1014

Kim S D[1], Park K K[1], Kim Y J[1], Huh J[1], Sohn D W[2]
1. *Department of Urology, School of Medicine, Jeju National University,* ***2.*** *Department of Urology, School of Medicine, The Catholic University of Korea*

WE RECOMMEND A USE OF PHOTOSELETIVE VAPORIZATION OF THE PROSTATE WITH 180W XPS GREENLIGHT LASER AS THE TREATMENT OF BENIGN PROSTATIC HYPERPLASIA AT HIGH RISK PATIENTS ON ORAL ANTICOAGULANTS.

Hypothesis / aims of study
Increasing numbers of patients with old age are taking oral anticoagulants for medical comorbidity and they are often denied surgery for symptomatic benign prostatic hyperplasia (BPH) at high risk for bleeding due to these medicines. Using photoselective vaporization of the prostate (PVP) with 180W XPS GreenLight laser of 3rd generation, patients at high risk may more safely undergo surgical treatment owing to better efficacy of coagulation and supply of powerful energy. We evaluated perioperative complications and functional outcomes after PVP with 180W XPS laser in BPH in high risk patients on oral anticoagulants.

Study design, materials and methods
Between Jan 2014 and Nov 2016, 41 patients of BPH on oral anticoagulants were enrolled at this study. They underwent PVP with 180W XPS laser, and followed up for 3 months. Data were collected on demographics, International Prostatic Symptom Score (IPSS), maximum flow rate (Qmax), post voiding residual urine (PVR), serum hemoglobin, serum sodium, transfusion, comorbidities, complications.

Results
The mean age was 72.8 years (range, 56-85) and mean baseline prostate volume was 55.6ml (31-125). Of patient 30 (73.1%) were on acetylsalicylic acid, 19 (46.3%) were on warfarin, 9 (21.3%) were on clopidogrel and 6 (14.6%) were on 2 or more anticoagulants. Median American Society of Anesthesiology score was 3. Mean ± SD operative time was 88.6 ± 30.5 minutes and mean ± SD energy use was 220 ± 148kJ. The mean ± SD decrease of postoperative hemoglobin was 0.8 ± 0.2g/dL. Mean ± SD catheterization time and hospital day were 2.3 ± 1.2 days, 3.5 ± 2.8 days, respectively. There were no major complications intraoperatively or perioperatively, and one patient (2.4%) required blood transfusion with two pack of RBC without unstable hemodynamic state. Early complications (<1 month) were persistent hematuria required bladder irrigation of 12 patients (29.2%), recatheterization of 5 patients (12.1%), urinary tract infection of 3 patients (7.3%), reoperation due to urinary retention of one patient (2.4%). After 3 months, significant improvements in IPSS, Qmax, IPSS were similar to previously reported studies of BPH with patients not taking oral anticoagulants.

Interpretation of results
For this series of patients at high risk and long-term anticoagulant therapy, photoselective vaporization of the prostate (PVP) with 180W XPS GreenLight laser was effective, and few complications and significant durable clinical improvement were seen.

Concluding message
These data demonstrated that PVP operation with 180W XPS laser can be performed safely and effectively as the treatment of benign prostatic hyperplasia at high risk patients, even those who cannot stop oral anticoagulant requiring surgery.

References
1. TaoW, Xue B, Zang Y, et al. The application of 120-W highperformance system GreenLight laser vaporization of the prostate in high-risk patients. Lasers Med Sci 2013;28:1151–1157.
2. Becker B, Knipper S, Gross AJ, Netsch C. Current Management in Transurethral Therapy of Benign Prostatic Obstruction in Patients on Oral Anticoagulation: A Worldwide Questionnaire. J Endourol. 2017;31:163-168.

Disclosures
Funding: No potential conflict of interest relevant to this article was reported. **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** the Catholic University Ethics Committee (CUMC-2014-0063-01) **Helsinki:** Yes **Informed Consent:** Yes