88. *Observations on Obliteration of the Vagina.* By Cæsar Hawkins, Esq.—There is a great variety in the congenital deformities, or accidental adhesions, or new growths, which are found in the generative organs of females, producing some impediment in their different functions, some of which are of little consequence, and easily remedied; others are of more importance, and require the most delicate and skilful surgical operations for their cure.

Nothing is more common in young infants than for some adhesion to take place between the sides of the labia, uncleanliness or some other cause producing inflammation of the mucous membrane; the adhesion being such as occasionally to leave only a small opening near the urethra, and to draw attention by the pain or inconvenience experienced in micturition. The remedy for this adhesion is very simple; the forcible separation of the labia by the thumbs or the probe, or a slight incision with a knife, being sufficient to lacerate the adhesion, and a little piece of lint dipped in oil, preventing their subsequent cohesion.

Sometimes, again, there is such a prolongation of the hymen over the orifice of the urethra, as to produce much difficulty in making water. A case of this kind is related by Warner, in his cases in surgery, in which the symptoms resembled those in stone, and after existing several years, were cured by an incision. The most remarkable instance of this sort, however, is one related by Cabrolius, (Obs. Anat.) in which the hymen was imperforate, and the urethra completely obstructed, so that no urine could be discharged by the natural passage, but it was evacuated from a tumour, projecting about four inches from

the navel, and formed probably by the urachus. Cabrolius made an incision into the urethra, and tied the tube projecting from the abdomen, the patient, who was nearly twenty, being cured. In the Phil. Trans. there is an account of a case where the urethra was similarly obstructed by caruncles growing from the orifice after delivery.

Besides these malformations, which obstruct the flow of urine, and may therefore be discovered and remedied in children, there are other natural and accidental impediments to the sexual functions, the existence of which is not usually ascertained till the time of puberty or marriage. The obstruction may be either partial or complete, and it may be situated at the orifice of the vagina, or higher within this passage, or in the mouth of the uterus itself.

The hymen is often so firm in texture, that although an opening in the centre allows the menstrual secretion to be discharged, yet an incision is necessary for the consummation of marriage, or, (if conception has taken place in spite of this obstacle,) to facilitate parturition, such an incision being easily effected, as a director can be passed through the opening, and thus all risk is obviated. Ruysch, (Obs. Chirurg.) met with an instance in which a second membrane was found higher than the hymen, and requiring a second incision during parturition. A similar partial obstruction to the function of generation is formed by contraction of the vagina, from the use of strong astringents, (Saviard, Obs. Chir.) from small-pox, (Beckerus de Paidioctoniâ inculpatâ,) from lues venerea, (Benivenius de Abdit. Morbor. Causs.) and still more frequently from accidental lacerations and cicatrices in consequence of violence during parturition, of which numerous instances are met with in several authors, which have been cured by tents, by several small incisions round the obstructed part, by dilatation on a director, &c. great care being necessary to keep up the the dilatation for a considerable time, to prevent subsequent contraction. The most remarkable instance of this obliteration, while the menstruation continued, is in Beckerus, (op. citato,) as the secretion was discharged by the rectum, and pregnancy took place pseudothyro intromissis voluptatibus; the laceration, and subsequent cicatrization, having been so extensive as to obliterate the whole of the vagina intermediate between the urethra and rectum.

In these cases of partial obstruction, where pregnancy has taken place, it is probably adviseable to operate as early as possible, so that dilatation may be effected, and the parts properly cicatrized before delivery; there must otherwise be considerable danger of more extensive laceration taking place during the expulsion of the child. The operation is one which necessarily requires great caution; but as an opening exists, through which conception has occurred, there is at least a certain guide to the operator, who is in much less danger of injuring the bladder or rectum than in cases of complete obliteration, though the difficulties have appeared so great that Smellie even advises the performance of the Cæsarian section where there are large cicatrices and adhesions in the vagina and os uteri. Callisen also gives directions for the vaginal Cæsarian section, where the os uteri has been closed by inflammation.

The malformation becomes still more serious when no orifice is left by which the menstrual secretion may be evacuated; this fluid being thus retained in the uterus and vagina, producing great disturbance of the health, and even becoming fatal if not discovered in time for the performance of a proper operation for its cure. The symptoms arising from retention of the menses from such a cause are accurately described by Sabatier, (De la Médecine Operatoire,) copied into S. Cooper's Surgical Dictionary, (Art. Vagina imperforate.) One circumstance, however, scarcely adverted to by Sabatier, is the sympathy of the mamma with the uterus, exemplified in the case I have narrated, and which sometimes proceeds so far as even to establish a vicarious secretion from this gland; the same thing having also been observed, "per vias aeriferas, urinarias, alvum, digitos, cicatrices, oculos, nasum, aliasve partes."—(Callisen.)—Of course, however, some exaggeration or misconception has arisen in many of these cases, so that

I would not be considered as a believer in many of the cases referred to in the quotation.

The similarity in the symptoms of such cases to those arising from pregnancy, and the injurious suspicions often excited, have been frequently pointed out; the resemblance they bear to cases of amenorrhœa, and the necessity of manual examinations, are also evident from the instance just related. The operation for imperforate hymen is generally a very simple one, as the fluid retained in the vagina and uterus distends the membrane, so as to point out exactly where the incision is to be made. It must not be forgotten, however, that the operation, however skilfully performed, is not wholly unattended with danger. In the last instance in which I witnessed the operation, the patient died in consequence of inflammation of the peritoneum. The fluid which is retained is in general perfectly free from putrefaction, however long the disease may have lasted, (see Mem. de l'Acad. de Chir.) though the rule is not without exception, (Sabatier, op. cit.) Where putrefaction takes place, death may often result from the irritation produced by this cause on the constitution; and even where it does not occur, yet suppuration ensues after the retained fluid has been evacuated, and the employment of opiates and soothing injections becomes necessary to obviate the irritation which is excited. But some danger arises from the mere quantity of the retained fluid, which may be so great as to produce rupture of the fallopian tubes into the cavity of the peritoneum, (De Haen, Ratio Medendi.) Smellie mentions a case where three pints and a half were discharged by operation, and half a pint more came away subsequently, of the consistence of butter-milk, a quantity sufficient to distend the uterus, as in a case of pregnancy; and in the absence of the natural contraction of this organ, very likely to be followed by severe irritation, or fatal inflammation. In the case I have narrated, I carefully abstained from pressure, but allowed the fluid to be expelled by the contraction of the uterus, and the pressure of the abdominal muscles; the discharge in this manner taking place very slowly, in consequence of the consistence of the fluid, which is usually like treacle. Attention to this rule I believe to be the principal means of avoiding dangerous results.

Where the malformation is situated not at the orifice, but within the vagina, an operation becomes much more difficult and dangerous. Sir Astley Cooper mentioned to me a case in which he had made incisions to form a passage to the uterus, and had cut through not less than two inches of membrane without perfectly exposing the cervix uteri, though the result was successful, as it was followed by pregnancy. A lady, after eight years suffering, was operated on, and the surgeon passed his finger into a large cavity, from which a good deal of blood escaped, and which was believed to be the vagina; the patient died, however, in three days, and it was discovered that the cavity was that of the bladder, the death having been the consequence of the escape of the menstrual secretion into the abdomen, from a rupture of one of the Fallopian tubes.—(Sabatier, op. cit.)

The difficulty of the operation is necessarily still greater when the obliteration is situated in the orifice of the uterus itself, (not the os uteri in the sense in which the term is employed by many authors, who allude to the subject of this paper, by which they mean the vagina,) unless the cervix is distended and elongated by the fluid so as to communicate a sense of fluctuation to the finger. Several directions for opening the uterus when thus enlarged, and containing menstrual fluid, or when the cervix is obliterated subsequent to impregnation, will be found in Callisen, Syst. Chir. vol. 2, ccccxlviii.

Callisen, (op. cit.) remarks, "Accidentalis vel symptomatica vaginæ concretio totalis vix unquam occurrit." Such cases are, no doubt, more rare than the instances in which some small passage remains open for menstruation, and have been seldom recorded by modern surgeons, while much attention has been bestowed on the less important cases of imperforate hymen, a neglect which has induced me to throw together these remarks; but several cases are described

by older authors, and I refer particularly to Beckerus "De Paidioctoniâ inculpatâ," and Roonhuyse, "Med. Chir. Obs. Englished out of Dutch by a careful hand." The latter author, for instance, relates a similar case to that which I have detailed, where a woman had her vagina so completely obliterated by gangrene after delivery, "that she never had her menses any more." Having dilated the vagina with a speculum, the closed part was opened from above downwards by a lancet tied to the end of the finger. A pessary was afterwards employed, but neglected by the patient, and in a subsequent confinement a further operation became necessary, but the patient was allowed to be so long in labour before it was performed, that she died in three days.

These cases of obliteration of the vagina after delivery, are much more difficult to relieve by operation than most of those in which there is a congenital deficiency. It is probable that they scarcely ever occur without considerable loss of substance by sloughing, the consequence of which is the approximation in a greater or less degree of the rectum and bladder and urethra to each other, and their junction by a hard semicartilaginous cicatrix, unyielding, and difficult to divide. The intricacy and difficulty of the case are necessarily dependent on the extent to which the obliteration has taken place; whether the sides are wholly brought together, or two or three inches of the vagina are firmly united, as in the latter case there will not be the distention of the vagina above the obliteration, separating the bladder and rectum from each other, and defending them where they are most loose, and where there is consequently greater risk of injuring these viscera. The operation becomes still more delicate when the sides of the uterus are also united together, which appeared to be the case in a patient of my friend Mr. Mayo, on whom he twice performed an operation, (at the last of which I assisted,) and succeeded in restoring part of the canal, though not in reaching the cavity of the uterus. There was in this case, however, no accumulation of menstrual secretion, and the health of the patient was restored, so that in all probability great part of the cavity of the uterus was obliterated, and the function of menstruation gradually ceased.

The operation is generally directed to be performed by making a perpendicular incision, but it appears to me to be much better, in most cases, to cut through the cicatrix transversely, *i. e.* with one flat side of the scalpel towards the rectum, and the other towards the bladder; in which direction, I imagine, with attention to the anatomy of the parts, there must be much less risk of wounding either of these viscera than when the edge of the knife is held upwards or downwards, and there can scarcely be any risk of injuring the peritoneum, as the vagina is so little connected with it, that the puckering of the cicatrix is not likely to implicate this membrane. I need only repeat the necessity of attending to the after-treatment, in the same manner as after the operation for imperforate hymen, and to the emptying both the bladder and rectum in all these cases previous to the operation.—*London Medical Gazette, September*, 1829.