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Commentary on "Outcomes and Complication Rates of Cuff Downsizing in the Treatment of Worsening or Persistent Incontinence After Artificial Urinary Sphincter Implantation"

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We read with interest a recent article by Weis et al. [1] assessing the outcomes and complications of cuff downsizing in the treatment of worsening or persistent urinary incontinence after Artificial Urinary Sphincter (AUS) implantation. In the study, the authors noted that cuff downsizing can improve the continence status in half of the patients and improve the quality of life of more than half of the patients undergoing cuff downsizing. This paper is undoubtedly an important voice in the debate on the optimization of the treatment of refractory or persistent urinary incontinence after AUS implantation. As this debate has been ongoing for decades and is probably not going to be resolved in the near future, we feel that a few aspects of this study should be emphasized.

The authors do not distinguish the patients with refractory and persistent incontinence, however, it should be noted, that persistent incontinence may be due to suboptimal parameters of primary AUS, e.g., cuff size or pressure-regulating balloon type.

Until recently urethral atrophy was considered the main cause of nonmechanical failure of AUS. As its existence is being questioned, the pathophysiology of recurrent urinary incontinence is not clear [2]. The treatment remains a clinical challenge, with several potentially therapeutic options proposed including increasing the amount of fluid in the system, changing the balloon reservoir for a higher pressure one, downsizing the cuff diameter, repositioning the cuff, transcorporal insertion of the cuff and tandem cuff placement [3-6]. There are no randomized trials evaluating the effectiveness of different types of treatment, so we can only base our clinical decisions on the results of retrospective studies or retrospective analyses of prospectively maintained databases. In the discussed study, the effectiveness of cuff downsizing was estimated at 52%, which is significantly lower than in other such series, where it reaches 71%–93% [4, 6]. This may be related to the assessment of the significance of continence improvement, which Weis et al. [1] described as an improvement of >5 out of 21 points in the International Consultation on Incontinence Questionnaire questionnaire and was not exactly described in the previous studies.

The authors do not address the issue of the severity of urinary incontinence expressed by the amount of urine lost in the pad test, despite the fact that it is the most objective and measurable tool to assess the severity of incontinence. It may not always be worthwhile to strive for better quality of continence, especially in mild incontinence, considering the significant risk of complications. In the discussed study the rate of major complications forcing the device explantation was 36%. This issue should be emphasized when consulting patients before this type of intervention, especially if the patient is already at high risk of failure.

Subcuff urethral capsulotomy is a relatively new approach challenging traditional methods of dealing with recurrent incontinence, first described by Bugeja et al. [2] and then confirmed by Pearlman et al. [7]. Midline ventral incision of the capsule and blunt dissection of the urethra from the capsule release the urethral diameter and enable replacement AUS involving a new cuff of the same size used previously, and a new pressure-regulating balloon rated for the same pressure rating

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as before. These maneuvers seem to have a favorable effect on urethral erosion, but there is a need for multicenter studies with more data to confirm this.

Moreover, Cousin et al. [6], assessed the aforementioned management strategies in recurrent urinary incontinence, demonstrating the best functional outcomes and the lowest reintervention rate among patients in whom all components of the artificial sphincter were changed. This may be due to the fact that the continence quality depends not only on a well-fitting cuff but requires proper function of all components of the device.

• **Conflict of Interest:** The authors have nothing to disclose.

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