

Primary hypospadias in adults: Tips and tricks

Techniques for repair do not differ much between adults and children



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Adults presenting with primary non-operated hypospadias seeking surgical correction are rare. Indeed, hypospadias in adults is mostly encountered in older men presenting for Lower Urinary Tract symptoms mostly based on prostatic problems; however these men do not seek surgical correction of hypospadias.

Most men asking for reconstruction of adult hypospadias present with minor or distal forms of hypospadias which were either not diagnosed or not corrected. In some rare studies incidence of distal hypospadias in adult men is more than 15 %¹.

Despite this rather high incidence, the number of manuscripts on adult primary hypospadias repair is rather low^{2,3}. Most men with undiagnosed or untreated hypospadias probably do not seek correction as they probably do not find it necessary to correct a mild anomaly. A recent study analyzed how the penis should look according to lay persons⁴. The quite interesting results show that laypersons find the position and the shape of the meatus the least important in the aspect of the penis⁴.

Very few studies are available in the literature about primary hypospadias correction in adults: Snodgrass compares outcome in adults and children operated by the same group of surgeons: their complication rate is similar in both groups, with 12.5% complications after primary repair². This study demonstrates that proximal meatus and reoperation are risk factors for complications². Pubertal stage, and thus adulthood were not identified as risk factors for complication².

In the study of Hensle the complication rate in a small group of patients with primary repair in adulthood is reported at 37,5 %, which is much higher than what is generally published for complication rates in children³. But this study analyzes a very small group of patients, thereby offering a very low evidence level³.

Low-level studies

Research on hypospadias repair in general is based on low-level studies⁵. Most studies are retrospective with short follow-up and non-objective measurements of functional and aesthetic outcome⁷. For primary repair in adults there is no evidence at all so the recommendations that follow are based on large experience and on literature about urethral reconstruction in adults.

The main difference between children and adults presenting with hypospadias consists of changes that happen with puberty. Next to growth of the penis there is also the increased trophicity of the tissues based on increased vascularity with puberty and the more systematic spontaneous erectile function in adults, more specifically nocturnal erections. While better tissue quality should be in favor of wound healing, the nocturnal erections might interfere with good healing as tension is put on the reconstructed tissues.

What do these findings imply on the operative technique? The techniques used in adults do not differ from those in children⁸. Tubularized incised plate urethroplasty (TIPU) which is nowadays most popular in children has been shown to be feasible in adults^{9,10}. Other techniques described are meatal advancement and glanuloplasty (MAGPI) and Mathieu repair as well as Tiersch Duplay techniques like GAP-repair.

In a comparative study comparing outcome of urethroplasty after failed hypospadias repair compared to urethroplasty for stricture disease non-related to hypospadias repair, we found a tendency for more complications in hypospadias, however non-significant¹¹.

Surgical approaches

What logically differs in the surgical approach of hypospadias between children and adults is the size of the suture material, the size of the catheter and the kind and duration of the dressing. For children it is known what is generally used¹².

Where in children sutures are resorbable and most often 6.0 monofilament or thinner, in adults rather 4.0 sutures are used like in most urethroplasty techniques. The suture material seems to have no result on the outcome and studies on suture size are nonexistent^{13,14}.

Catheter size in children is most often 10 French (Fr) where in adults 16 or 18 Fr is more frequently used. As for duration of catheter there is wide variation in children, going from no catheter to two weeks; this information is unknown in adults.

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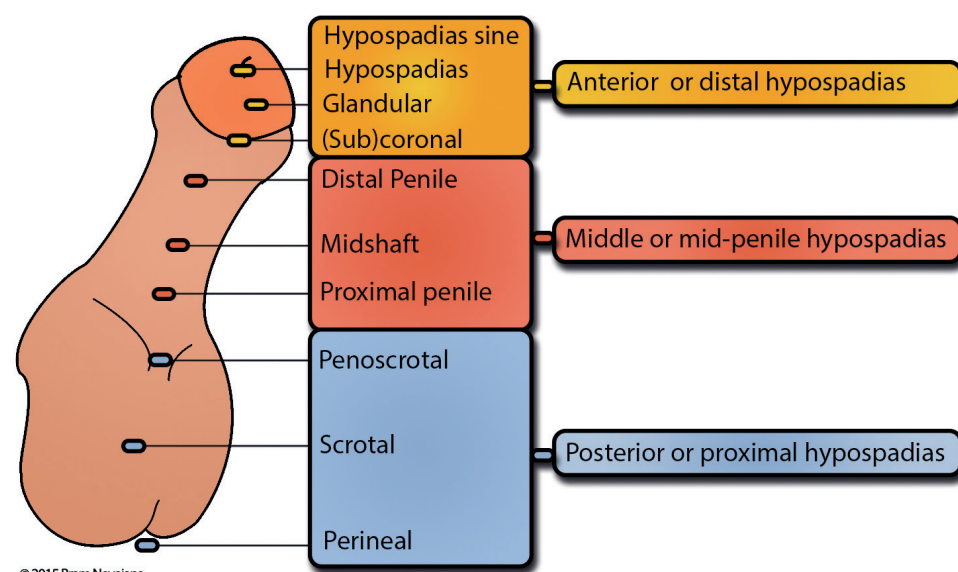
Erections logically might interfere with healing and outcome. Prevention of erection has been studied but no single treatment has been found to be effective to prevent nocturnal erections in a postoperative setting^{15,16}. The only way to limit the negative effects of erection on outcome is by using a good postoperative compressive dressing during the night. Where in children most often foam-based or tegaderm-based dressing are used, in adults more often a simple compressive penile dressing is used. In our center we try to keep the primary dressing for at least five days and encourage patients to use a compressive dressing during night for at least three weeks after surgery.

In conclusion, no final word is written on primary hypospadias repair in adults. It is common sense to accept that techniques for repair do not differ between adults and children; however sutures, catheters and dressing need to be adapted to the size and the erectile activity of the adult penis.

With the increased detection of genital anomalies at a younger age and the advent of microsurgical techniques, virtually most of hypospadias are nowadays diagnosed, and most of them are corrected. Primary adult hypospadias will probably therefore progressively vanish, at least in Western Europe.

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Saturday, 12 March 10.15-15.45: Meeting of the EAU Section of Genito-Urinary Reconstructive Surgeons (ESGURS), Uro-genital reconstructive surgery: Personal tips and tricks