

## Meatal mobilization and glanuloplasty: A viable option for coronal and glanular hypospadias repair

Hypospadias is one of the most common anomalies in the human genitourinary system. With an incidence of 1 in 300 male newborns. The meatal location may be anywhere from just below the tip of the glans to the perineum and hypospadias is divided into three types, posterior, middle and anterior, based on the position of the meatus. Anterior hypospadias is the most common type, occurring in 65% of cases. Among anterior hypospadias, 15% are glanular, 50% are coronal, 30% are sub-coronal and 5% are MIP (Megameatus Intact Prepuce). Together, glanular and coronal hypospadias represent a significant proportion of cases. Meatal Advancement and Glanuloplasty Inclusive (MAGPI), represents one of the most common methods for repair of glanular and coronal hypospadias, first described in 1981. In this surgical approach, the hypospadiac meatus is advanced to the tip of glans without tubularization. The most significant complications of MAGPI are meatal retraction or regression, seen in up to 22% of cases and glanular chordee, in which there is ventral deflection of the glans. Both complications are associated with unsatisfactory cosmetic outcomes. For this reasons, there are numerous reports of modifications to improve functional and cosmetic results of the MAGPI. The aim of this study is to describe our experience with a modification of the MAGPI procedure that we have named Meatal Mobilization with Glanuloplasty Inclusive (MMGPI) it is schematically represented in Figure 1.

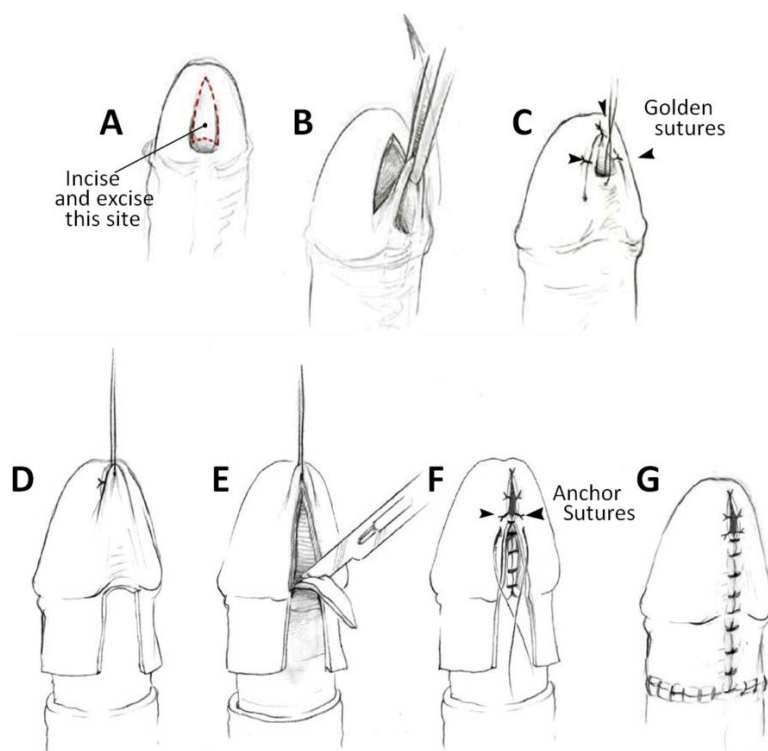


Fig. 1.

This study included 120 patients with anterior hypospadias, but 17 patients discontinued cooperation and finally excluded, including 21 glanular, 62 coronal and 20 sub-coronal hypospadias, whom underwent the MMGPI technique. The mean age was  $3.2 \pm 1.4$  years (range 1-12 years). There were no cases of hematoma, meatal necrosis or other early complications in any patients. In glanular hypospadias patients there were no cases of meatal regression or meatal stenosis, functional and cosmetic outcomes were satisfactory. Two patients out of 62 cases (3.22%), with coronal hypospadias had meatal stenosis and two patients out of 62 cases (3.22%), had meatal regression. Five patients out of 20 cases (25%) with sub-coronal hypospadias had 2 mm meatal regression with downward sloping urinary stream and two patients out of 20 cases (10%) had meatal stenosis. However, in all patients the neomeatus remained more distal than the preoperative meatus. No patients required a second procedure.

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