

# HYPOSPADIAS SURGERY

– long-term outcome focusing on adolescence

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentlig försvaras i F1 (Tallen), DSBUS, SU/Östra, den 31/5, klockan 13.00

av **Marie Andersson**

Fakultetsopponent:

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## Avhandlingen baseras på följande delarbeten

- I. **Andersson M**, Doroszkiewicz M, Arfwidsson C, Abrahamsson K, Sillén U, Holmdahl G.  
Normalized Urinary Flow at Puberty after Tubularized Incised Plate Uretroplasty for Hypospadias in Childhood.  
*J Urol* 2015 (194) 1407-1413.
- II. Örtqvist L, **Andersson M**, Strandqvist A, Nordenström A, Frisé L, Holmdahl G, Nordenskjöld A.  
Psychosocial outcome in adult men born with hypospadias.  
*J Pediatr Urol.* 2017 Feb;13(1):79.e1-79.e7
- III. **Andersson M**, Sjöström S, Doroszkiewicz M, Örtqvist L, Holmdahl G.  
Urological outcome in adolescents after surgery for proximal hypospadias in childhood.  
*Manuscript. Submitted.*
- IV. **Andersson M**, Sjöström S, Wängqvist M, Örtqvist L, Nordenskjöld A, Holmdahl G.  
Psychosocial and sexual outcome in adolescents after surgery for proximal hypospadias in childhood.  
*Manuscript. Submitted.*

**SAHLGRENKA AKADEMIN  
INSTITUTIONEN FÖR KLINISKA VETENSKAPER**



# HYPOSPADIAS SURGERY

## – long-term outcome focusing on adolescence

**Marie Andersson**

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### Abstract

Hypospadias is a malformation that affects 1/125 born boys in Sweden. 1/10 with hypospadias are born with the most severe form; proximal hypospadias. The treatment, which is surgical, is performed during the first years of life. The aim of this thesis was to evaluate the urological, psychosocial and psychosexual outcomes in adolescence among boys and young men operated for different degrees of hypospadias.

**Study 1** showed that the flow rates of boys with distal to midpenile hypospadias operated with the Tubularized Incised Plate (TIP) procedure (introduced in 1994) improved spontaneously in puberty compared to the obstructive flows in childhood. The hypoplastic urethral plate used at TIP seems to grow with the boy sufficiently to provide a good urinary flow in puberty and a continuously straight penis.

**Study 2** investigated psychosocial outcomes in adult men with different degrees of hypospadias and showed that Psychological General Well-Being (PGBW) was comparable to controls, patients treated for hypospadias had a good hrQOL, can be expected to have a normal psychosocial life with partners and children to the same extent as controls, but repeated follow-up and support during childhood/adolescence is important for patients with proximal hypospadias.

**Study 3** showed that the uroflows improved for patients with proximal hypospadias in adolescence. Glanular sensation was normal in 72% and 18% had some degree of penile curvature in adolescence. Many patients were dissatisfied with penile length. Many, in particular patients reconstructed with the Duckett procedure, required reoperations. One third of patients were reoperated more than 10 years after primary surgery, stressing the need of followup beyond puberty.

**Study 4** investigated the psychosocial and psychosexual outcome for patients with proximal hypospadias in comparison with distal hypospadias and controls and found that despite concerns about penile length in the group of patients with proximal hypospadias, sexual experiences were comparable to both patients with distal hypospadias and controls. However, more than a third of patients with proximal hypospadias expressed uncertainty in questions related to physical contact. Specialized tutoring in school was also more common in patients with proximal hypospadias. Continued follow-up through adolescence, with extra time offered for age-adequate information and support is important.

*In conclusion*, urinary, psychosocial and psychosexual outcome in adolescence is good for patients with distal and proximal hypospadias, but the latter may require a considerable amount of reoperations to achieve this. Hypospadias patients are concerned with penile length and especially patients with proximal hypospadias are in need of more support which is preferably given during urological follow-up.