PEDIATRICS

20 years of hypospadias repair—yet still no consensus

The best practice for surgical repair of primary severe hypospadias in children is controversial. This is partly because the field has been subject to a number of surgical trends, whereby new techniques have been suggested and abandoned without a substantial amount of data being accumulated to support their use.

The authors of a recent publication in *The Journal of Urology* have attempted to clarify the ideal management of children with primary severe hypospadias, by systematically reviewing 20 years' worth of data. Marco Castagnetti, from the University Hospital of Padua, Italy, and Alaa El-Ghoneimi, from the University of Paris, reviewed the results of studies published between 1990 and 2009.

The pair found that most of the 69 studies identified were of low quality, being often uncontrolled or performed using flawed methodology. Nevertheless, one main challenge emerged from data analysis—a lack of clear guidelines for diagnosis. A broad range of criteria are used to assess penile curvature and severity of hypospadias. Opinions regarding the level of curvature requiring treatment and the best surgical approach therefore vary widely

across the literature. Surgical outcome, in terms of incidence of persistent curvature, is also extremely variable, ranging from 12–50% in different studies. The degree of persistent curvature has a role in determining subsequent management; most authors recommend sectioning of the urethral plate.

Analysis of outcomes following hypospadias repair seems to suggest that most surgical techniques yield satisfactory cosmetic results, although data collection is extremely subjective. Functional outcomes are not well reported. Despite this, the general consensus seems to be that postoperative urinary and ejaculatory function are poor. “Urethroplasty techniques only create a tube which has biological properties different (and worse) from the native urethra”, comments Castagnetti. “Most of these patients have uroflow abnormalities, and urinary and/or ejaculatory problems”.

“The decision as to which technique to use for urethroplasty mainly depends on technical reasons, particularly whether the urethral plate can be spared or needs to be transected to achieve penile straightening. Since we have no clear cut criteria to

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decide from the outset when the plate has to be transected ... a step-wise approach seems to be the most sensible approach for penile straightening.”

A clear set of diagnostic and management criteria is definitely needed for this rare but debilitating condition. In the meantime, the approach suggested by Castagnetti and El-Ghoneimi seems the most sensible.

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Original article Castagnetti, M. & El-Ghoneimi, A. Surgical management for primary severe hypospadias in children: systematic 20-year review. *J. Urol.* **184**, 1469–1474 (2010)