

WHAT ARE THE FACTORS THAT CAN SIMPLY ESTIMATE THE THERAPEUTIC EFFECTS OF 5 α REDUCTASE INHIBITORS IN PATIENTS WITH MALE LUTS?

Hypothesis / aims of study

In patients with severe benign prostatic hyperplasia (BPH), the administration of 5 α reductase inhibitors (5ARIs) is recommended, and the effectiveness of its long-term administration has been reported. Therefore, 5ARI is administered long-term in many cases. However, for patients who experience insufficient improvement, long-term pharmacotherapy should be avoided because therapeutic satisfaction cannot be obtained and its cost effectiveness decreases. Can any factor predict the therapeutic effects of a 5ARI before its administration? On the basis of urodynamic study results, the present study examined factors related to therapeutic failure that can be simply evaluated using dutasteride as a 5ARI.

Study design, materials and methods

This open-label single-center prospective study recruited 108 out-patients with untreated BPH, and investigated pre-administration factors that could predict the effects of dutasteride on subjective symptoms and bladder outlet obstruction (BOO) before and 1 year after its administration. The patients received dutasteride 0.5 mg a day for 12 months. Before and 12 months after drug administration, International Prostate Symptom Score (IPSS), Overactive Bladder Symptom Score (OABSS), and the quality of life (QOL) score testing were used for assessing subjective symptoms and QOL. Urodynamic study including cystometrogram, and pressure flow study were conducted to evaluate objective symptoms. As parameters of storage function, first desire to void (FDV), maximum cystometric capacity (MCC), and occurrence of involuntary detrusor contraction were measured, while maximum flow rate (Qmax), detrusor pressure at Qmax (PdetQmax), post-void residual urine (PVR), and bladder outlet obstruction index (BOOI) were assessed as parameters of voiding function.

With regard to subjective symptoms, we defined our patients into 2 groups: patients with an IPSS improvement of 50% or greater as good responders (GR), and those with less than 25% as poor responders (PR). Regarding bladder outlet obstruction, when the improvement ratio of BOOI was <20%, improvement was defined as insufficient, whereas when it was >40%, improvement was defined as excellent.

Results

A total of 102 patients with a mean age 68.9 years and mean prostate volume 58.9mL were included in the analysis. A total of 32 (31.3%) patients showed insufficient IPSSs (PR), while 41 (40.2%) patients showed excellent IPSSs (GR). Factors for which a significant difference was observed before the administration of dutasteride between these 2 groups included the frequency of urinations during the day, Qmax, and intravesical prostatic protrusion (IPP) (14.8 mm versus 11.7 mm). A total of 26 (25.5%) patients had insufficient improvement in BOOI, whereas 48 (47.1%) patients showed excellent improvement in BOOI. Factors for which a significant difference was observed before the administration of dutasteride between these 2 groups included PVR and IPP (17.7 mm versus 10.1 mm). Based on the above results, multivariate analysis was performed on the factors related to the improvements in subjective symptoms and BOO. Consequently, only IPP was a significant factor for predicting therapeutic effects. For patients whose IPP was >15 mm before dutasteride administration, sufficient improvement due to dutasteride administration tend to be not observed.

Concluding message

Although dutasteride was shown to be effective in patients with LUTS due to BPH not only in terms of subjective symptoms but also BOO, sufficient improvement was not observed in approximately 30% of these patients. Because pre-administration IPP was significantly large in poor responder, compared with in good responder, IPP was considered a useful factor to predict the therapeutic effects of 5ARIs.

References

1. none

Disclosures

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