A CONTRIBUTION TO THE ANATOMY OF HERNIA OF THE FEMALE PELVIC FLOOR.*

BY

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(With three illustrations.)

It is so seldom that we have an opportunity to study hernia of the female pelvic floor in the cadaver that I have thought it worth

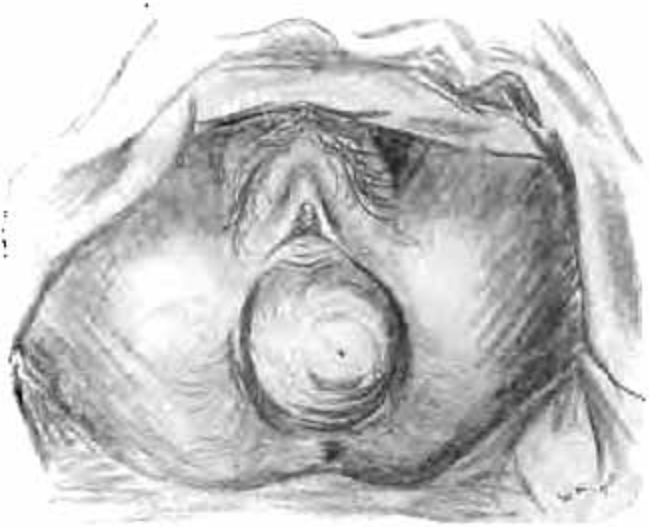

Fig. 1.—Procedentia Uteri.

while to present this case to you, and to ask you to study with me its pathological anatomy, and to see what lessons in treatment it may teach us. The body having been preserved by injection with 2½ per cent. formalin, I first made a cast of the parts as they appeared externally (Fig. 1), and later made a sagittal mesial

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section through the pelvis, such a section being always easy and accurate in a formalin-preserved body without the necessity of freezing.

On external examination (Fig. 1) the whole vagina is seen to be everted, the infravaginal cervix uteri and its os occupying very nearly the center of the tumor. There was no marked erosion of the vaginal mucosa.

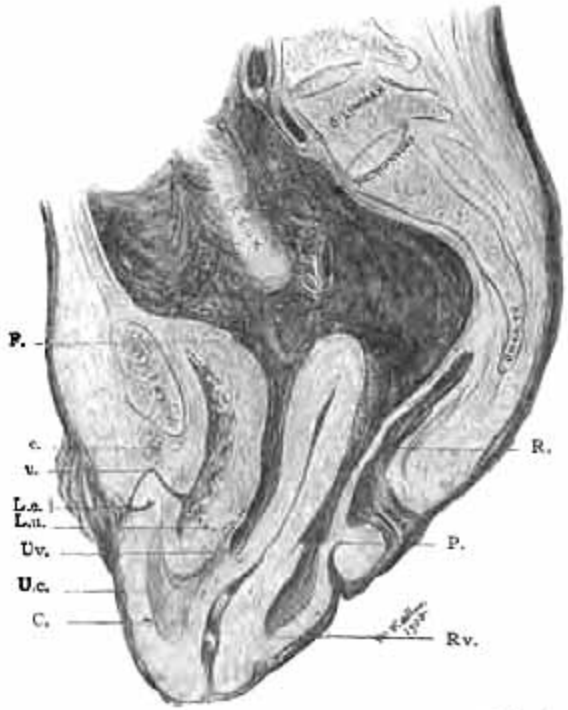

FIG. 2.—Sagittal Mesial Section, Procedentia Uteri.

F.—Fallopian tube.
c.—Crura of clitoris.
u.—Urethra.
L.e.—Line of eversion of ventral vaginal wall.
L.u.—Line of Ureter.
Uv.—Uterovesical cul-de-sac.
U.c.—Uterovesical connective tissue.
C.—Cervical canal with polyp.
R.—Rectum.
P.—Point of eversion of dorsal vaginal wall.
Rv.—Rectovaginal cul-de-sac.

Passing now to the section (Fig. 2), the hernia is seen to contain two-thirds of the contracted bladder, the lower three inches of the ureters, and half of the urethra; the whole vagina, which is completely everted, at least four inches of a much-elongated uterus, the anal canal, and 5 cm. of rectum, as well as the uterovesical and rectovaginal pouches of peritoneum. The fundus

of the uterus is only slightly lower than normal, and appears to be supported by the round ligaments, and Fallopian tubes and infundibulo-pelvic ligaments, the cervix uteri receiving marked support from the uterosacral ligaments, which appear to be strong and very rich in muscular fibers. The uterus is very much elongated, measuring 16 cm. in length, of which 11 cm. appear to be body and 5 cm. cervix. It is not wider than normal, being 5 cm. between the cornua. In the fundus is a small intramural fibroid, which has undergone calcareous infiltration, and on the dorsal wall is a sessile fibroid nodule, about 2.5 cm. diameter at its base. The vaginal walls are completely everted, the anterior wall carrying the bladder with it and being much thickened (it varies between 1 cm. and 2.3 cm. in thickness), while the posterior wall has broken loose from its connections with the rectum, so that the rectocele is very moderate and the rectovaginal cul-de-sac of peritoneum extends down to near the lowest limit of the hernia. The vesicouterine pouch of peritoneum maintains its relative relations to bladder and uterus almost unaltered, but has descended with these structures. There is a decided increase of loose connective tissue between the bladder and vagina and cervix uteri.

The bladder, instead of entirely lying within the pelvis, its base above the lower level of the symphysis, has descended so that its apex (in its contracted condition) is somewhat lower than the upper margin of the symphysis, and its base descends to fully 5 cm. below the symphysis. The clitoris has by its firm pubic connections retained the outer 2 cm. of the urethra in nearly the normal situation, but the inner (proximal) half of the urethra is bent downward at an acute angle to the distal portion, rendering micturition very difficult. The greatly hypertrophied bladder wall (1.5 cm. thick at its thickest part) is evidence of the urethral obstruction.

The lower end of the ureter has descended with the bladder and cervix uteri, to which latter and the uterine artery it maintains its normal relations. It passes downward and forward beneath the uterine artery, crosses the cervix uteri 5 cm. from the external os, and curves forward and upward in the bladder wall. From where it passes beneath the uterine artery upward to the kidney, the ureter is much dilated, and as the lower limit of the dilatation corresponds to the level of the vaginal entrance (line of vaginal eversion), it is rather suggestive that the constricting ring here, or perhaps that and the sudden bend on the ureter at

this point, may partly account for the hydronephrosis which we find in both kidneys (Fig. 3). Both kidneys are in a condition of extreme hydronephrosis, the secretory substance being very much reduced. This may be accounted for by the constricting ring just described, by the bend of the ureter where it pierces the bladder wall, by possible kinking as the bladder filled, and by the strong expulsive efforts necessary during micturition to over-

FIG. 3.—Hydronephrotic Kidney, 15 centimeters in length, from case of Procedentia Uteri.

come the obstruction caused by the acute bend in the urethra. An analogous condition in the male is the hydronephrosis occasionally caused by a large prostate.

The whole rectal segment of the pelvic floor is elongated at least 5 cm. beyond the normal; but there is no marked rectocele, since the vagina has broken away from its rectal attachments and Douglas's pouch descends into the hernia.

Perhaps the kidneys of this case teach the most important

lesson. Nothing could emphasize more strongly the necessity of early treatment of prolapse of the pelvic floor so as to prevent renal complications. No warning could be plainer to be guarded in giving a prognosis in extreme cases of sacropubic hernia. We all know how guarded the prognosis must be in prostatic enlargement in the male, and how much depends on the condition of the kidneys. Do we realize how often the kidneys are involved in procidentia uteri?

Apart from renal involvement, relief by operation in such a case presents considerable difficulties. Resection of the uterus would not correct the vaginal and bladder prolapse, and would seriously weaken the pelvic floor. The operation described by Kelly seems the most suitable. The vaginal attachment to the uterus should be shifted up, two, or perhaps three, inches of the cervix being amputated, and the vagina attached to the stump of the uterus. The vagina should be narrowed by anterior, posterior, and perhaps lateral colporraphy, and lastly it would seem serviceable to firmly attach the fundus uteri to the abdominal wall.

In the presence of albuminuria and difficult and frequent micturition, much care would be required in deciding whether operation should be advised at all. It is evident that in such a case as our specimen presents operation could only have hastened the end, or, if undertaken at all, should be done under spinal anesthesia, that the almost surely fatal effect of ether or chloroform on such kidneys might be eliminated.