IV. *Dr Hart* then read his paper

ON SOME OF THE PHENOMENA OF PARTURITION IN THEIR PRACTICAL ASPECTS.

In a previous communication to this Society, on the "Nature of Prolapsus Uteri," I remarked that "in the formation of the female pelvic floor a structural problem had to be solved as follows:—The floor had to be constructed so that we should have some method by which it could be opened up to admit of the passage of the child's head; and while this was to be arranged in such a way as not unduly to impede parturition, the pelvic floor was not to be impaired in its structural efficiency, and was to remain sufficiently firm to resist ordinary, and to a certain extent extraordinary, intra-abdominal pressure." I endeavoured on that occasion to show how this had been effected *quâ* intra-abdominal pressure and its bearings on prolapsus uteri. To-night I wish to work out the problem already given, *quâ* parturition. This may be stated as follows:—At the end of pregnancy the fœtal head lies in the lower uterine segment and resting on the unbroken, compact pelvic floor. The vagina appears as a mere cleft, with the bladder, a pelvic organ, lying in front. Now, how is the bladder got out of the way of the advancing head? How is the urine stored and evacuated when the head fills the pelvis? How is the placenta got rid of? and, finally, Is there any arrangement for preventing the access of germ-laden air to the raw surfaces of the uterus, cervix, vagina, etc.?

Behaviour of Bladder during Parturition.—The facts as to the behaviour of the bladder need not occupy long. It is drawn up by uterine action, so that it comes to lie above the pubis—a position favourable for the storage of urine. It lies between the cervix and abdominal wall, with its anterior and posterior walls in contact. From this position, therefore, it results that during a pain in the second stage it is subjected to upward tension and antero-posterior pressure, and thus emptied. Often it becomes distended, reaching up even to the navel—a condition I have noticed in ordinary labours when it lay too much to the one side of the mesial line, or where, from too early administration of chloroform, the abdominal muscles did not aid in the second stage and compress the bladder, as I have above indicated.

So far, then, as we have gone, we see that during parturition the bladder is placed where it can distend to a limited extent, and that there is an arrangement by which it can be emptied during labour apart from the volition of the patient.[1]

Expulsion of Placenta.—Coincident with the expulsion of the

[1] A series of interesting observations could be made in a maternity on these points.

child the pubic segment of the pelvic floor drops accurately on the sacral one, and the uterus, much diminished in bulk, but still large and containing the placenta, lies anteverted on the pubic segment. In a short time uterine action sets in again. The pubic segment is probably slightly elevated, and the placenta squeezed edgeways into the vagina. At the same time there is a palpable diminution of the bulk of the uterus. So far the mechanism of expulsion is that so accurately described by Matthews Duncan. Uterine action may, however, expel the placenta out of the vagina too, but not as a rule.

The causation of the expulsion of the placenta from the vagina is different from that of its expulsion from the uterus. Let us consider now how matters are. The placenta is wholly in the vagina and cervix. It lies, therefore, between the pubic and sacral segments, *i.e.*, it has the pubic segment, uterus, and abdominal viscera lying above it. Its presence in the vagina causes a strain reflexly on the part of the patient, and accordingly by intra-abdominal pressure it is expelled from the vagina, while from the uterus it has been extruded by uterine contraction. It is held by some that the elasticity of the vagina itself causes or helps the expulsion of the placenta therefrom. The vagina, however, has been so distended by the head that it is improbable that the much less bulky placenta calls any elasticity into play; and, besides, it would require to be a peristaltic elasticity to be of any avail.

So much for some of the phenomena. We now take up—

Parturition viewed from the Standpoint of Prevention of Accession of Air.—I wish to glance at parturition viewed from the standpoint of the prevention of the access of air. Modern surgery allows air-contact with a wound only after it has been purified by carbolic spray, or, in suitable cases, prevents the access of air altogether. What, then, are the facts in regard to the access of air to the vagina and cervix of the unimpregnated, pregnant, and parturient female? In the unimpregnated or pregnant female there is never any air in the vagina (unless in exceptional cases) whatever posture, natural or otherwise, she may assume. The vagina has always its walls in contact in all natural circumstances. But what about parturition? The pubic segment is, during labour, separated from the sacral one, and air has access, probably, when the labour is in the second stage. After the child, however, is expelled from the uterus its walls are in contact, with the placenta only between them; and as the breech is driven out of the vagina the pubic segment follows it up, and when expelled, the vaginal walls are once more in contact. The same happens after the expulsion of the placenta; and ultimately the downpour of the lochia acts as an irrigant of no insignificant value. In parturition, therefore, access of air is limited during birth, and absolutely prevented while the child and placenta are being expelled. The whole process is quite analogous, in this light, to the valvular

method of opening abscesses, so as to limit the access of air, first practised by Abernethy.

So far I have considered certain facts in parturition. The question may, accordingly, be fairly asked, What practical bearings have these statements? And, first, in regard to the general management of parturition. The surgeon, in all his operative interference, keeps in mind as his type the simple fracture. The obstetrician, in all the ordinary manipulations necessary in a normal confinement, should keep the prevention of the access of air ever before him. Let me briefly sketch, then, what would be my ideal of a labour conducted intelligently and in accordance with natural facts. The parturient woman is in a private room, with pure air and perfect drainage. Abdominal palpation tells the practitioner that the fœtus is lying with its head engaging in the brim. Auscultation shows that the fœtal heart is vigorous and regular. As the pains go on he can feel the uterus diminishing the vertical height of its fundus above the pubes, until it ultimately expels a living child. He feels the uterus remain firm, and then, in about twenty minutes, notes its hardening and diminution in bulk simultaneous with the expulsion of the placenta.

Now this ideal is unattainable in one respect, viz., that vaginal examination is necessary. How is the accoucheur to render his vaginal examination as little dangerous to the patient as possible? In two ways. First, by seeing that his fingers are scrupulously cleaned with turpentine and carbolic acid; and, second, by taking care that his patient, while he examines, is never in the semi-prone nor genu-pectoral postures. These postures admit air when the vaginal orifice is dilated, and therefore are bad for ordinary obstetrical manipulation. This should be conducted when the patient is dorsal or semi-dorsal, with the shoulders raised. The fingers, passed while the patient is in this posture, separate the vaginal walls only where they touch them, and being followed up by them as withdrawn, air is prevented ingress.

Management of the Third Stage.—The mechanism of the expulsion of the placenta as given by Duncan clearly proves that traction on the cord to aid the expulsion is inadmissible under any circumstance. It is tempting and seems natural to help out a sluggish placenta with a gentle tug, but wrong nevertheless. The best means of imitating the natural process, when necessary, seems to me as follows:—After the child is born, the accoucheur should palpate the uterus, feel that it is contracted, note its bulk, and satisfy himself further that there is no bleeding from the cervix, etc. Nothing active should be done for twenty minutes or so. If the placenta is not then expelled, the following plan should be tried:—With the patient on her back, grasp the fundus uteri with both hands, fingers in front and thumbs behind. Squeeze it firmly in the direction of the line joining these, avoiding downward pressure. The uterus will then become smaller as the placenta is squeezed

out of it. It is now out of the uterus, as is felt by its lessened bulk. Then press down the uterus in the line of the axis of the brim. This drives the uterus against the pubic segment, and the latter against the placenta, forcing it out. Spiegelberg recommends the squeeze and downward push to be simultaneous, but I prefer them separated. Sometimes the placenta is difficult to get out of the vagina. This is owing to the curve of the posterior vaginal wall arresting it. Under such circumstances some recommend traction on the cord. A better plan is, however, to pass in two fingers into the vagina, hook back the lower part of the vaginal wall so as to get rid of the corner, at the same time driving the uterus down. In this way the exact mechanism is imitated, and access of air prevented. When more interference with labour is required, all attention should be given to the details recommended by Dr Croom in his able article on antiseptic midwifery.

MATTHEWS DUNCAN: *Mechanism of Natural and Morbid Parturition*, p. 246. In this article Schultze's mechanism, as figured in his *Wandtafeln*, is criticised.

A. R. SIMPSON: *Contributions to Obstetrics and Gynecology*, p. 147, where a clear account of the Credé method of expelling the placenta is given.

MUNDÉ: *Obstetric Palpation*. Wm. Wood & Co., New York.

The newer literature by Schultze, Spiegelberg, Freund, and others, will be found in recent numbers of the *Edinburgh Medical Journal*, *New York Medical Journal*, and *American Journal of Obstetrics*.

Dr Croom had little to say on the subject. He thought Dr Hart should have laid more stress on the importance of avoiding too frequent vaginal examinations.

Dr Gordon did not think the entrance of air into the vagina during parturition did any harm. He thought the placenta should be got rid of as soon as possible after the birth of the child, and thought that traction on the cord was right. Indeed, if they did not pull on the cord, he should like to know what was its use?

Dr Barbour was most interested in the final remarks as to the expulsion of the placenta when in the uterus and when in the vagina. He thought the hooking back of the perineum good.

The President had listened with interest to the paper. Unlike Dr Barbour, however, he thought the first part of the paper the most interesting. The description of the behaviour of the bladder during parturition was good and valuable. In his practical deductions he agreed with Dr Hart, and was not so little afraid of the entrance of air into the vagina as Dr Gordon was. Dr Duncan had shown that traction on the cord was bad, and an interference with the natural mechanism. His own practice was to turn the patient on her back immediately after the child was born, so as

to conduct the third stage with the patient in the dorsal position, because then the entrance of air was effectually avoided.

Dr Wilson had repeatedly known air enter the vagina during the third stage, and no harm ensue. He agreed with Dr Hart as to the management of the placenta, less pulling on the cord.

MEETING XI.—MAY 25, 1881.

Dr ANGUS MACDONALD, *President, in the Chair.*

I. *Dr W. A. Finlay* showed a preparation of BOWEL from the case of a child with imperforate anus. After cutting over the site of the anus to a depth of 1½ inches he failed to reach the bowel, and therefore desisted. At the post-mortem examination the last half inch of bowel was found to be an obliterated cord, the tip of which was distant two inches from the skin of the perinæum.

II. *Dr James Carmichael* on

RETRO-PHARYNGEAL ABSCESS IN AN INFANT.

THIS disease is one peculiarly liable to occur in the period of infancy and childhood, inasmuch as by far the larger proportion of recorded cases have been observed at an early period of life. Of a number of cases recorded by Dr Allin, fully one-half were under ten years.[1]

The symptoms and general course of the disease, as well as its etiology, have been fully described and are familiar to all practitioners.

The object of the present communication is to relate a case, that of an infant five weeks old, the subject of this disease, and whose death was caused in a sudden and unexpected manner from a cause rarely if ever met with in such cases. In looking over the literature of the subject I have been unable to find any record of death occurring in the manner to be described, excepting in one case referred to by Erichsen.

For an account of the previous history of the case, and for permission to record it, I am indebted to my friend Dr James Sidey, under whose care it was. The circumstances are these:—On the afternoon of Wednesday, the 20th inst., I was asked to visit the child, the father bearing a note which Dr Sidey, who had seen it some hours before, had written to a well-known surgeon in this city, asking him to see the infant, with a view to possible surgical interference in the way of opening an abscess which Dr Sidey believed was situated on the left pharyngeal wall. This gentleman being from home, I agreed to visit the little patient. On entering the room the infant was in its mother's arms. Before I had time to ask any questions or

[1] *New York Medical Journal*, Nov. 1851.