



Letter to the Editor

Comment on “The GUD technique: Glandular urethral disassembly for distal hypospadias repair”



I read the article (in press) and watched the video with great interest in the Journal of Pediatric Urology, entitled ‘The GUD technique: Glandular urethral disassembly for distal hypospadias repair’ [1]. The authors describe the mobilization of the urethra, the incision of the glans in the midline and enclose the mobilized urethra in the glans penis. The authors use the definition of “aggressive glans deconstruction” for the urethral and glandular disassembly and propose that its refurbishment creates a much more conical and better cosmesis. I have some comments on the “aggressive deconstruction technique” of the authors:

- 1 The aggressive deconstruction of an anatomically normal glans without urethra has no connection with the penile disassembly technique in epispadias or Peyronie’s disease [2]. The failure of urethral formation within the glans is linked to a ventral deficit in the foreskin. It is shown that the distal growth of the median primordial fascial tissues of the prepuce carries the ventral prepuce and frenulum over the urethral meatus [3]. The inner layer of the prepuce receives its blood supply mainly from the glans, especially when the small terminal and cross-communicating branches with the outer prepuce are cut [4,5]. In Fig. 4, the necrosis of the mucosal collar (inner foreskin) can be easily seen as a result of aggressive glans deconstruction.
- 2 The authors report the release of urethra from the corpora, but do not provide details about the corpus spongiosum. From the video it can be seen that the authors release, mobilize the urethra with corpus spongiosum and enclose it in the wide-open (definition of the authors: “like a book”) glans penis. As a result, as seen in Fig. 2, the urethra is brought up with the corpus

spongiosum and circumferentially covered by the glans tissue. In the normal anatomy of the penis, however, the glans wings do not fuse in the ventral midline and are separated by a thin fibrous tissue (“septum glandis”) and frenulum [6,7]. Furthermore, the urethra is not a tubular structure with uniform configuration and diameter, by forming the fossa navicularis in the glans penis. The glandular urethra (fossa navicularis) has a wider caliber than the proximal penile urethra, forming a vertically elliptical shape, resembling a laterally compressed, slit-like passage. The corpus spongiosum covers the penile urethra and gradually terminates at the mid-glandular level where it meets the fossa navicularis. After this level, the fibrous extensions of the tunica vaginalis of the corpus cavernosum (upper median septum) and the corpus spongiosum (lower median septum) cover the fossa navicularis and form the “septum glandis”. The authors’ midline glans incision corresponds to the anatomical location of the upper median septum, which is also known as the “distal ligament” or “corpora-glans ligament” of the penis. It seems that the authors are harming this ligament that is supposed to provide flexibility and rigidity to the glans penis, especially during sexual intercourse [8].

- 3 The sub-epithelial approximation of the glans never holds the glans tissue together, as can be seen in Fig. 3. The edges of the glans are obviously separated and the position of the meatus is not clear. It would be nice to see the patient during micturition to observe the urine coming out from the neomeatus. The use of smartphones by families is a good option for this purpose. By using the inner surface of the mucosal collar as a reconstruction material, we were able to seal the area between the glans wings and, like in normal anatomy, form a septum and frenulum [9].

The authors can subjectively convince themselves of the cosmetic and functional results of this technique and define it as genuine, but not with the facts mentioned. In

DOI of original article: <https://doi.org/10.1016/j.jpuro.2020.03.017>.

<https://doi.org/10.1016/j.jpuro.2020.07.029>

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summary, hypospadias surgery is full of subjective descriptions of subjective technical steps that undermine the proven facts about anatomy. To avoid adding new misunderstandings to hypospadiology, we should revisit and research the anatomy of the normal penis.

Conflicts of interest

No conflict of interest.

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24 June 2020

Available online 29 July 2020