

URETERAL TRANSPLANTATION IN THE VERY YOUNG

Report of a Case

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The most frequent indication for transplantation of the ureters into the rectosigmoid in young children is exstrophy of the urinary bladder. Time will not correct the condition nor will the deformity improve with years. Unlike some other deformities, no compensatory function is to be expected; on the contrary, the situation becomes worse for both the child and parents as the child grows older. In addition, the danger of damage to the kidneys increases with years.

At what age, then, can a successful transplantation be accomplished? Formerly we were of the opinion that one should wait until the child had been taught voluntary control of the anal sphincter or from three to five years of age. If the anal sphincter is functioning, we now believe the earlier the ureters are transplanted the less will be the danger of complications, such as ascending infection of the urinary tract. We know that very young children tolerate surgical procedures remarkably well as is attested by operations for cleft palate, harelip, pyloric stenosis, intussusception, etc. As an example of the tolerance and result of early operation for exstrophy, the following case is presented in which operation for exstrophy of the bladder was performed on a patient four and one-half months of age.

This patient, a baby boy 4 months of age, was first seen in the Clinic on June 22, 1936, with marked epispadias and exstrophy of the bladder. The baby was a full term child and the delivery was uncomplicated. He was breast fed, had developed normally, and at the time of admission, his general health was excellent and no other abnormalities were noted. Examination of the blood showed 4,540,000 red cells, 71 per cent hemoglobin, and 13,650 white cells.

Transplantation of the ureters into the rectum was advised and for this purpose the patient entered the hospital on July 2, 1936. On the day of admission he was given cleansing enemas of saline solution until the return was clear. Another enema was given four hours before operation. Feedings were withheld for twelve hours before operation. On the morning of July 3, 1936, the left ureter was transplanted under general anesthesia into the sigmoid. The operation was carried out through a lower left rectus incision and the ureter was transplanted, using the Coffey I technic. The patient was given nothing by mouth except very small amounts of sterile water for the first 12 to 16 hours after operation. Following this the usual nursing regime was started. A rectal tube was kept in place for the first five postoperative days for continuous drainage. This was irrigated frequently with small amounts of saline solution. For the first two or three days postoperatively, the patient had a rather poor appetite and was somewhat irritable, but after this his disposition improved and he appeared to be a normal, happy baby. He had a slight rise in temperature following operation, but this promptly fell to normal by the second day and remained so. The wound healed by primary intention.

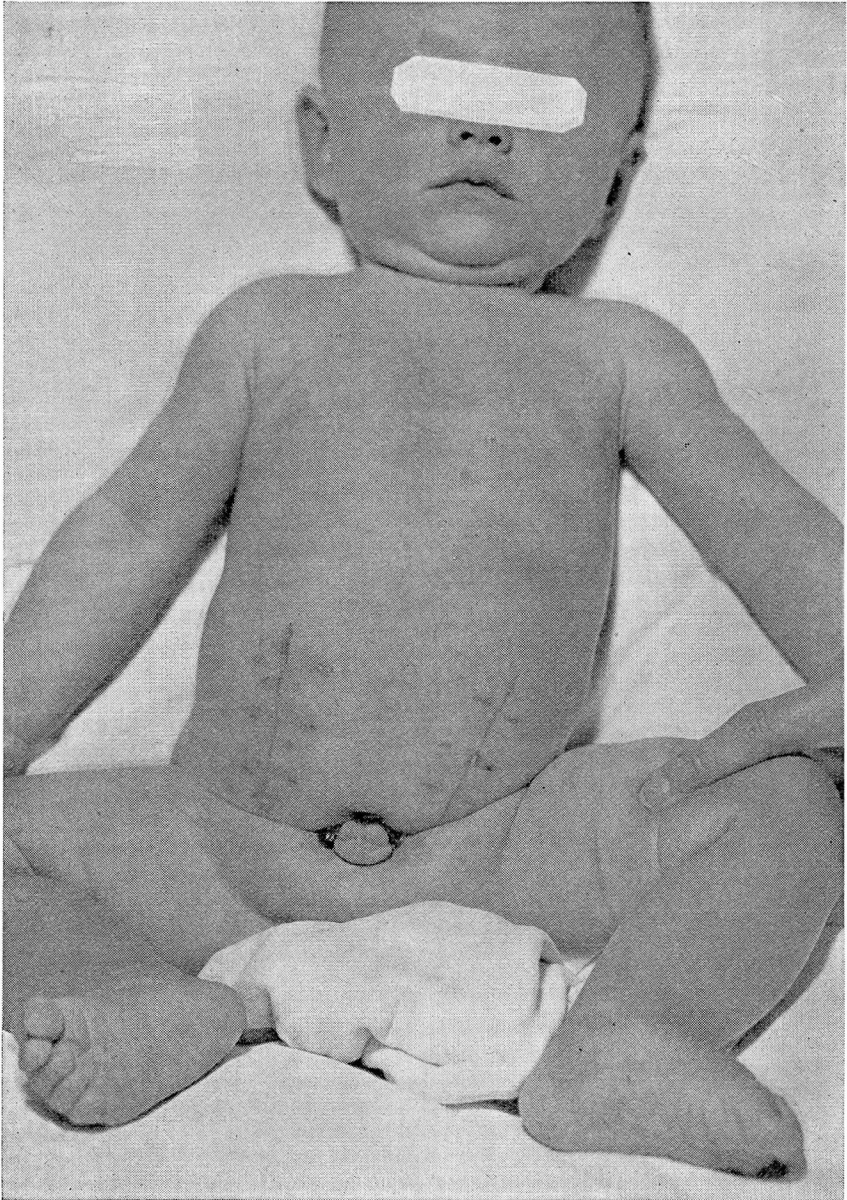


FIGURE 1: Photograph of patient nine days after second operation.

The right ureter was transplanted into the sigmoid on July 14, 1936—the eleventh postoperative day—by the previously used technic. The pre- and postoperative care was the same as that at the first operation. Following the second operation there was a rise in temperature to 103.5°F. with a return to normal by the second postoperative day where it remained during the balance of the hospital stay. The patient had a somewhat greater immediate reaction

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from the second operation, but by the fourth postoperative day his disposition and appetite had returned to normal. The second incision likewise healed by primary intention, and the patient was discharged from the hospital on his twenty-first hospital day which was nine days after the second operation (Fig. 1).

The baby was last seen on October 27, 1936. He had gained four pounds in weight and appeared quite healthy. He apparently had good control of the sphincter and was able to hold his urine for a period of four or five hours.

This child is the youngest on whom we have performed transplantation of the ureters for exstrophy of the bladder, and the postoperative results in this case, compared with those in older children, lead us to believe that this is a much more favorable age for operation.