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UROLOGY - LETTER TO THE EDITOR

Re: The effect of intraurethral hyaluronic acid on healing and fibrosis in rats with experimentally induced urethral trauma

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Editor,

The interesting article by Doğantekin et al. on the benefits of Hyaluronic Acid (HA) applications for preventing spongiofibrosis on the rat urethra is thought-provoking, but raises some questions [1].

The effect of HA in modulating fibrosis has been observed on traumatised urothelium previously [2]. The rodent urethral mucosa is urothelial [3]. The human urethra, on the other hand, has transitional epithelium only up to the prostatic urethra, and the penile, bulbar, and membranous portions of the urethra contain pseudostratified and stratified columnar epithelium. Despite the difference, previous human trials have shown the benefit of HA alone or in combination with carboxymethylcellulose in preventing stricture recurrence [4, 5].

In the bladder, HA remains in contact with the urothelium for some time to enable anti-inflammatory, anodyne and antifibrotic benefits. However, it is challenging to achieve a reasonable contact time of HA with the urethral mucosa, given the rapid transit of fluid through the urethra, compared to the longer contact time of material instilled within the bladder. Previous human reports have described methods to ensure that the contact time of hyaluronidase with the urethral mucosa is maintained for 24 h with observable benefits [4, 5]. However, Doğantekin et al. do not mention any similar manoeuvres to increase HA contact time in their methodology. Therefore, surprisingly, an anti-inflammatory response was seen in their experimental rats despite the little time it takes for an instillation to transit through the urethra. Did the authors adopt any measures to increase the contact time or transit time of HA within the urethral mucosa in these experimental rats? Or do they contend that a prolonged contact, as previously reported, is redundant?

Answers to this question would help further understand this animal study's human translational benefit.

Declarations

Conflict of interest The author has no conflicts of interests.

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