Impact of alfa- and beta-blocker, carvedilol on the long-term clinical outcomes in benign prostatic hypertrophy patients with palpitation

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**Introduction:** Benign prostatic hypertrophy (BPH) is associated with autonomic dysfunction. Purpose: There was limited data about the impact of alfa- and beta-blocker (BB), Carvedilol on the long-term clinical outcomes in BPH patients with palpitation.

**Methods:** A total of 448 patients with BPH were consecutively enrolled (mean age; 69.2±10.9 years) from 2015 to 2018. Inclusion criteria included patients taking BB in patients with BPH. We analyzed arrhythmic events and the voiding pattern, urinary symptoms.

**Result:** Among 448 patients taking BB in patients with BPH, Carvedilol group (219 patients; 48.9%) and other BB group (bisoprolol, 183 patients, 80%; nebivolol, 45 patients, 20%) were enrolled. There was no difference of the baseline characteristics. During a mean follow-up of 29.3±12.4 months, there was no difference of total IPSS score in both group. However, there were increased voiding volume and maximal voiding velocity in the Carvedilol group. And there was higher incidence of additive prescription of alfa-blocker in the other BB group (P=0.004). There was higher event-free survivals from urologic events associated with BPH (P=0.030) in the Carvedilol group and the lower use of Carvedilol (P<0.001), CHF (P<0.001), and renal disease (P=0.046) were independent risk factors for arrhythmic events in multivariate analysis.

**Conclusion:** Although there was no difference of total IPSS score in both group, Carvedilolol can improve the voiding volume and maximal voiding velocity, and decrease the incidence of urologic events for BPH and the use of Carvedilol was associated with lower arrhythmic events in the long-term follow up.