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URO-RADIOLOGICAL ABNORMALITIES THAT MAY INFLUENCE MANAGEMENT DECISIONS IN ADULT MEN WITH LUTS

Aim of Study Lower urinary tract symptoms (LUTS) are usually attributed to obstructive benign prostatic hyperplasia (BPH). However, in a third of neurologically normal adult patients, factors unrelated to bladder outlet obstruction (BOO) produce LUTS. Although simple urodynamics can characterize voiding dysfunction, they cannot reveal coincidental morphologic abnormalities of lower urinary tract without radiological emphasis. Over the past years, we have radiologically diagnosed narrow mouthed bladder diverticula, vesico ureteral reflux and prostatic calculi in patients with persisting LUTS after trans-urethral resection of prostate (TURP). Similarly, patients without BOO presenting with LUTS were found to have prostatic reflux and prostatic calculi suggestive of chronic prostatitis. These findings prompted us to conduct a study to determine whether significant lower urinary tract abnormalities that may potentially influence treatment decisions are present in patients with LUTS.

Methods Radiologic and urodynamic studies of adult men presenting with lower urinary tract symptoms were evaluated. Radiological studies included a scout film of the abdomen, voiding cystourethrography (VCUG) and a post-void film. Retrograde urethrography was performed as indicated. Comprehensive video-urodynamic evaluation included uroflowmetry, medium fill cystometry, voiding profilometry and/or pressure-flow study. Patients with relevant neurologic diseases, previous pelvic surgery or abdominopelvic resections were excluded.

Results Radiological films of 1427 patients were analyzed. Abnormalities included bladder trabeculation of varied severity (17.2%), vesico-ureteral reflux (2.5%), prostatic calculi (3.1%), prostatic reflux (8.4%), urethral strictures (1.4%) and narrow mouthed diverticula with stasis (10.5%). The urodynamic studies of 277 of these patients were reviewed. BOO was found in 54.8% of those with urodynamics and 66 (43.4%) of these patients had detrusor instability. A majority of patients without BOO had abnormal

radiological findings which included bladder trabeculation, and poorly opacified bladder outlet (BO) with contrast during voiding. The latter findings are presumably due to impaired detrusor contractility.

	<i>Abnormal X-ray</i>	<i>Trabeculae</i>	<i>VU reflux</i>	<i>Prostatic Calculi</i>	<i>Prostatic Reflux</i>	<i>Diverticuli</i>	<i>Poorly Opacified BO</i>
<i>BOO (54.8%)</i>	93.4%	48%	0.6%	2.6%	14.4%	9.8%	64.4%
<i>No BOO (32.8%)</i>	71.2%	28%	4%	0.8%	4.8%	7.2%	31.2%

Conclusion: Our data indicates that clinically relevant radiologic abnormalities in patients with LUTS are common not only in patients with BOO, but also in patients without BOO. Some of these abnormalities, such as large diverticula with stasis, prostatic calculi, and prostatic reflux may contribute to LUTS or influence treatment decisions, especially after prior treatment failure. Therefore, focused radiological assessment of LUT would compliment urodynamic studies in the evaluation of patients with recurrent symptomatic voiding dysfunction who have failed to respond to other modalities of treatment.