Introduction

Voiding dysfunctions is a common but complex condition affecting at least 1 in every 5 adults. Voiding dysfunctions in women are often overlooked and under-treated. Female voiding dysfunction is primarily manifested with slow urinary flow and/or incomplete emptying sensation, and yet, in many cases, storage symptoms may co-exist.

Aims of study

This study analysed women with voiding dysfunction by videourodynamic study (VUDS), in particular, examined the role of bladder neck and the effectiveness of treatment.

Materials and methods

We retrospectively reviewed consecutive women aged ≥18 years, who had undergone video urodynamic study at our institution for investigation of lower urinary tract symptoms from August 1996 to Jan 2014. All patients had at least one voiding symptom (i.e., difficult urination, hesitancy, intermittency, slow stream, straining, and urinary retention) with or without storage or post-micturition symptoms. The age distribution, presence of detrusor overactivity and treatment modalities in patients diagnosed with BND were analyzed.

Results

Compared with normal tracing group, BND patients had significantly lower first sensation of filling, full sensation and voided volume, maximum flow rate (Qmax); but higher post-void residual volume, voiding detrusor pressure, and bladder outlet obstruction index (all p < 0.05).

High pressure BND had a greater bladder outlet obstruction degree but low pressure BND had a lower voiding efficiency (Table 1).

Alpha-blocker improved 62.3% of Qmax whereas transurethral incision of the bladder neck (TUI-BN) improved 63.1% of Qmax in patients who failed medical treatment (p<0.05).

Conclusion

The causes of female voiding dysfunction are heterogeneous. BND comprises 12.3% of women with bladder outlet dysfunction. BND could be high pressure or low pressure in nature. The high pressure BND can cause anatomical BOO, whereas low pressure BND is likely to affect the micturition through inhibitory effect of sympathetic hyperactivity on detrusor contractility. VUDS is the mainstay diagnostic tool to diagnose BND in women. Alpha-blockers and TUI-BN are effective in improving Qmax in BND patients.