

The Cleveland Clinic experience with adult hypospadias patients undergoing repair: their presentation and a new classification system

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Objective: To characterize and categorize adults with hypospadias who presented to our clinic with urethral stricture and fistula to better clarify the presentation, history and intraoperative findings in this heterogeneous group and to better describe the natural history of this anomaly in adulthood.

Patient and Methods: A retrospective chart review was performed on adults with hypospadias who underwent urethroplasty for urethral stricture, urethrocutaneous fistula, and/or hypospadias repair at Cleveland

Clinic between 1993 and 2009. All procedures were performed by a single staff surgeon (K.W.A.). The charts were reviewed for site of hypospadias, presenting complaint, overall symptoms, history of repair and type of surgery performed.

Results: Fifty-five adult patients were identified. Median age was 37 years (range: 18-72). About half of the patients had distal (glanular/subcoronal or pendulous) hypospadias (56.4%) and the others had more proximal (bulbar) hypospadias (43.6%). Voiding symptoms (such as dysuria, weak stream, spraying, urgency, frequency) were the most common presenting complaint (50.9%) and overall symptom (81.8%). About half of patients underwent a two-stage urethroplasty (52.7%). Based on their history of repair, patients were divided into three categories: I, patients who have undergone continuous multiple surgeries for repair with significant scarring and tissue loss; II, delayed complications after an initially successful childhood repair; and III, no previous repair. Most patients were category I (58.2%); however, seven patients (12.7%) were category III. Balanitis xerotica obliterans (BXO) was more common in this subgroup compared with other categories (42.9% vs 8.3%, respectively, $P = 0.037$). In two of the three patients in category III with BXO, the stricture length was longer than 7 cm.

Conclusions: Adults with hypospadias represent a heterogeneous group. More than half of adults with complications related to hypospadias have had multiple operations (category I) representing one of the most difficult challenges to the reconstructive urologist. Roughly 30% of patients undergo an initially successful repair in childhood with recurrent problems in adulthood (category II), suggesting that the outcomes of repair may not be as durable as estimated by studies with shorter-term follow-up. Finally, BXO is over-represented in men with hypospadias who have not previously undergone repair, which contradicts the previous suggestion that the risk of BXO is related to the use of skin grafts/flaps from previous repairs and suggests that there may be an increased risk of severe stricture disease in patients who have never undergone corrective surgery for this anomaly.

Editorial Comment

The take home messages from this article are that (1) repair of previously operated-upon adult hypospadias is extremely difficult and (2) failure of childhood hypospadias repair may be more frequent than we understand it to be based on pediatric surgical series in which the follow-up stops at or before adolescence. An additional insight covered briefly in the article is the psychological challenges faced by adult men with hypospadias complications. Some are bothered by a sense that their penis is different in appearance from their peers and seek additional surgery in pursuit of a “normal” penis. Here, the words of Voltaire are often appropriate counsel: “Le mieux est l’ennemi du bien”, or “The best is the enemy of the good”. It is ill-advised to pursue additional surgeries to correct a urethra that is free of stricture but has a mild sacculation that causes post-void dribbling. Similarly, whereas an orthotopic mid-glans meatus is the goal in pediatric hypospadias repair, a sub-coronal meatus is preferable in adult hypospadias reconstruction because the glansplasty is fraught with complications. Another psychological consideration is that some men with restenosis after childhood hypospadias repair approach any additional surgery with great anxiety and fear. Repeat surgery can bring up memories of suffering through repeat interventions as a child. Truly, these represent challenging patients, pre-operatively, intra-operatively and post-operatively. They require skilled attention and careful counseling.

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