



The facts and misconceptions in glans penis anatomy

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Dear Editor,

I read with great interest the article titled 'Development of the human prepuce and its innervation' (Cunha et al., 2020). Although it is a great work of the authors, I want to clarify a few points in the penis anatomy, which has been a misconception in hypospadias surgery for decades. In the normal penis, glans penis doesn't cover the glanular urethra (fossa navicularis) circumferentially. The glans wings are separated ventrally by a thin fibrous tissue (septum glandis), and its epithelial extension (frenulum) forms a delta with its preputial connection (Henle, 1877; Özbey, 2019a). We recently showed these anatomical details of the glans penis with MRI study, with particular reference to the glanular urethra, septum glandis, and frenulum (Özbey and Kumbasar, 2017; Özbey, 2019b). In Fig. 2, however, the glans penis is shown circumferentially surrounding the glanular urethra, and a midline mesenchymal tissue connects the glans to the inner surface of the prepuce (Fig. 2, green area). As the authors of this study point out, the intact prepuce variant of hypospadias with megameatus is the typical clinical evidence for this complex remodeling of the glanular urethra and midline mesenchymal confluence. More than 300 different surgical techniques are described in hypospadias surgery. Among those, the most common technique for hypospadias repair involves dissection of the glans wings and their approximation on the ventral midline to enclose the neo-urethra. This technique aims to cover the ventral aspect of the urethra, as in this figure of the article, to prevent glans dehiscence (Snodgrass and Bush, 2016). This figure is misleading information for surgeons, that appears to support a serious misconception in hypospadias surgery (Özbey, 2017, 2020). I hope that this information and/or figure will be corrected in the future issue of the journal.

In addition, van der Putte has already hypothesized that the failure

of urethral formation within the glans is linked to a ventral deficit in the foreskin. He proposed that the ventro-medial expansion of the glandopreputial lamella is combined with the distalward growth of the median primordial fascial tissues of the prepuce, which carries the ventral prepuce and frenulum over the urethral meatus (van der Putte, 2007). It is interesting that the well-known studies by van der Putte on the development of genitourinary tract are not among the references in this article.

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<https://doi.org/10.1016/j.diff.2020.03.005>

Received 16 March 2020; Accepted 23 March 2020

Available online 15 April 2020

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