URETHRAL DIVERTICULUM

JAMES S. KRIEGER, M.D.
Department of Gynecology

and

EUGENE F. POUTASSE, M.D.
Department of Urology

DIVERTICULUM of the female urethra is said to be a rare condition. Thirty-eight women afflicted with this pathologic condition have been seen in this institution since 1932. Engel[1] and Higgins[2] have reported previous cases. Twenty-six of these patients have been observed since the last report in 1945. This increased frequency of diagnosis does not reflect a change in the natural occurrence but instead indicates increased interest in case identification.

A diverticulum represents an outpouching of the ventral wall of the urethra and is, as a general rule, the end result of infection of a periurethral gland. It is usually manifested by a tender palpable swelling along the anterior vaginal wall. There is a direct communication, single or multiple, with the urethra which allows intermittent drainage of the sac contents. With continued adequate drainage the diverticulum may be asymptomatic. Since periurethral glands contain numerous branches and surround the urethra laterally, the diverticulum may be unilocular or multilocular and may even girdle the urethra in a saddle-like fashion.

The following case report is presented to emphasize the clinical features as well as diagnosis and treatment of this condition.

In June 1951, a 45 year old woman came to the Cleveland Clinic complaining of urethral pain and aching, especially with distention of the bladder. She was the mother of two children, her last pregnancy ending uneventfully in 1941. For the past 12 years she had had repeated attacks of dysuria, frequency, and urgency. The patient had noted a swelling in the vagina and experienced dyspareunia when the swelling was prominent and the urinary symptoms prevailed. Throughout the years she had been treated for recurrent cystitis by means of urinary antiseptics and antibiotics with only temporary relief.

Vaginal examination disclosed an exquisitely tender 2.5 cm. mass on the anterior vaginal wall extending almost to the bladder base. Pressure on it caused pus to extrude from the urethral meatus. Panendoscopic examination revealed a small opening in the floor of the middle third of the urethra from which pus could be seen escaping from the diverticulum. A urethrogram showed a large collection of radio-opaque material along the midurethra, outlining a multilocular diverticulum (fig. 1).

The urethrovaginal septum was explored transvaginally and the diverticulum completely excised. The opening into the urethra was closed and allowed to heal for 10 days before removing the catheter. The patient had an uneventful convalescence and has remained symptom free for one year. Vaginal examination now shows no evidence of swelling along the anterior vaginal wall.

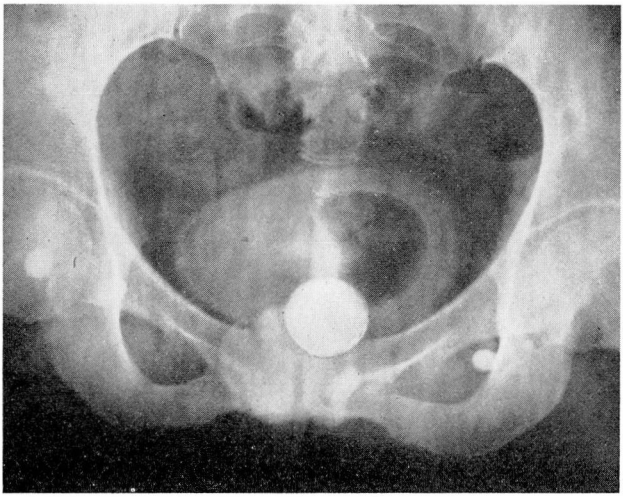

FIG. 1. Large urethral diverticulum. The diverticulum lies under symphysis pubis extending up under the bladder. Symmetrical round shadow is the bag of a Foley catheter filled with radio-opaque material and pulled down snugly against bladder neck.

This patient demonstrates the classical symptoms and findings associated with a urethral diverticulum. She had a long history of lower urinary tract symptoms suggesting recurrent infection. She had noted a swelling within the vagina when the bladder symptoms and dyspareunia were most evident. A cystic mass was palpable along the anterior vaginal wall and pressure on it produced pus at the urethral meatus. The diagnosis was confirmed by the urethroscopic visualization of the openings into the diverticulum and a urethrogram showed its size and extent.

Other symptoms can occur and should be emphasized. Burning at the conclusion of urination and dysuria are usually observed. Some patients experience dribbling of small amounts of urine after voiding due to emptying of the diverticulum. In some instances the diagnosis has to be based only on the history and physical findings because the opening into the diverticulum is closed off and cannot be demonstrated by urethroscopic examination or urethrogram.

In general, if the above diagnostic criteria and methods are kept in mind and employed, there should be little difficulty in making an accurate diagnosis. However, it is important to differentiate a diverticulum from several other conditions of the anterior vaginal wall. Urethrocele (a poor term) means the downward protrusion of the urethra from its attachments beneath the symphysis pubis. This is not a diverticulum but simply a part of the commonly occurring anterior vaginal wall relaxation. Gartner's duct cysts are common, but they are asymptomatic and located lateral to the midline. An adenoma of a urethral gland is uncommon.

Treatment consists of surgical excision of the sac with repair of the urethral defect. Urethral dilatations, vaginal drainage, repeated courses of antibiotics

and other halfway measures have no place in the treatment of urethral diverticula.

Summary

The clinical features of diverticulum of the female urethra are presented. The diagnosis is made on the basis of characteristic symptoms and the presence of a mass along the anterior vaginal wall. The diagnosis is confirmed by urethroscopic examination and urethrography. Treatment consists of surgical excision and repair of the urethra. By calling attention to this abnormality it is hoped that urethral diverticula will be recognized with greater frequency.

References

1. Engel, W. J.: Diverticulum of female urethra. J. Urol. **45**:703 (May) 1941.
2. Higgins, C. C. and Rambousek, E. S.: Diverticula of urethra in women; review of 12 cases. J. Urol. **53**:732 (May) 1945.