The Turkish Journal of Pediatrics
Volume 26, Nos 1-4, 1984

HYPOSPADIAS*

*Robert H. Whitaker MChir, FRCS***

Key words: chordee, Duckett, hypospadias, one-stage repair

Many adults are encountered with minor degrees of meatal displacement and chordee who are in no way disabled, so that it is debatable whether our desire to seek perfection in penile straightening and a distal meatus is fully justified. This philosophy is particularly apt in view of the high failure rate of some of the older operations. However, fortunately there are now several one-stage operations that are both effective and also have minimal morbidity that help to justify an aggressive approach.

The underlying principles of all operations are the careful preservation of the blood supply, avoidance of overlying suture lines, nontraumatic handling of the tissues and avoidance of infection with adequate diversion of urine away from the repair during the initial stages of the postoperative healing.

The classification of hypospadias is well known and does not need reiteration. Fortunately, most children presenting with hypospadias have a minor degree that only requires straightening of the penis and advancement of the meatus from a coronal position onto the glans. The two Duckett operations[1,2] are satisfactory for the vast majority of primary hypospadias repairs, and only if the child has had a previous operation or if there is a lack of adequate skin or an exceptionally long urethral gap to bridge, is it necessary to consider other methods such as a free skin graft or the use of scrotal skin.

MAGPI (Meatal Advancement and Glanuloplasty Inc)

This operation[1] is designed for the coronal or minimal sub-coronal hypospadias with limited degrees of chordee. The meatus is brought forward into the under surface of the glans and by adjustment of the skin below it the stream is directed forwards and the chordee corrected. The majority of the circumference of the meatus is left intact so that postoperative stenosis is most uncommon. The operation is flexible so that if there is much chordee the dorsal hood can be used to make

* From the Department of Urology, Addenbrookes Hospital, Cambridge, United Kingdom.
** Consultant Urologist, Addenbrookes Hospital, Cambridge.

up the deficit on the ventral side. The results are excellent both cosmetically and functionally.

For worse degrees of hypospadias other types of repair are needed which will not be described in this paper. However, the full Duckett repair using a transverse ventral preputial island flap can be very effective[2].

The Transverse Ventral Preputial Island Flap

This one-stage repair allows adequate correction of chordee and replacement of the distal urethra by up to 4 - 5 centimeters of vascularized preputial skin. It is particularly advantageous in that the suture line of the new urethra lies against the corpora and there is less likelihood of fistula formation. The meatus is on the distal glans and the remaining skin coverage of the penis has an independent blood supply separate from the neo-urethra. The proximal anastomosis should be oblique and the proximal urethra cut back until the normal spongy tissue is reached. Splintage and temporary suprapubic diversion are essential.

The results of both these operations are excellent provided meticulous care is taken with the surgical technique; as with all hypospadias repairs the best results are obtained after considerable practice.

REFERENCES

1. Duckett JW MAGPI (meatoplasty and glanuloplasty): a procedure for subcoronal hypospadias. *Urol Clin North Am* **8**: 513, 1981.
2. Duckett JW. The island flap technique for hypospadias repair. *Urol Clin North Am* **8**: 503, 1981.