A SATISFACTORY COLPOCLEISIS COMBINED WITH ANAL CLOSURE AFTER SEVERE DAMAGE TO BLADDER AND RECTUM BY RADIUM

BY

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The results of repair of vesico-vaginal fistulae, especially those caused by radium burns, are far from satisfactory, in spite of the fact that the treatment of the simpler type of case was put on a practical basis 100 years ago by Marion Sims (1852). Very few surgeons can show a large series of successful cases. Each case must be treated on its own merits, and no one operation appears to be suitable for all cases.

Among the procedures that have been suggested for overcoming an extensive destruction of the bladder wall is that of vaginal closure (colpocleisis). Miller (1935) and Mahfouz (1929, 1938) condemn this operation as unanatomical and unphysiological. They refer, however, to the colpocleisis which was originally described by Simon (1856), where the upper half of the vagina is closed off from the lower half, leaving a sacculum which is very apt to have a phosphate stone form in it.

The colpocleisis described by Latzko (1942), where part of the vagina is taken to repair the fistula and no diverticulum is subsequently formed, seems to give more satisfactory results. If the sphincter of the bladder is destroyed a satisfactory result is extremely difficult to obtain, though a few cases have been reported in which a subsequent sling operation of the Aldridge type has been successful in controlling the urine. As a rule more drastic operations are required, such as transplantation of the ureters.

In cases of vesico-vaginal fistulae complicated by damage to the bladder neck, and further complicated by recto-vaginal fistulae, a colpocleisis with removal of the urethra has been occasionally described, the urine draining direct into the rectum (Te Linde, 1946; and Crossen and Crossen, 1948). This operation cannot be performed unless there is a functional anal sphincter.

Radiation therapy causes further complications, as radium destroys the vessels in the tissue, thus limiting the blood supply necessary for healing. Another difficulty with this type of tissue is its lack of elasticity and its tendency to fibrosis, thus preventing satisfactory approximation.

In 234 cases of vesico-vaginal fistula reported by Mahfouz (1929) there were five in which a colpocleisis was performed; according to Mahfouz the end-results were, however, unsatisfactory for the reason stated above. Moir (1947) reported 40 cases of fistula, one of which was a combined vesico-vaginal and recto-vaginal fistula caused by necrosis of the vagina after radiation treatment of carcinoma of the cervix. This case was dealt with by a high colpocleisis, and with continuing satisfactory results.

Case Report

In 1942 the patient, then aged 17, gave birth to her first-born son. Two years later she had her second baby, born

one month prematurely, who died when only 8 weeks old. Nothing abnormal was noticed for a year, when, at the age of 20, she had intermittent bleeding for a month. A carcinoma of the cervix and anterior vaginal wall was found and confirmed by biopsy; it was treated by radium over the next 18 months, the last treatment being given in September, 1946. Four months later, in January, 1947, a brown vaginal discharge was noticed, which rapidly increased until it was obvious that both urine and faeces were being passed per vaginam.

On examination she was seen to be a pale thin woman of West Indian extraction, weighing 7 st. 1 lb. (44.9 kg.). Her mouth and teeth were in good condition, and no abnormality was detected in the cardiovascular or respiratory system. Nothing abnormal was palpated in the abdomen, which was lax because of previous pregnancies. The skin of the thighs between the legs was excoriated by the constant irritation of the urine and having to wear protection. An offensive smell of decomposing urine was obvious. Vaginal examination showed a large, whitish, irregular sloughing mass occupying the whole of the introitus. There were two small passage-ways through this sloughing tissue, one leading into the upper vaginal vault (although neither cervix nor uterus could be palpated) and the other leading through to the rectum. Rectal examination showed that the perineal body was almost entirely gone. About 1 in. (2.5 cm.) above the anus an annular constriction could be felt, and in passing this constriction the examining finger entered the vagina. The haemoglobin was 70%, and tertian gametes of malaria were found in the blood smear.

Treatment

A left lower colostomy was performed through a muscle-splitting incision, with a view to ridding the vaginal tissue of contamination. The colostomy acted regularly from the start, and in a short time healthy granulation tissue was noticed around the fistulae. Pelvic examination was still difficult on account of the scar tissue left by the radium, but a cystic mass was felt in the anterior part of the vagina, and was thought to be a cystocele. The actual fistula into the bladder was not identified.

Four months after the colostomy an attempt was made to repair the vesico-vaginal fistula. The cystic mass inside the vagina, thought to be a cystocele, was found to be an extroverted bladder. When this was replaced a very large fistula into the bladder was identified. All that remained of the urethra was a small tunnel of mucous membrane less than 1 in. (2.5 cm.) long. The sphincter into the bladder had been completely destroyed. The tissue around the bladder was accordingly freed and the fistula closed, a self-retaining catheter being left in the urethra. This operation, however, was unsuccessful.

In April, 1948, four months after the previous operation, another attempt was made to repair the fistula. A small suprapubic incision was made, and the bladder, pushed up from below, was sutured to the rectus sheath, thus preventing extroversion. Rather than attempt to close the large fistulous opening, a partial colpocleisis was performed, using the labia minora for the purpose. In the hope that the remainder of the urethral canal could still be used, the vagina was closed around the urethra and a self-retaining catheter inserted through the short urethra into the bladder.

FIG. 1.—Lithotomy view, showing the suture line from the region of the coccyx to the clitoris.

The unusual step was now taken of closing the anal canal; this was done because of the incontinence of the anal sphincter. This operation was only partially successful, as the urine was now passing through a smaller fistula. There was still incontinence, and the patient, rather discouraged, returned to the country.

On February 17, 1949, 10 months later, the colpoceleisis was completed, with the complete closure of the vagina. Portions of tissue were removed on each side of the vagina, beginning in the region of the coccyx, until the clitoris was reached. Inner and outer cuffs were raised and the inner cuffs approximated. A few buried sutures were inserted before closing the outer cuffs. As a result the whole of the anal canal and vagina was completely closed, leaving the clitoris as the only external landmark of the vestibule (Fig. 1). Before complete closure a catheter was passed

FIG. 2.—Front view showing the patient herself inserting the catheter down the distal opening of the colostomy, to empty the "bladder."

down the distal opening of the colostomy until it was seen in the vagina. The catheter acted as a continual post-operative drain for the newly formed "bladder."

Uninterrupted recovery gave encouragement, and after 10 days the patient was walking around emptying the "bladder" herself by passing a catheter through the distal orifice of the colostomy as occasion demanded

(Figs. 2 and 3). This was the first time the patient had been dry for two years. An intravenous pyelogram showed satisfactory function of both kidneys.

At the time of writing, two and a half years after the final operation and six and a half years after the diagnosis of the cancer, the patient was extremely fit, having put on 35 lb. (15.9 kg.) in weight. The colostomy and bladder were both working well; there was no need to wear a colostomy bag or belt, as she is forewarned when either the proximal or distal loops of the bowel require to be emptied. No sign of menstruation had been seen since the radium treatment.

FIG. 3.—Radiograph showing retrograde filling of the "bladder" with a solution of potassium iodide, from a catheter inserted into the distal orifice of the colostomy. The shadow outlines the pelvic colon, vagina, and remains of the true bladder. Intravenous pyelography had previously shown satisfactory function of both kidneys.

Summary and Conclusion

There are few operations so satisfactory to patient and surgeon as a successful closure of a vesico-vaginal fistula. Such a distressing condition, with the constant odour of decomposing urine, prevents the patient mixing in society. David of old seemed to recognize this when he said: "My lovers and my friends stand aloof from my sore; and my kinsmen stand afar off" (Psalm xxxviii. 11).

A case is described of extensive damage to the bladder and rectum following the use of radium for carcinoma of the cervix uteri and vagina. The double incontinence was treated by providing an inguinal colostomy and completely closing the vagina and anal canal.

An excellent result was obtained, and the patient is now in good health and enormously improved in mental outlook. So far as is known to me, this procedure is unique.

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HAEMATOMA OF THE ADRENAL GLAND IN THE NEWBORN

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Haemorrhage of microscopic dimensions in the adrenal gland is often found in the neonatal period, but massive unilateral haemorrhage has been infrequently recognized and only a few cases have been described. Yet the cases present a fairly clear clinical picture, enabling the diagnosis to be made during life and effective treatment instituted.

Talbot (1900) seems to have been the first to draw attention to the condition in this country, but since his description there have been barely a dozen articles on the subject. Stock (1947), reviewing the publications on cysts of the adrenal gland up to that date, was able to find only 50 recorded cases. Most of these were said to be lymphangiectatic or haemorrhagic, but no specific mention is made of their occurrence in the neonatal period.

Kohlbray and Wells (1945) found 3 cases of unilateral adrenal haemorrhage among 452 stillbirths and neonatal deaths in a total of 9,500 births. Arnold (1930) reported