Half-time control in Paediatric Surgery

IKVL Lund University
Department of Pediatrics

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Title
Post-operative outcome after hypospadias reconstruction in boys

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Abstract
Post-operative outcome after hypospadias reconstruction in boys

Aim
The aim was to evaluate complications following hypospadias repair and correlate them with pre- and post-operative symptoms, degree of hypospadias and surgical procedures.

Methods
This was a cohort study from a prospectively collected register which included 171 boys 0-15 years old with hypospadias grade 1-2, who had primary repair by Mathieu’s technique or tubularised incised plate (TIP). The two surgical methods were compared regarding complications. Controls were used for analysis of post-operative urinary tract infections. A meta-analysis was performed comparing the two surgical procedures regarding two major complications: urethrocutaneous fistula and urethral stricture. In an observational study urinary flow measurements were conducted to evaluate whether signs of obstruction might precede any development of fistulae.

Results
There were no significant differences between Mathieu’s technique or TIP regarding the frequency of major surgical complications (Clavien Dindo 3b), with respect to preoperative symptoms or degree of hypospadias. The presence of positive urinary cultures post-operatively differed between boys who had hypospadias surgery (7.5%), and boys operated on for inguinal hernias (1.5%) (p<0.01). A higher incidence of urinary tract infections was noted in boys who had concomitant congenital malformations in addition to hypospadias (34% versus 0.5%) (p<0.01). In our patient cohort Mathieu’s technique was followed by a higher frequency of reoperations compared to TIP (p < 0.01) but in the meta-analysis Mathieu’s repair was favoured regarding urethral strictures. Urinary flow measurement could not identify boys at risk of developing urethral fistulae.

Conclusions
Boys with hypospadias are likely to be susceptible to urinary tract infections and their overall risk of complications does not appear to correlate to the degree of hypospadias or preoperative symptoms. The post-operative complication rate in our local cohort decreased after switching from Mathieu’s technique to TIP, but in the meta-analysis strictures were less common after Mathieu’s repair technique compared to TIP.