Retroversion of the Impregnated Uterus, with a Case, occurring between the Fourth and Fifth Months of Pregnancy. By DAVID PRINCE, M. D., of Jacksonville, Illinois. With a wood-cut.

THE discrepancy of opinions found in the text-books upon midwifery, regarding the proper method of replacing retroversion of the impregnated uterus, is a sufficient apology for reporting the following case. Erroneous opinions as to the cause of the malposition may do but little harm, but the importance of correct *practice* cannot be over-estimated.

The cases of persistent retroversion are so rare that many physicians of large practice have not met with a case, and, perhaps, the unsettled practice may be owing to the infrequency of the accidents.

Contrary, however, to the opinion which has been generally entertained, Prof. Hodge, in his magnificent work on Obstetrics (p. 413), says:—

"Retroversion of the uterus is very common during gestation, much more so, we believe, than is generally supposed, especially during the early stages. The author has met with innumerable examples."

Rigby furnishes, in his *Midwifery* (p. 126), an excellent history of this displacement.

Pressure from distension of the bladder is by many regarded as a cause of retroversiom, but this writer thinks that distension of the bladder is an effect and not a cause of this displacement. External violence and the action of the abdominal muscles may press the fundus below the promontory, when it will pass lower to find greater space in the concavity of the sacrum. Then accumulation of urine in the bladder from pressure of the os upon the urethra, and accumulation of feces in the rectum from pressure by the fundus, will tend to fix the uterus in its new position.

This view of the succession of events is supported by the statement that pain, probably from the stretch of uterine attachments, is felt in some of the cases in which the accident occurs suddenly, from action of the abdominal muscles, before those distressing symptoms arise which depend upon distension of the bladder.

The relaxation of the uterine ligaments is plainly necessary to retroversion, both in the unimpregnated and the impregnated state. Without this relaxation the uterus can incline neither forward nor backward. The uterus, again, is so attached to the bladder, that when this organ is full, it must cause the uterus to hug closely to it, and be carried with it, up to the superior strait of the pelvis. It is in this view, clearly impossible that a distended bladder should be the immediate cause of retroversion. The distension of the bladder must, however, put the round and the broad ligaments upon the stretch; and if they fail to retract upon the emptying of the bladder, the uterus has lost its props, and may tumble over, if

forcibly pushed by the intestines, suddenly crowded down by the abdominal muscles.

This explanation has been clearly made by Prof. Meigs, in his *Woman and her Diseases*. In this view a retroversion may occur so soon after the discharge of urine from a distended bladder, that the distress of the retroversion may follow that of the retention of urine so closely as to have no interval in the memory of the patient.

It is easy to conceive that a *retroflexion* might occur in connection with a distended bladder, the fundus of the uterus doubling down upon the lower part of its body and its neck, while the latter is hugged closely upon the posterior surface of the bladder. A retroflexion might also become a retroversion by the straightening out of its long diameter in the process of enlargement in the development of the ovum.

While, then, the accumulation of urine in the bladder may predispose to retroversion by elongating the ligaments; the retroversion may afterwards cause retention by the compression of the urethra between the os uteri and the symphysis pubis. At length, as the os rises into the abdomen above the pubis, the urethra ceases to be compressed, and is only elongated, while the capacity of the bladder may be diminished by the position of the mouth and neck of the uterus. If, however, in this last case, the pressure of the os uteri upon the brim of the pelvis comes below the entrance of the ureters, the bladder may be still greatly distended, as was the condition in Hunter's case, a drawing of which is copied in *Rigby's Midwifery*, and in *Bell's Anatomy*.

Dr. Hodge ascribes the malposition to relaxation of the ligaments from distension of the bladder, a loaded condition of the intestines, and contraction of the abdominal muscles. He thinks, contrary to the opinion of Dewees, that a previously retroverted uterus is frequently impregnated. If spontaneous reposition fails to take place, an early abortion may occur from the continued influence of the tense vagina upon the os uteri.

Treatment.—Dr. Weir, of Glasgow, reduced a retroversion by pressure upon the fundus and a *pull upon the mouth.*

"After much difficulty," he says, "and a great degree of force, and in opposition to the strong and powerful exertions of the patient, which all tended to prevent its admission, I succeeded in getting my hand into the vagina, forced up my finger above the pubes, and reached the mouth of the womb. An assistant, at the same time, got his hand into the rectum, and we had thus the perfect command of the patient. By steadily pushing upward the fundus, and cautiously *pulling the mouth and neck of the womb downward*, the tumour was gradually raised above the promontory of the sacrum and the uterus reduced to its proper position."—*Glasgow Med. Journ.*, vol. i. p. 268.

Prof. Meigs quotes this treatment with approbation, and makes no criticism of the expedient of pulling down the neck of the uterus. While the length of the uterus is limited to the antero-posterior diameter of the pelvis, the plan of depressing the os may be well enough, but when the os uteri is

pushed firmly against the pubis, and especially when it rides above the pubes, any pull upon the mouth of the womb must be so much force worse than wasted, crowding the fundus all the more firmly into the hollow of the sacrum and requiring a greater lifting force to carry the fundus above the promontory. The period of pregnancy in this case was about the fourth month.

The uterus is uniformly described as forming a lodgment in the hollow of the sacrum, the promontory of which constitutes an impediment to the elevation of the fundus into the abdomen. It would seem, therefore, that the *point* is, to raise the fundus above the promontory. If a pull upon the neck of the uterus crowds the fundus more firmly into the hollow of the sacrum: then this traction is a force which impedes the elevation of the fundus, and is therefore worse than useless. Dr. Rigby, in his *Midwifery*, expresses similar views.

Though this might seem sufficient to settle the chief point of treatment, as consisting in elevation of the fundus without depression of the os, we may quote as authorities in favour of pulling down the os uteri, Burns (*Midwifery*), and Bedford (*Obstetrics*).

Meigs, in his book quoted above, describes and figures a ring upon the end of a rod, by which he lifts up the fundus, and by having two of them, he can hook one upon the cervix and pull down, while with the other he can push upward upon the fundus. He quotes from Moreau a case in which the posterior wall of the vagina was ruptured in the process of reduction, and the woman died.

Perhaps the knowledge of some such catastrophe may have led Denman to enjoin that only mild means should be employed, without describing what those means should be, further than the emptying of the bladder. He thought the enlargement of the ovum favoured the ascent of the uterus. This was probably a mistake as applied to cases in which the fundus becomes impacted in the hollow of the sacrum, favouring adhesion, by the pressure of opposed serous surfaces, as occurs in ovarian tumours.

Ryan, in his *Midwifery*, ascribing retroversion to distension of the bladder, advises to reduce it by two fingers in the rectum and two more in the vagina pressing upon the uterine tumour; very properly omitting the pulling down of the cervix.

Dewees presses upon the fundus with the hand in the vagina until it is above the promontory of the sacrum. The traction upon the os is omitted. The hand is then withdrawn, and a pessary is introduced. It is difficult to conceive how a pessary can be necessary when it must be as difficult for the fundus to get back past the promontory into the pelvis as to get past the same point upward into the abdomen.

Rigby places the patient upon the knees and elbows, and passes two fingers into the vagina and two into the rectum, pressing upon the fundus, and *upon the fundus alone*. He approves Dewees' recommendation to

bleed. This, however, was written before the use of ether and chloroform was known.

The position upon the knees and elbows, for the purpose of diminishing the tenesmic expulsive effort of the patient, is rendered of no importance by the employment of anesthetics, which completely obviate all expulsive efforts, permitting the employment of the more convenient position upon the back as for lithotomy.

Dr. Hodge advises interference rather than to leave the case to nature. In the earlier period, before the uterus becomes, from its size, impacted in the hollow of the sacrum, he relies upon his "lever pessary," which is fully described in his *Diseases Peculiar to Women*. In the employment of this instrument a gradual replacement is intended. At a later period he places the patient upon her back and elevates the uterus with the fingers of one hand in the vagina while with the other hand pressure is made upon the hypogastrium to aid the descent of the cervix.

According to Dr. Hodge, M. Evart employed a long bougie with a padded extremity, introduced into the rectum.

"The late Dr. Bond, of Philadelphia, contrived an ingenious elevator [figured in *Hodge's Obstetrics*, p. 416] consisting of two curved steel rods surmounted by ivory balls running parallel to each other and united near the handle. In their application, the longer rod is passed into the rectum, and the shorter into the vagina, so as to operate simultaneously upon the fundus and upon the posterior surface of the uterus."

If adhesions render replacement impossible, there is no more rational treatment than to puncture the uterus through the posterior or inferior wall from the vagina, and induce abortion; and if the fœtus cannot turn the short corner necessary to get into the vagina, an incision, at the junction of the neck and body between the duplicature of peritoneum and the os, would certainly be the only practicable expedient.

The following case is interesting on account of its history, and also for the facility with which the malposition was reduced with appliances which may be extemporized at any time:—

Mrs. Stout, aged 35, tall and thin, between four and five months in her fifth pregnancy, nothing having ever before gone amiss, became the subject of new and distressing sensations, with retention of urine, between the second and third months of pregnancy. Dr. Christy, an intelligent physician, living near the patient, found a tumour between the vagina and the rectum, and, by passing the strong middle finger into the rectum and pressing upon the tumour, he secured relief from the distressing symptom as long as the pressure was continued. Upon the theory of Meigs this relief arose from the diminished strain upon the ligamentous connections of the uterus while the pressure was applied. No particular time or circumstance could be fixed upon by the patient as the beginning of the malposture. Dr. Christy had failed to reduce the misplacement by pressure by his finger in the rectum, and he concluded to act upon the advice of Denman and wait for the uterus to rise in the progress of the development of the ovum at or before the period of quickening, in the mean time drawing off the urine regularly by the catheter.

Disappointed in this expectation of spontaneous correction, the advice of Dr. J. F. Snyder was obtained, and Rigby's plan was tried unsuccessfully. One operator introduced one finger into the rectum and the other passed three fingers into the vagina, and they both pushed, while the patient was upon her knees and elbows. They attributed their failure to want of length of fingers.

My visit to the patient was January 9th, 1865. The fundus was felt on the perineum by the finger either in the vagina or in the rectum, and no alvine evacuation had been procured for several days.

The cervix of the uterus projected above the pubis, making a hard well-defined projection, and the retention of urine had been exchanged for incontinence, probably because the cervix rising higher not only ceased to compress the urethra, but interfered with the enlargement of the bladder.

Two wooden pessaries or paddles were whittled out of pine boards for pressure upon the fundus of the uterus. One of them, for the rectum, was made one inch by three, and the other, for the vagina, two inches by three. Each was eight inches long, all parts, except the bulged end whittled down, an inch and a half in diameter. The large end of each was covered with three thicknesses of old flannel, which was thoroughly saturated with lard. Two fluidounces of urine were drawn off through a flexible catheter before the commencement of the operation.

The patient having been rendered insensible by the inhalation of pure ether, and placed in the position for lithotomy, the pessary for the rectum was introduced first, the sphincter readily relaxing to receive it, and the other was then placed in the vagina. By holding together the handles of the two pessaries, pressure was made upon the two at the same time, while they were kept from spreading apart.

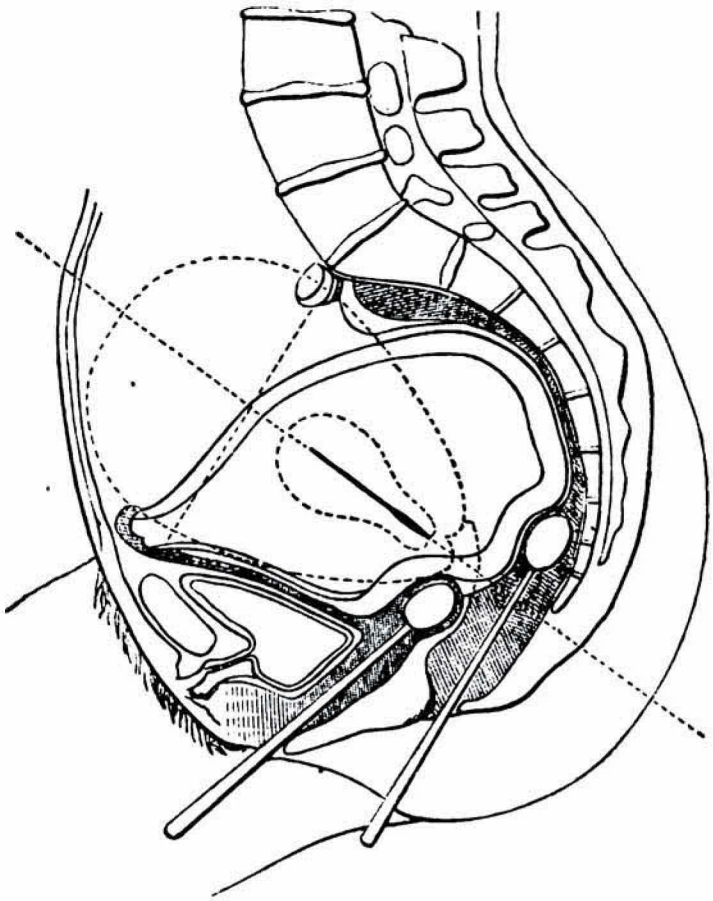
The pressure was made slowly, gradually increased, until the hands holding the pessaries felt a shock and a diminution of resistance. Upon placing a hand upon the abdomen, the fundus was felt rising near the umbilicus. Upon withdrawing the pessaries and introducing the fore and middle fingers of one hand, the neck of the uterus, with an unusually open mouth, was felt in its usual position within easy finger-reach. The peculiar tumour above the pubis had disappeared.

The replacement would doubtless have been easier at an earlier period, but the practitioner was justified in waiting by so high an authority as Denman. It is probable that no operator would now fail to avail himself of the great advantage of anæsthesia, and it is hoped that, if his fingers prove too short, he will employ a wooden pessary, which may be made on the occasion, with a good handle, or a ball, which may be of yarn or of rubber, and that he will not trouble himself about the neck, for if he can get the fundus above the promontory of the sacrum, the neck will come down by the contractility of the vagina.

The following diagramatic illustration explains the theory of the position of the uterus—the impediment to reposition afforded by the promontory of the sacrum—the inutility of traction upon the neck of the uterus—and the *modus operandi* of the wooden pessaries or drumsticks. The diminution of the capacity of the bladder is explained by the diagram. At an earlier period, with the os uteri pressing against the pubis below the entrance of

the ureters, the pressure must cause retention and make the frequent and regular introduction of the catheter necessary.

The normal positions of the impregnated and unimpregnated uterus are shown by the curved dotted lines, and the straight dotted lines show the



plane of the superior strait of the pelvis and its axis. The general outline is taken from Hodge's *Diseases Peculiar to Women.*

After consciousness became restored, the patient took some whiskey-punch and a grain of morphia, from which she slept pretty well for several hours, and the bladder continued its functions without the further use of the catheter.

It should be mentioned that the patient had been taking grain doses of morphia for several weeks to quiet her distress. A dose of oil was given, which was vomited. Six hours later two fluidrachms of fluid extract of senna were given, which were also rejected. Pulse, six hours after the operation, of moderate fulness and strength and not much increased in frequency.

The remaining notes of the case were furnished by Dr. Snyder.

Jan. 10, 12 M. (2d day). Found the patient lying on her back with her knees drawn up, under the influence of morphia, and consequently very easy and quiet. She complained of no tenderness on pressure, except at a point just above the pubes. Pulse small, hard, and 120. Considerable thirst; no gastric disturbance; bowels not moved. At 2 P.M., voided

urine freely. Gave pulv. rhei gr. xv, and two hours later commenced the use of veratrum viride; morphia *ad libitum*.

11*th*, 3 P.M. (3d day). No catharsis; pulse 100; skin soft; no tenderness of the abdomen on pressure. She has taken no morphia since six A.M. Very easy; no nausea; no thirst; slight yellow coating on the tongue; urination free with but slight pain. Gave pulv. rhei gr. x, hydrarg. chlorid. mit. gr. vi, and continued the veratrum viride.

12*th*, 2 P.M. (4th day). A dose of oil taken in the morning had moved the bowels freely and without much pain. She has taken no morphia since yesterday morning, and is perfectly easy, with a soft skin. Pulse 80; no abdominal tenderness; in a word, we may regard the patient as recovered.

Our patient was, on the 7th of June, delivered of a daughter without any accident. From this, the patient must have conceived about the 1st of September, making her four months and a week pregnant at the time of the reduction.