LONG-TERM UROLOGICAL MANAGEMENT OF CLOACAL ANOMALIES

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Purpose: Cloacal anomalies in girls are one of the most complex and challenging reconstructions of the genitourinary systems. Its management involves not only the creation of three orifices in the perineum, but also maintaining genitourinary function over an extended period of time. The present study summarizes the experience of long-term urological management of cloacal anomalies in our institute.

Methods: Seventeen girls with cloacal malformation have been treated at the Tokyo Metropolitan Kiyose Children’s Hospital since 1970. In these cases 12 patients have been followed up over 5 years after definitive reconstruction. We investigated the length of common cloacal channel, the level of confluence sacral and genitourinary anomalies preoperatively, and have followed up the bladder and renal function up to the present.

Results: All twelve patients underwent colostomy after birth. Definitive reconstruction of the cloaca was performed through combined abdominal and posterior sagittal approach at the age of 11 months to 6 years, growing up to a bodyweight of 6.7 to 14.1 kg. Of the 6 patients with low confluence position (common cloacal channel < 3 cm), VUR, megaureter and abnormal sacrum were detected in 1, 1 and 2 cases, respectively. All 6 cases could void spontaneously without significant residual urine after definitive repair. Of the 6 patients with high confluence position (common cloacal channel > 3 cm), upper urinary tract anomalies (dysplastic kidney, hydronephrosis, VUR) and abnormal sacrum were detected in 5 and 4 cases, respectively. Five children underwent temporary urinary diversion (vesicocutaneostomy, ureterocutaneostomy) to prevent UTI in infancy. In one patient with urethral hypoplasia, Mitrofanoff procedure was performed before definitive repair. All 6 patients required CIC for several years after the repair because of underactive detrusor function, however, 4 cases eventually gained spontaneous voiding habit with Valsalva and Credé maneuver by the school age. Meanwhile, in two patients with severe renal dysfunction, renal transplantation is considered at present.

Conclusions: The frequency and severity of genitourinary abnormalities related to the level of the confluence. In cloacal anomalies with high confluence position, temporary urinary diversion is also considered to prevent UTI before definitive repair, and CIC is required for underactive detrusor function after the repair. However, spontaneous voiding with Valsalva and Credé maneuver could be tried for urological management at the school age.