Incontinence Cured by Replacement of the Urethra with a Bladder Flap

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(Received February 3, 1969)

Referring to the experimental work of Lapides the author describes three successful cases of substituting the urethra with a tube made from the anterior wall of the bladder. The lack of urethra and the incontinence in the three female children were due to malformation. The paper also deals with the conditions of the operation. According to the author there is no lower age limit to using this operative method.

Incontinence due to absence of the urethra, epispadias, etc., is one of the most distressing misfortunes that can befall an individual. In the past, surgical procedures for correction usually fell short of cure. The experimental work of Lapides [1] demonstrated that a tube could be formed from a bladder flap, which could function as a urethra with voluntary control. Our success with this procedure contrasted with the dismal failures of the procedures of the past for these patients has made it one of the most exciting developments of the past decade.

Shortly after announcement of Lapides' work a seven-year-old female pseudo-hermaphrodite with congenital adrenal hyperplasia and absence of the urethra presented in our Clinic. With the bladder flap procedure as a possible choice versus diversion we elected to try it. Through a suprapubic incision the internal urethral orifice was closed [2]. A full thickness bladder flap 4 cm wide and 5 cm long was cut in the anterior bladder wall with the base just above the internal urethral orifice and fashioned into a tube. This new urethra was brought out through a tunnel previously made in the course of a normal urethra. A suprapubic cystostomy tube was left in place. When the tube was removed a month later she had control of her urine and a normal voiding pattern thereafter [3] (Fig. 1A, 1B).

The second case was a 12-year-old girl with total incontinence due to epispadias. The same procedure was carried out and on clamping the cystostomy tube three weeks later she voided intermittently and is now cured (Fig. 2A, 2B).

The most recent patient was a two-year-old girl with subsymphyseal epispadias and total incontinence. Since undergoing this procedure she has voided intermittently without leakage between voidings but is not yet toilet trained.

The procedure has been considered for some adult women but all of our attempts have been abortive because their bladders were too small, contracted and scarred due to inflammatory or irradiation changes. The operation as represented in the above three patients has been successful in all attempts where certain
Fig. 1. Case 1. (A) Before operation contrast medium is seen filling the bladder when injected into the vagina producing this cysto-vaginogram. (B) Semilateral postoperative voiding cystogram