



## Letter to the Editor

### Correspondence to the comment on “Symptomatic corpus spongiosum defect in adolescents and young adults who underwent distal hypospadias repair during childhood”

I would like to address Dr Hennayake et al.’s comment on Dr Ali et al.’s article entitled “Symptomatic Corpus Spongiosum Defect in Adolescents and Young Adults Who Underwent Distal Hypospadias Repair During Childhood” [1,2]. I congratulate the authors for questioning the age-old techniques that surgeons blindly apply to the most precious organ of manhood, penis. This organ deserves more scientific approaches because of its unique functional anatomy than giving it a straight look and a uniformly built tube inside. Using magnetic resonance imaging (MRI), we previously obtained detailed information about the anatomy of glans penis, particularly in relation to the glanular urethra, “septum glandis” and “frenulum” [3]. I disagree with the authors’ statement that “anatomically, the glanular urethra is non-distensible causing some pressure to be generated internally to forcefully direct the urine stream and the ejaculate”. It is true that there is an increase in pressure in the glanular urethra, but not because of its non-distensibility. In fact, the glanular urethra is more distensible, compliant, and wider in caliber than the proximal penile urethra. I would like to refer the authors to our study in which we analyzed urine flow dynamics based on the structural anatomy of the glanular urethra. Using theoretical physics (fluid dynamics), we have shown how the glanular urethra act as a “flow control chamber”, resulting in an increase in pressure and a decrease in the velocity of urine flow [4,5]. Once again, I must stress that there is no corpus spongiosum around the glanular urethra like the corpus spongiosum in the penile urethra. There are only the extensions of the tunica albuginea (of both corpora cavernosa and corpus spongiosum), which form a fine fibrous layer (septum glandis) that covers the fossa navicularis, holds

it in the midline as a slit-like opening, and separates the glans wings in the ventral midline. Therefore, the compliance and distensibility of the glanular urethra is provided by the fossa navicularis and septum glandis and differs from that of the penile urethra, which is surrounded by the corpus spongiosum.

It is also interesting how the authors observed normal spongiosum in size and length in the majority of hypospadias. I don’t think that laterally deviated spongiosum can be seen fully developed in patients with penile or proximal hypospadias. This observation can only apply to glanular and/or frenular hypospadias, since the spongiosum and tunica albuginea are dissolved and/or absent in more proximal cases. In these patients, the tissues brought to the midline are Buck’s layer-covered dartos tissue adapted as tunica albuginea and spongiosum (to be published). I believe and hope that the editors and reviewers of surgical journals should value and give more space to translational studies in hypospadias surgery.

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### Conflicts of interest

No conflict of interest.

### References

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