

dular kallikrein/total PSA to avoid further misinterpretations of significance levels.

Respectfully,  
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#### RE: THE PELVIC PLEXUS AND ANTIREFLUX SURGERY: TOPOGRAPHICAL FINDINGS AND CLINICAL CONSEQUENCES

J. Leissner, E. P. Allhoff, W. Wolff, C. Feja, M. Höckel, P. Black, AND R. Hohenfellner

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*To the Editor.* This is an interesting article that looks at the topography of the pelvic neural plexus with specific attention to nerve injury resulting from antireflux surgery. However, I noted that in the discussion they quoted an article I wrote on the detrusorrhaphy technique,<sup>1</sup> and stated that voiding dysfunction required intermittent catheterization in 26% of patients. This is a misquote. In fact, in contradistinction to their statement, we performed bilateral detrusorrhaphy in 41 cases, of which only 1 case required intermittent catheterization for a short period. That case equates to 2.4% of this group and not 26%. The authors should not draw conclusions based on erroneous data. If one screens out those patients with significant voiding dysfunction, my experience and that of others are that bilateral detrusorrhaphy is, in fact, safe and effective, and has a low risk of urinary retention.<sup>2</sup> Patient selection seems to be the most important parameter in determining the risk of postoperative urinary retention.

The dissection to free up the ureter extravasically is done in line with the natural course of the ureter. By staying in this line, one would avoid the main portion of the pelvic plexus as described by the

authors and, hence, the risk of urinary retention due to nerve injury would be minimized.

Respectfully,  
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*Reply by Authors.* We agree and regret that the statement that 26% of patients have bladder dysfunction after detrusorrhaphy is not quoted in the original publication of Zaontz et al. However, the other references cited in our publication confirm the high rate of bladder dysfunction after extravasical antireflux procedures, and our conclusion is not drawn from a single study.

As demonstrated in our study, the higher risk of bladder dysfunction after detrusorrhaphy is caused by the circumferential myotomy and the Vest type sutures. Both steps will definitely destroy nerve fibers in the pelvic plexus. The dissection of the distal ureter is another step that carries the risk of nerve fiber damage. Therefore, every dissection of the distal ureter should be performed close to the ureter regardless of the antireflux technique used.

Interestingly, after publishing our report, we have had a number of personal communications in which urologists have confirmed our conclusion. In these discussions our impression was that the incidence of bladder dysfunction may be even higher than that reported in our article. Many urologists told us that they had observed bladder dysfunction but did not realize others had experienced the same, since there are few data in the literature. In this context, we would like to encourage others to be aware of this complication and to report their own data to highlight the problem.

#### RE: BIOFEEDBACK TRAINING FOR DETRUSOR OVERACTIVITY IN CHILDREN

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*To the Editor.* The authors of this article conclude that biofeedback training is effective for treating detrusor overactivity. During biofeedback training, patients were instructed to contract the anal sphincter without raising abdominal pressure to inhibit overactive bladder contractions. The idea was that contracting pelvic floor muscles inhibits detrusor overactivity.

We have recently described the mechanism of detrusor inhibition induced by contraction of the pelvic floor muscles.<sup>1,2</sup> By pelvic floor muscles we mean the puborectalis muscle, which is the constricting part of the levator ani muscle. The latter consists of the pubococcygeus, puborectalis and iliococcygeus, which are rudimentary in humans.<sup>3</sup> While the pubococcygeus muscle on contraction opens the vesical and rectal necks, the puborectalis muscle closes them.<sup>4–6</sup> The puborectalis muscle gives rise to the external anal and urethral sphincters.<sup>4,5</sup> When patients are instructed to contract the anal sphincter, the contraction of not only the external anal, but also the external urethral sphincter and puborectalis muscle will be affected. All 3 muscles contract simultaneously on anal sphincter squeeze.<sup>4,5</sup>

Our previous studies have demonstrated that contraction of the anal or urethral sphincter or puborectalis muscle causes inhibition of rectal or vesical contraction, an effect mediated through the voluntary inhibition reflex.<sup>1,2</sup> The mechanism of evacuation starts with rectal or vesical contraction, which reflexively leads to internal sphincter relaxation provided the external sphincter relaxes. External sphincter contraction prevents relaxation of the internal sphincter. Failure of the latter to relax leads to reflex detrusor relaxation.<sup>1,2</sup> This reflex seems to be the mechanism by which the anal sphincter contraction, as performed by patients in biofeedback train-