Introduction

The Pediatric Penile Perception Score (PPS) was the first validated score to objectively assess the cosmetic outcome of hypospadias repair. It consists of 4 items rated by patient's parents and surgeons, with 4-point Likert scale, ranging from very dissatisfied to very satisfied. The score include size of the penis, glans, meatus, postpubertal skin and curvature (1). The main limitation of this instrument is that it was validated for prepubertal hypospadias only. Nevertheless, the instrument has found acceptance in assessing hypospadias repair in adults (2).

Most pediatric Urologists are in favor of monitoring urine flow after hypospadias repair among toiletted trained boys. This can be achieved by uroflowmetry and residual urine measuring if needed (3). The International Children's Continence Society (ICCS) suggests that uroflowmetry of Voided volume less than 50 mL is not enough for interpretation (4). Moreover, Yang et al further suggested that a voided volume >50% of expected bladder capacity is more reliable for the interpretation of uroflowmetry (5).

The aim of the present study is to evaluate the validity of urine flow monitoring added to Pediatric Penile Perception Score in evaluating distal hypospadias repair.

Methods

Sixty boys with successful distal hypospadias repair age 5 to 10 years old (toilette trained) were enrolled in the present study. Twenty cases each group were evaluated more than 6 months post-operatively. Group I; boys underwent Tubularized Incised Plate (TIP) repair; Group II; boys with mental based flap (Mathieu) repair; while group III were boys with successful urethral mobilization. Exclusion criteria include, non toilette trained boys, age less than 5 or more than 10 years, recurrent cases or complicated cases with fistula or incontinence.

Children parents were asked to complete the PPS to express satisfaction with hypospadias repair with 4 items referring to their child penile. PPS was calculated by adding the scores of all 4 items for a range of 0 to 12.

After clear parents consent, four standardized views were photographed of the non-erect penis (figures 1 & 2). Antero-posterior, oblique and two views of the penis held so that the meatus and ventral side of the penis were visible. The 4 photos were given to the 5 Pediatric Urologists to assess the cosmetic appearance of the penis using PPS. The Urologists were not aware of referring to their child penis. PPS was 2.6 ± 0.502 among group I boys, 2.65 ± 0.489 among group II boys and 2.85 ± 0.386 among groupIII boys. As regards Urologists evaluation, came as follows:

Two cases in group I (TIP urethroplasty) needed urethral dilatation for weak urine flow and low uroflowmetry (< 10 ml/sec.). On the other hand, one boy in group II (Mathieu repair) needed revision urethroplasty because of failed urethral dilatation with persistent low uroflowmetry (< 10 ml/sec).

Conclusions

Voiding pattern and uroflowmetry seems to be important for objective evaluation of urethroplasty repair, and early address of complications. We suppose to popularize PPS with urine flow monitoring charts to be part of follow up strategy for hypospadias repair.

References