no means of strengthening its inhibitory power by exercising every known means of building up the nervous system. Plenty of fresh air is an essential. Moderate exercise, tonics, especially the phosphates, long continued. Delay all attempts at school education until assured of recovery, and above all other things guard the child's diet. It is my opinion, formed by years of study of large numbers of epileptics, that there is no more potent factor in the production of spasm in children than irritation of the gastro-intestinal tract. In a recent study of 566 cases of juvenile convulsion, in which the histories appeared full and reliable, in 52½ per cent. the convulsions had ceased although mental enfeeblement had in some degree persisted. I believe as many would have recovered without so many cases of mental impairment, had the cause shared the treatment with the symptom.

Next in order comes traumatism, including blows, falls and all other injuries to the head, from which I have excluded all cases which were not followed by spasms, paralysis or other symptoms of severe nervous shock. It is comparatively rare for operative procedure to be made in these cases, partly, no doubt, because friends will not allow them. It is a very doubtful matter how much good operation would do, except where fracture occurs; for post mortem examination demonstrates that the injury from blows is apt to be diffuse rather than local. Complete rest for some time after the accident should be insisted upon, and the appearance of a spasm after the primary irritation has had time to subside, should awaken the gravest apprehension. Secondary mischief has almost certainly been awakened and such cases are most obstinate. The treatment recommended for early convulsions should be begun as early as possible. I would not discourage operative measures for such cases in these days when such operations can be done with relative safety.

It is difficult to believe that large doses of bromids should accomplish anything in these cases, except to smother the spasms and blind both physician and friends as to the progress of the disease. Of the medical treatment I will speak later. The specific fevers are seen to be a very fertile cause of subsequent cerebral mischief, especially scarlet fever. It is not at all uncommon for convulsions to occur at some period of its course. In measles, if the nervous system is weak, meningeal symptoms are very apt to complicate the case. At the Pennsylvania Institute for Feeble-Minded Children, three epidemics of measles occurred, covering 397 cases. In the school department, when the children were of more healthy growth, catarrhal complications predominated; but in the asylum department, cerebral complications were the rule in the many cases where complications occurred, in some cases so severe as to kill the child in two or three days. When pneumonia would fatally attack a measles case, meningeal congestion would also be found post-mortem. In all such cases, as soon as indications of intercranial irritation are seen, prompt derivative measures should be employed to relieve cerebral congestion before the foundation be laid for permanent changes. Bromids may enter freely in the treatment at this stage but should not be long continued. The general remedies for this purpose are too well known to need mention. The number of imbeciles left in the wake of acute inflammatory cerebral disease is well known. Only

the comparative infrequency of this class of affections prevents this number from being frightful.

In all these diseases which I have described it is the residual products which cause the dreaded after effects. The remedies which are known to be of service are not numerous. Among those on which I have learned to look with favor is chlorid of gold. My use of it has been limited, but occasionally it has proved very effective. Much more can I commend a combination of iodid of potash with iodid of iron. In children where there has seemed to be a reawakening of cerebral change, and extension of old trouble has threatened, the symptoms have abated and the children have gained flesh and strength under its use. Arsenic, though less certain, has occasionally done good service.

The most satisfactory treatment is for the physician to follow his case through convalescence to complete health. To advise regular habits, sufficient rest, and above all things, and before all things, to provide rest and food for the rapidly growing brain, whose needs in the very young dominate all other organs, and the retardation of whose growth may be lifelong.

Lastly, I will refer to those obscure cases of epilepsy which arise in the years between dentition and the advent of puberty without any cause that we can demonstrate, merely to confess my inability to understand their origin or to recommend special method of treatment. They will occasionally recover under almost any treatment. Bromids will best diminish the frequency of their spasms, and, I believe, shortens the period during which they are fated to suffer.

THE FUNCTIONS AND THE FORM OF THE OBSTETRIC FORCEPS.

Read in the Section on Obstetrics and Diseases of Women at the Forty-fifth Annual Meeting of the American Medical Association held at San Francisco, June 5-8, 1894.

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The functions of the obstetric forceps may be divided into constant, occasional, extraordinary and incidental. Its sole constant function is traction—the reënforcement of the natural *vis-a-tergo* by an artificial *vis-a-fronte*. As traction is intended to supplement the natural forces of labor, it should imitate them in so far as an artificial process may imitate a natural one—it should be intermittent, it should be moderate, it should urge the presenting part by its smallest circumference along the line of least resistance which in a general way will coincide with the axis of the parturient canal, at whatever point the presenting part may be engaged, and as nearly as may be with the axis of the blades of the forceps. Minor exceptions, however, are not infrequent. When the head impinges too strongly on the pelvic walls, either laterally or anteriorly, the line of least resistance will traverse the pelvic axis towards the opposite wall. When the forceps is applied before rotation takes place, the axis of the blades will depart from the axis of the pelvis proportionately to the obliquity of the application; at the outlet the interests of the perineum require that traction be anterior to this axis. Traction by the ordinary forceps as usually employed is neither moderate nor in the line of least resistance, and it is likewise neither in the axis of the blades nor in that of the pelvic

canal. The axis of the handles being set at a considerable angle anteriorly to the axis of the blades, and the grasp being at a right angle with the former axis, the direction of the tractive force exerted is always indefinite, not to say problematical, and generally deviates greatly either anteriorly or laterally from the normal line. Traction must be injurious and excessive in ratio to its misdirection.

The forceps of Morales, Hubert and Tarnier, while avowedly designed for traction in the axis of the pelvic canal, are really adapted to traction in the axis of the blades only. They are all alike incapable of adaptation to the varying requirements of individual cases. They embody a distinct advance in the direction of the principle which should guide us in traction, but they do not fully realize it. This principle is traction in the line of least resistance. It should not be departed from except for some well-defined and rational purpose—to promote rotation, for instance, or to protect the perineum. It may be objected that the line of least resistance, like the mathematical axis of the pelvis in the living subject, is incapable of demonstration, but it can not be denied that an empirical approximation to this line should be attempted in every case of forceps delivery.

Leverage, the occasional function of the forceps, may be either axial or transverse. Axial leverage is employed to promote rotation and transverse leverage to produce flexion and extension and, by some operators, in the form of lateral leverage, to “pry” the fetus out of the maternal passages. Lateral leverage should be rejected absolutely because, as Smith has demonstrated, it is mathematically absurd and, as experience has shown, it is extremely damaging to the maternal tissues. Transverse leverage, in promoting flexion and extension, may be applied equally well with any of the modern forceps, but axial leverage as applied by the ordinary forceps is indefinite and inefficient. It is made in the axis of the handles and at a considerable angle with the axis of the blades, and therefore instead of sweeping the head about its own axis tends to sweep it about an axis altogether external to itself and at a marked angle with its axis of presentation.

Compression, the extraordinary function of the forceps, may be made with the greatest exactitude with the shovel-handled forceps which I presented to the profession about a year ago. Among other forceps, however, when compression is exercised designedly there is little choice, but incidentally the ordinary forceps exerts a compression immensely greater than that required for secure prehension of the fetal head. This, it must in all candor be admitted, is a serious objection to this instrument. If compression as an independent function of the forceps is of doubtful propriety and always to be exercised with the greatest caution, compression as an incident of traction should be reduced to a minimum compatible with a solid grasp of the presenting part of the fetus. This is accomplished by axis-traction forceps and by no other.

Uterine excitation, the incidental function of the forceps, its so-called dynamic influence, is exerted by the ordinary forceps probably in a greater degree than by any other, but solely because of its defects, and not because of its perfection as an instrument of precision. In efforts to make axis-traction the handles are crowded against the perineum and the blades against the anterior walls of the uterus and vagina

while, in leverage, the blades are forced laterally against the latter structures. The pressure and friction thus produced, by reflex action, often materially strengthen uterine and abdominal contractions, but always at the expense of the maternal tissues.

The function of the obstetric forceps must determine its form. The blades should conform to the contour of the fetal head, and to the curve of the pelvis, and afford a secure and harmless grasp of the former without materially enlarging either of its diameters; the lock, on the one hand, should be easily adjusted and, on the other, should entirely prevent rocking of the blades; the handles should enable the operator to exercise all of the functions of the forceps with the greatest ease, safety and efficiency.

In accordance with these views, Messrs. Tiemann & Co. have constructed for me two forceps, a long

Fig. 1.

Fig. 2.

and a short which, in form, differ from previous forceps in several important particulars: The distal end of the fenestrum is filled in for a full inch or more; the axis of the handles is parallel with the axis of the blades; the axis-traction rod is connected with the lock of the male blade by a ball and socket joint; the axis-traction bar drops perpendicularly from the right handle about whose axis it moves for nearly 180 degrees; the catch for fixing the blades is in the form of a ratchet placed at the end of the handles, operates automatically and, when not in use, drops between the handles entirely out of the way.

The advantages of this forceps are:

1. Harmless grasp of the fetal head. The danger from compression varies in direct geometrical ratio with the amount of pressure applied, and in inverse geometrical ratio with the area over which the pressure is distributed. Undue compression is exercised

by the ordinary forceps for three reasons—viz, *a*, the extractive force not being exerted in the line of least resistance must be greater than with axis-traction instruments, and the compression correspondingly greater in order to obviate slipping of the blades; *b*, the grasp of the handles is maintained by lateral pressure which increases, particularly when the handles approach parallelism, as it were in parabolic ratio with the increase of extractive force; *c*, traction altogether and compression chiefly are exerted by the distal half of the blades—by the half lying beyond the point of greatest divergence. This pressure, whether of traction or of compression, is made by the ordinary forceps on a narrow surface, that underlying the bars of the blades and rarely exceeding five-sixteenths or three-eighths of an inch in width on either side. This undue pressure, this pressure in excess of what is required for a secure prehension of the presenting part, applied by the narrow bars of the distal half of the blades, it is that so often proves disastrous to the child.

Pressure when applied to the lateral surfaces of the head is by no means so dangerous as when applied obliquely or antero-posteriorly but, with a living child, it may be laid down as a rule absolutely without exception that compression should be reduced to a minimum compatible with a firm grasp of the presenting part and a safe delivery of the mother.

Not only should the pressure be minimized in the aggregate, but it should also be minimized at every point by distribution over the largest possible surface—thus greatly diminishing its injurious results. By the forceps I present to you, total pressure is minimized by axis traction applied by a handle that exercises no leverage whatever, and pressure on any given surface is minimized by filling in the distal or further end of the fenestrum for a full inch and thus nearly doubling the pressure area.

2. Secure grasp of the presenting part of the fetus. Traction with the ordinary forceps is usually made at an angle and frequently at a considerable angle anteriorly to the axis of the blades and has a proportionate tendency to promote slipping. Traction with this new forceps, however, is always quite or very nearly in the exact axis of the blades and slipping, if it occur at all, will not be attributable to any misdirection of the tractive force.

3. Avoidance of injurious pressure on the maternal tissues. The ordinary forceps endangers the maternal tissues in three ways: *a*, by misdirected traction dragging the head upward against the anterior vaginal wall; *b*, by crowding the blades too far forward in efforts to make axis-traction at the superior strait; and *c*, by pinching the intervening tissues between the forceps and the lateral walls of the pelvis in leverage and pendulum traction. These dangers are wholly obviated by the new forceps.

4. Easy application. Comparison here is made particularly with the Tarnier forceps and its numerous modifications.

5. Firm and comfortable grasp in traction. These are possessed by the Tarnier forceps also, but, in protracted and difficult cases, the handles of the ordinary forceps are a source of not inconsiderable annoyance from both discomfort and insecurity of the grasp.

6. Convenient catch for holding and for releasing the blades. The nut and screw of the Tarnier forceps

require some time for their adjustment both in fixing and in releasing the blades, while the catch of this instrument is operated instantly for either purpose and, when not in use, drops between the handles out of the way.

7. Freedom of one hand in traction. The force applied in axis-traction need rarely exceed 20 or 30 pounds and probably should never exceed 50 or 60, although some authorities place the limit as high as 80 or 100 pounds. This force can be easily and comfortably applied with one hand, either the right or the left, leaving the other perfectly free for such uses as constantly present themselves in instrumental delivery.

8. Axis-traction wherever and however the forceps may be applied. The Tarnier forceps and its numerous modifications when applied to the sides of the pelvis enable us to make traction in the pelvic axis as nearly as any forceps can—no more nearly, however, than the forceps under consideration; but when applied obliquely, when applied before rotation has been accomplished, the line of traction departs more or less and sometimes considerably from this axis—it is displaced laterally and superiorly. Not so, however, with the new forceps. When it is applied obliquely the axis-traction handle drops down by gravity into a perpendicular position. Grasping this handle well down below the connecting rod, traction may be still be made in the pelvic axis.

9. Lateral traction whenever indicated. In the living subject it is impossible to determine the exact mathematical axis of the pelvis. Approximation is all that is aimed at even in so-called axis-traction but, as was hinted at the outset, it is the line of least resistance and not the exact pelvic axis that should be sought—this is the method of nature. In a general way, the line of least resistance will correspond with the axis of the pelvis, but at any given point it may or may not. In every case of instrumental delivery the line of most efficient traction, the line of least resistance must be determined empirically—a general law we have, it is true, which must, however, be interpreted by the conditions peculiar to each individual case. Leverage and pendulum traction, are a blind effort to discover this line of most efficient traction, or in other words the line of least resistance. Their efficiency does not depend on leverage but on alternate lateral traction. By carrying the head to one side, pressure is relieved on the opposite side where friction is so reduced that progression takes place; traction is then made on the other side with a like result. This, to my mind, is the solution of the undoubted efficiency of pendulum traction.

But lateral traction is often indicated independently of oscillatory leverage. When the head impinges strongly on either wall of the pelvis, friction will be diminished and the line of least resistance approximated by bearing away to the opposite wall. When, for instance, the forceps is applied obliquely, either at the superior strait or in the pelvic canal, the line of traction may now and then be profitably carried somewhat to the side opposite to that of the presentation. On the contrary, however, traction in the pelvic axis or slightly toward the side of the presentation will sometimes materially assist in producing rotation; for now the force is applied below and to the side of the axis of the blades, while the resistance is made above it and to the same side—the leverage is obvious. This combination of force and re-

sistance is an exact imitation of the process of nature, and conforms perfectly to the dictum enunciated at the beginning of this paper—traction should imitate the forces of labor in so far as an artificial process may imitate a natural one.

10. Index for the direction of traction. The small ring in the axis-traction rod when in normal position marks a point within the axis of the blades. Traction at right angles to the axis-traction bar, with two fingers above the ring and two below, will be in the exact axis of the blades, and approximately in both the axis of the pelvis and the line of least resistance. This ring then furnishes a guide quite as trustworthy as the obsolescent handles or so-called indicatory needles of the Tarnier forceps.

11. Effective leverage. Transverse leverage, either antero-posterior or lateral, may be just as easily and effectually applied by this forceps as by the ordinary one, and axial leverage much more effectually, so that Pajot's criticism of the Tarnier forceps in this respect does not apply to the forceps under discussion. By reversing the axis-traction ring, the nipple is made to catch in a slot at the end of the male blade, and to fix the axis-traction rod. Axial leverage may now be applied by a pronative or supinative movement of the forearm.

12. Freedom of the head to rotate. The ordinary forceps unless very skilfully used materially hinders rotation. The Tarnier forceps allows the head far greater but not perfect freedom. The forceps under consideration may be employed so as to permit the head absolute freedom in this respect, to assist rotation by a combination of force and resistance or, if desired, to act as a powerful axial lever. Freedom of the head is assured in a far wider range of traction by this forceps than by the Tarnier.

13. Exactitude in the application of force and consequent economy in its expenditure. The ordinary forceps is a wasteful instrument. Traction, as usually employed, demands an extravagant expenditure of force which is largely consumed in useless and even injurious pressure on the maternal tissues. Traction by the methods of Smith and Pajot, as Lusk observes, requires both strength and skill. Traction with this forceps, on the contrary, can be made almost wholly in the line of least resistance and therefore with the least possible waste. This must be conceded to be a point of importance when we reflect that in these cases useless force is injurious force.

14. Reserve force and consequent control. In difficult cases the ordinary forceps demands an extravagant expenditure of force and attention. In consequence little reserve, either of force or of attention, remains for the exercise of proper control. As I have elsewhere said, delicacy in any operation implies the existence of a reserve force commensurate with the force employed; with this the greatest force may be conservative; without it the slightest force destructive. With this forceps the various forces are economically applied and intuitively regulated. Power, therefore, is obtained with a modicum of force and regulated with a minimum of attention. In consequence there remains a large residue of force and attention for the exercise of the most perfect control. Not only are the necessary force and attention reduced to a minimum, but also one hand is left free to perform any manipulation that may be indicated in the interest either of mother or of child, and to watch every step of progress or aberration in delivery.

15. Parallelism of the axis of the handles with that of the blades. The forceps is frequently indicated when traction of from three to five pounds or even the mere correction of the cephalic axis is sufficient to complete delivery; strict axis-traction may then be unnecessary. If, for this or any other reason, it is determined not to use the axis-traction attachment it is still possible with this forceps to make traction approximately in the pelvic axis without the adoption of any difficult maneuver. By grasping the handles from below, the forearm is readily placed almost in the exact axis of the blades and makes traction accordingly.

16. Wide range in the line of traction, without axial movement of the blades and consequent friction and abrasion of fetal and maternal tissues. In changing the line of traction with the ordinary forceps the axis of the blades follows that of the handles. The results of this swaying of the blades of the forceps are often observed in abrasions of the fetal tissues, especially near the end of the blades. The line of traction with this forceps, however, is regulated by swinging the axis-traction bar about the end of the handles, and without in the least displacing the axis, either of the handles or of the blades, and consequently without friction or abrasion or injurious pressure of the tissues either of mother or of child.

DISCUSSION.

DR. E. S. MEAD, San Jose, Cal.—It seems to me that however excellent the forceps may be in some respects in helping the traction, they have one anatomic defect. The curve of that forceps is altogether wanting. A forceps to work with facility in my hands must have this curve, especially when you are going to apply them in the interior strait. This curve of the forceps wants to be a great deal more marked.

I do not think it is necessary that we should make such heavy traction, but we should make the traction gradual. Every time the pain comes and every time there is a coming down of the head, the forceps should be re-adjusted. If we do not have an instrument with more curve we wound, necessarily, the maternal tissue. If you can have a forcep made so that the curve exactly corresponds to the curve under the pubis there is no necessity that I see to wound the maternal part. If the forceps are in unskilful hands—I have asked people to assist me in delivery (not me, my patients in delivery), and they put on a pair of forceps, and with great strong muscles that could lift probably two hundred pound dumb-bells, they pull. They seem to think that the only thing to be done is to deliver the child; if they cut off its circulation or bruise the mother, that is a matter of minor importance. That to me is all wrong. It is not brute force that we want; we don't want to make this too strong. I am wonderfully interested in the delivery of children and in the protection of the mother.

Some of the members present have had the fortune, or the misfortune, to see my delivery. I put on a pair of forceps, and they say: "Ain't you going to deliver?" I said: "I am going to wait until there is pain." There is more pain in half an hour, and the child comes. Sometimes the mother is torn, but oftentimes not at all.

I don't like the idea of fixing the handles, as in this instrument exhibited here. When I want to make traction I bring the handles together. I am not a strong woman, but I am strong enough for all the child or woman can bear. It seems to me that it is a lack of anatomic knowledge that destroys so many and makes so many failures.

DR. OSCAR J. MAYER, San Francisco—I think the mechanism as applied to these forceps is directly in opposition to

modern practice and principles of obstetrics. The most improved principle is asepsis. How it can be applied to forceps with so much machinery as this I can not understand.

Another objection to the forceps is their weight. Forceps should be as light as possible. These remind me of some of the older forceps in use. And this handle control I think is entirely unnecessary. Our aim should be not to use brutal force, but intelligent manipulation in expanding, and in rotation of the head in the delivery of the child. I think this forcep will not find much favor with the profession at large.

DR. W. WINTERBERG.—In talking about making that instrument aseptic, my friend Dr. Mayer, evidently forgot that we have sterilizers, and I think it would be very easy to make an instrument like that aseptic. I am in possession of an instrument which will hold that forcep and a whole obstetrical outfit, and all that is necessary to make the total outfit aseptic is to put it in the sterilizer and leave it for a few hours at a certain temperature. I think this is a very nice forcep. I do not object to complication in an instrument, but simplicity is always certainly desirable.

DR. BROWN, California.—I have had considerable experience in obstetrics for the last eighteen years, and I have observed the same objections that Dr. Mead has mentioned. It has not the curve that I like. I have found better success with the old Eclectic or old Philadelphia forceps than any others. I have never had any difficulty with it. I believe that it will fulfil all indications better than any instrument I ever handled.

As far as the complication is concerned of this instrument exhibited here, I can hardly see any objection against that, provided it has all the utilities. But I do think the mechanical shape of the instrument is objectionable.

DR. W. A. BRIGGS.—I will say in regard to the curve of this instrument, that it is really greater than it seems, for the reason that we are all used to the ordinary forceps where the handles instead of being parallel to the axis of the blade are set at quite an angle. This angle makes the blade seem to possess a greater curve than they really have. In these forceps I have measured the curve. I ordered it to be made the same as in the classical forceps; the curve is half an inch less than that of the classical forceps. But it is a condition more in appearance than in reality.

In the second place, in regard to asepsis, that is not, as Dr. Winterberg has said, dependent upon the instrument itself, but upon the care you take of it and the interest you take in making it aseptic. We do not keep an instrument aseptic, but we make it aseptic. This instrument as easily as any other can be made aseptic by heat. What I believe to be the advantage of this instrument is, the greater area for pressure, and the regulation of the direction of traction, so as to make it come within the line of least resistance in any possible application of the forceps.

ABDOMINAL PREGNANCY—FULL TERM, COMPLICATED WITH FIBROID OF UTERUS— CELIOTOMY AND REMOVAL OF THE CHILD AND PLACENTA AND ABDOMINAL HYSTER- ECTOMY.

Read by title in the Section on Obstetrics and Diseases of Women, at the Forty-fifth Annual Meeting of the American Medical Association, held in San Francisco, June 5-8, 1894.

BY W. F. McNUTT, M.D., M.R.C.S. ED., ETC.

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It is not the object of this communication to discuss the various views of abdominal pregnancy—whether it is a primary or secondary condition, that is, as to how the fecundated ovum found itself in the abdominal cavity, nor to discuss the formation of a capsule about the ovum and the development of the

blood vessels, nor to refer to the different methods of treatment as to the fetus or to the management of the placenta. This case is reported in the belief that abdominal pregnancy (as distinct from all other extra-uterine pregnancies) is sufficiently rare to justify its being recorded, especially as a living child was removed at full term, and the diseased uterus removed as well.

On August 24, 1893, I was called across the bay by Drs. Payne and Hirshiser, to see Mrs. D., age 34; she had gone to nearly or quite her full term, when she was taken with abdominal pains similar to those of labor pains, with active delirium. Mrs. D. had been delivered of a child seventeen years before, had not been pregnant since till now. Had been in fairly good health while carrying the child and had spent most of the summer at the World's Fair, Chicago. I saw her late in the afternoon; she had then been delirious for thirty-six hours, with a good deal of abdominal pain. The bed had been quite saturated with water which was supposed to have been due to the rupture of the membranes. The child's head was thought to have been felt at the brim of the pelvis; the cervix while soft was as long as an unimpregnated cervix, though the abdominal walls were contracted. The child could be felt very distinctly by abdominal examination. This was then late in the evening; I advised giving the woman rest for the night, and that I would return in the morning. Not being able to go over in the morning, I sent Dr. Winslow Anderson, and asked him to carefully examine her per rectum, with the view of ascertaining if what was thought to be the child's head, might not be uterine fibroid, and the case was probably one of abdominal pregnancy. Dr. Anderson examined her carefully, with Dr. Payne and Hirshiser, and telephoned me to come over with instruments, feeling quite sure it was a case for operation. On my arrival we chloroformed her and opened the abdominal cavity, where I found a living ten pound child, loose in the cavity, not encased in membranes. Lifting the child out and having tied the cord I found the placenta a large one, attached along the margin of the right broad ligament and to the peritoneum, and over the ascending colon nearly to the liver. I detached it rapidly; the hemorrhage was profuse, and would have been greater, had not Dr. Anderson controlled the ovarian circulation. It soon ceased after the placenta was detached and a couple of ligatures used, one included in the ovarian artery. We found a large fibroid of the uterus, which had been taken for the child's head at the brim of the pelvis. Thinking it best not to close the abdominal cavity with such a fibroid, I removed the uterus. As the fibroid involved the lower portion of the body and the upper portion of the cervix it was not possible to make a Porro and the whole uterus was removed. When coming out from under the influence of the chloroform, the woman resumed her delirium, showed no evidence of shock, but died forty-eight hours after.

The cause of the delirium was a question of great interest, as the membranes had ruptured, the child escaped from the sac and there was no fluid in the abdominal cavity. Had the absorption of the amniotic fluid by the peritoneum been the cause of the delirium, or had the fluid escaped by the tube, or had the fluid that had wet the sheets been from the bladder?