery by the long forceps, preferred turning. However, Dr. P., at the Professor's request, attached the instruments a second time, and worried the patient, *secundum artem*, for some minutes; when, concluding the resistance insurmountable by that means, he agreed to an attempt by Dr. Simpson's alternative of turning.

The patient was placed under chloroform, the infant was turned and delivered by Dr. Simpson in about four minutes, crying vociferously a minute or two after.

The triumphant termination of this case imperatively demanded a verdict in favour of version, and naturally suggested to me the following query on the following premises,—If delivery could be effected so rapidly, easily, and safely, under such formidable circumstances, how much more easily, safely, and rapidly, could it take place by the same means under normal circumstances?

With so many excellent manuals of midwifery in the hands of the Profession, it would appear almost impertinent of me to offer my observations as to the mode of carrying this measure into execution; however, for the benefit of my junior brethren I will offer a few directions.

Place the patient on her left side transversely in the bed, so that her body form an angle of 45 degrees with the longitude of the bed, over the side of which let her nates nearly protrude, while her knees are drawn up in the direction of the abdomen. Let the covering be a single blanket or sheet; two or three pillows may be placed under the head, while a hot and cold water bath ready for the infant are in close vicinity. Never attempt the operation till the os uteri acquire the diameter of three inches, nor defer it till it ceases to be tangible in its whole circumference to the examining finger. Avoid, if possible, rupturing the membranes, but do not imagine the version impracticable if they be ruptured. Administer chloroform to perfect anæsthesia. Place an assistant sitting in the concavity formed by the flexure of the patient's body, desiring her to elevate the right knee. Throw off your coat, and anoint the arm and back of the right hand, avoiding the palm. Throw the fingers of the right hand into the form of a cone, introduce them in the axis of the pelvic outlet, not being deterred, if in the case of a primipara, this require a little force, pass them internally to the posterior uterine lip, and into the cavity of the uterus. Grasp the feet, coterminously with which you must of necessity rupture the membranes. In doing this the feet

must be carefully discerned from the hands of the fœtus, and seized, by passing the heels between your fingers.

Should you by mistake bring down an arm, do not esteem it of any consequence, but repeat your search for the feet; draw them in close vicinity to the child's abdomen, and thus throw up its arms and head tangent to the uterine fundus, while the feet enter the pelvis.

The left hand may be now employed on one leg, while the right acts on the other, drawing the infant's body in the direction of the mother's rectum, in effecting which a towel placed between your hands and the child's limbs will afford a firmer attachment. If the child originally present with its face towards either synchondrosis, which will be the case in seventy per cent. of parturient patients, the evolution will, of course, transform it into a pubic presentation, a circumstance of no material consequence, as you can turn it the quarter circle to the right or left, into the first or second Nægele, when the body is drawn down till the os encircle the axillæ and chest of the infant, its arms being at this stage tangent to the side of the head in the uterine longitudinal axis. Having turned the face posteriorly, when required resume traction till you experience a sense of resistance to a tolerable amount of effort on your part. Now gently draw down two or three inches of the cord; hook the fore-finger of your right hand over the infant's arm lying posteriorly to the right ramus of the maternal pubes, carry it to the bend of the elbow, and press the arm down perpendicularly to the side and external to the vagina.

Repeat the measure with the other arm; encircle the cord without pressure between the thumb and fingers of the left hand; carrying the same hand into the vagina, and placing the fore-finger in the infant's mouth, therewith press the chin close to the sternum, at the same time exercising traction in the direction of the mother's rectum, with the right hand spanning the child's loins. If the resistance require a greater amount of traction than this attachment affords, encircle the neck with a towel, the ends of which grasped opposite the breast, will form a better hold.

When, however, the head has reached the floor of the pelvis, bring the body of the infant directly forward, between the femora of the mother, turning the face downward, and clearing the vagina.

If you experience any difficulty in bringing down the arm next the maternal pubes, at once attempt the extraction of the posterior one.

If that be also immovable, pull the child's body laterally in the direction of the mother's right acetabulum, thus causing a depression of the arm adjoining the sacro-iliac synchondrosis, and placing it within your reach. A relaxed undilatable os uteri, with thickened edges, frequently accompanied with flooding, ante partum is a more serious obstacle than ordinarily contracted pelvic passage. For if you succeed in introducing the hand and turning the child, the os encompasses the neck, and confines the head with almost the same tenacity that the capsular ligament exercises over the head of the femur.

I am not aware of any remedy instantaneously counteracting this evil, which imparts considerable tedium to the delivery, presenting, however, one redeeming trait, viz. if the os and cervix be defective of tone, there is no pressure on the cord, and therefore little risk to the infant.

It may occur that on introduction of the hand into the uterus, one foot only may be within reach, the opposite leg being in all probability ligatured by two or three circles of the cord, and thus maintained perpendicularly parallel to the long axis of the womb, instead of the flexed position favourable for the operation.

The first attempt to secure both feet proving abortive, do not waste your time by further efforts, but proceed in accordance with previous directions with the single foot, when the traction will cause a rotation and version of the fetal body, and consequently the liberation of the opposite one, which can then be easily extracted.

Perhaps neither feet are tangible; the near leg being encircled with the cord, the distant one is beyond reach. Or the fœtus may present in the third Nægele, forming the curvature of its body anteriorly. The cause of difficulty is immaterial, the mode of rectification being the same, viz. making the fœtus to revolve like a wheel on its own axis, and when the segment of a circle is effected, the feet will fall

within reach. The instant the infant is secured, remove the placenta, and press externally over the uterus.

In the greater proportion of cases, I have found it partially detached, and consequently effusing blood from the lacerated vessels, along the line where its uterine adherence remained. It may have been forcibly removed by contact with the child's body in the act of turning. It may have been acted on by the tension of the cord. Whatever the cause, the precaution of early removal obviates the danger.

With regard to the children they are generally still from two to five minutes, and in some cases half an-hour's duration. In many instances the first arm brought down is a little painful when moved for a day or two. I confess with humility that I have even broken four arms, which, though they occurred in cases of great pelvic contraction, were attributable to my own mismanagement in pressing over the shaft of the os humeri instead of following its line to the elbow. Should you commit the same error, with similar result, be not too candid to the relatives, but at once by your dictum transubstantiate the injury into a slight sprain received by the infant striking his shoulder against the backbone of the mother while actively prosecuting his uterine gambols. It will pass current, more especially if you appeal to her experience, when it is sure to be corroborated by a quotation of the day and hour of occurrence. Two slips of pasteboard applied, with a strip of calico a yard long, remedies the evil in ten days.

In establishing a comparison between the advantages derivable from turning in primiparæ and multiparæ, I believe there is a preponderance of argument in favour of the former. In a primipara the os uteri is more in the axis of the pelvic brim, the body of the organ being more inclined to the perpendicular, and not projecting anteriorly, as in the frequent parturient; hence, in the former case, the uterine efforts of the last month previously to labour lodge the os and cervix inclusive of the head low in the cavity of the pelvis, not only assuring the Practitioner by tangible proofs of the perfect capacity of the brim, but also presenting the best arrangement for the co-operation of the uterus with his extractive efforts. In the latter case from the yielding of the abdominal muscles in former labours, the fundus bearing forwards, throws the os in the direction of the spine, rather than the pelvic cavity. Hence until the contraction of these muscles in some measure restore the proper axis, no advance can take place.

The advantage in the second particular is briefly explained, by stating that in a primipara the antagonistic force is directly in line with the extractive. In a multipara it is entrenched round a corner.

Again, in a primiparal case you have good grounds for the conviction that, in obviating the perineal stage, you limit the labour considerably; while in the latter patient an hour's suffering might conclude the case.

Be they right or wrong these are the sentiments which have guided my conduct at a large majority of my cases latterly, experience appearing to justify in happy results what theory dictated on sound reasoning. I hope I shall soon lose all mental impressions of a head lingering on the perineum, or stationary from falling pains for hours. My primiparal patients are up in four days without swelling of the vaginal muscles, nymphæ or labia; and what to me is perfectly unaccountable, with very slight laceration of the perineum.

I have had but one maternal death where the infant was turned, and that occurred five days after the event, by inflammation of the peritoneum of a patient, who, with contracted pelvis, had submitted to the ordeal to produce her sixth full-timed dead child.

If I be entitled to any credit at all, it is for the candid avowal of a practice, that some under fear of professional censure, would have adhered to but concealed.

The operation was ancient, but nearly obsolete, and its revival by Dr. Simpson in particular circumstances, led to my adoption of it in general cases.

P.S. Since writing the above observations some months ago, I have attended sixty labours, three of which alone have been conducted as head presentations. Of the remainder two were breech presentations, and the other fifty-five were conducted according to the principles advocated in the above communication, viz. the children were all delivered by turning.

Borrowstounness.