

## **Safety and Efficacy of TUR-IS-Vaporization in Men on Anticoagulant Drugs: A Preliminary Experience**

**Introduction and Objective:** Trans Urethral Resection of Prostate (TURP) represents the gold standard of LUTS treatment for Bladder Outlet Obstruction (BOO) caused by Benign Prostate Hypertrophy (BPH). It is proved that the use of new devices, working with saline solution, significantly reduced the bleeding risk. Since the rate of patients receiving anticoagulant therapies for secondary prevention increased significantly, and the interruption is associated with an increased risk of thromboembolic events, the aim of our study is to critically review the clinical efficacy and safety of TUR-IS Plasma Vaporization (TUR-IS-V) technique, which uses the Olympus UES-40 Surgmaster generator and button va-po-resection electrode in patients affected by severe LUTs for BPH receiving therapy for high cardiovascular risk.

**Materials and Methods:** We present preliminary data related to 10 patients, affected by severe LUTS for BPH, no therapy responders, operated between June 2010 and May 2011, with a medium follow-up of 12 mo. (19-7 mo). The average age of the patients was 72 yrs (range 65-86 yrs). All of them presented significant cardiovascular co-morbidity (prior stroke or systemic embolism, coronary artery disease or peripheral vascular disease) on chronic oral anticoagulant therapy. Six out of 10 patients had prior cardiac surgery, 2/10 had atrial fibrillation, and finally 2/10 had prior thrombosis diseases. In this cohort, 4/10 patients were carriers of the catheters for prior UAR with previous unsuccessful attempts of catheter removal. Patient's evaluation at baseline included IPSS, QoL, maximum peak flow rate, post-voiding volume (PVR), prostate and adenoma dimension rate by TRUS. All patients underwent to standard endoscopic Button TUR-IS-V. We evaluated Hgb rate value before and after surgery, operating time, catheter duration, transfusions rate, hospital stay and complications. The post-operative follow-up examinations were performed every 3 months and included IPSS, QoL, urine culture, maximum peak flow rate and post-voiding residual volume.

**Results:** All patients have completed at least 7 mo. follow-up. We observed, a statistically significant increment of Qmax ( $p<0,001$ ) baseline, IPSS ( $p<0,01$ ) and QOL ( $p<0,01$ ). In all four patients with pre-operative bladder catheter, we assisted to revival of natural urination. Mean post-surgical hospitalization and catheterization time were 36 and 12 hours respectively. Just in three cases, post surgical Hg value decreased more than 2 point but no patients were submitted to transfusions. We registered no cases of cardiovascular events peri and post-operative. Early Adverse Events (EAs), in the first month, include dysuria, urgency, persisting haematuria and AUR with re-catheterization for clots in 1 case. We observed a single case of bladder neck contracture after 4 months, which required a second look endoscopic surgery.

**Conclusions:** In this preliminary study, the use of Button TUR-IS Vaporization, also in patients on chronic anticoagulants oral therapy for high risk of cardiovascular diseases, shows a significant improvement of Qmax and QoL, and induces significant reduction of PVR, IPSS. Furthermore AEs were the same as expected on the general population.