

Discussion: Simple prostatectomy represents a safe and effective procedure in the treatment of large adenomas. Although RCTs are needed before reaching definitive conclusions, Laparoscopic and robotic surgical approach seems to be less invasive with similar trifecta outcomes when compared to open procedures.

SC23 Is prostate artery embolization (PAE) the future for the treatment of lower urinary tract symptoms secondary to benign prostatic hypertrophy?

S. Secco, F. Barbosa, P. Brambillasca, D. Di Trapani, M. Barbieri, C. Migliorisi, G. Napoli, R. Vercelli, A. Olivero, M. Solcia, G. Petralia, E. Strada, A. Rampolidi, A. Bocciardi, A. Galfano (*Milano*)

Aim of the study: Several medical, mini-invasive, endoscopic or surgical options are now available for LUTS BPH-related. Among these, prostatic artery embolization (PAE) is an endovascular approach that is gaining popularity thanks to some advantages (performance under local anesthesia, fast patient discharge, no pausing of anticoagulant drugs, ejaculation maintenance). We have analyzed the results one of the largest single Centre series in the world, achieved from patients treated in our hospital with PAE.

Materials and methods: Prospective study (November 2013–April 2018). All patients had a mpMRI (or CT scan) study and a multidisciplinary team assessment to confirm indication. Inclusion criteria: patients with special risks regarding surgery/anesthesia considered unfit for surgery; patients with indwelling bladder catheter (IBC); patients refractory with BPH medication; sexually active men (keen to avoid risk of retrograde ejaculation); patients with recurrent bleeding caused by BPH. PAE is performed using hydrophilic microcatheters and polyvinyl alcohol particles.

Results: 278 patients were treated, 118(42.4%) had an IBC. Median age was 73(53–93), and median Charlson CI was 5,09(2–14). Mean operation time and mean dose were 140,58 min(Std Dev: 39,5) and 717,4(Std Dev: 379,8) Gy_{cm}², respectively. PAE was technically successful(bilateral) in 192(81,8%) patients; PAE was not possible in 5(2.1%) because of vascular issues. All patients were discharged the day after the procedure. Mean follow up was 19(range 6–54) months. No intra or peri-operative time complications occurred. Among all patients, 197(70.8%) complained urethral burning in the first 48 hours after the procedure, 2(0.7%) rectal discomfort. Among no IBC patients, 4(1.4%) of them reported emospermia, spontaneously resolved after 2 months; no one reported erectile dysfunction; 82 (29.5%) had urgency e frequency for 10 days. Considering IBC patients, complete follow-up was achieved for 88(31.6%); 15 days after PAE, catheter was successfully removed in 67(76.1%); 12(4.3%) had UTI in the first month after catheter removal. A significant improvement in the observed endpoints compared to the baseline values was seen: the IPSS improved by –7.5 points, the QoL score (assessed with a visual scale) by –3.1 points, the maximum urine flow (Q_{max}) by 5.3 ml/s, postvoid residual volume by –66.9 ml and the PSA value by – 2.35 ng/ml.

Discussion: PAE is an interesting endovascular procedure generally performed by interventional radiologist; is mandatory that urologists select and follow the patients before and after procedure. According to our experience, PAE results feasible, safe and with high success rate and improvements in quality of life, without sexual side effects. PAE can be useful both for catheter removal and in selected patient keen to preserve ejaculation, with no benefit from medical treatment or unfit for standard surgery. Comparative studies between PAE and TURP are on going; moreover, additional study data regarding the long-term efficacy of PAE can certainly soon be expected.

SC24 Waterablation of the prostate for the treatment of lower urinary tract symptoms in men with benign prostatic hyperplasia: First Italian multicenter experience after 1-month of follow-up

G. Russo, E. Di Trapani, G. Musi, G. Cozzi, O. De Cobelli, M. Rinaldi, P. Minafra, G. De Rienzo, M. Spilotros, S. Cimino, P. Verze, V. Mirone, V. Morgera, L. Bianchi, M. Borghesi, M. Guerra, R. Schiavina, E. Brunocilla, M. Salvi, A. Tuccio, M. Gacci, M. Carini, A. Cocci (*Catania*)

Aim of the study: Transurethral resection of the prostate (TURP) is considered the gold standard for minimally invasive treatment of lower urinary tract symptoms due to benign prostate enlargement of <80 ml. However, new technologies are facing and waterablation is gaining new interest in treating lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH). The Aquabeam system uses high-velocity water jets to robotically ablate prostatic tissue under real-time ultrasound guidance, with hemostasis achieved via a catheter balloon tamponade and a novel traction device or electrocautery.

Materials and methods: Waterablation was performed in 36 patients with symptomatic BPH in a multicenter prospective study. Baseline, peri-operative and 1-month urinary function data were collected, including uroflowmetry, international prostate symptom score (IPSS), IPSS-Quality of life (IPSS-QoL) and post void residual (PVR).

Results: Mean age was 67.5 (SD 1.83), baseline mean IPSS was 20.4 (SD 1.15), baseline mean peak flow was 9.05 (SD 0.65) and mean prostate volume was 85.9 cc (SD 6.08). After 1 month of surgery, mean change of peak flow was +7.94 ml/s (SD 1.51)($p < 0.01$), of IPSS was –10.2 (SD 2.06)($p < 0.01$), of PVR –80.2 cc (SD 26.26) ($p < 0.01$) and IPSS-QoL was –2 (SD 4.11)($p < 0.01$). Median of catheterization (days) was 3.0 (SD 3.1) and median of hematuria 1.0 (SD 1.33) while the rate of post-operative antegrade ejaculation was 80.0% (30/6).

Discussion: We showed the first Italian multicenter experience for Waterablation to treat LUTS/BPH. Although the low number of treated patients and the low learning curve among center, the procedure was demonstrated to be safe and effective. Interesting, the rate of antegrade ejaculation is higher than other procedures reported in literature

SC25 Complications after Waterablation of the prostate for the treatment of lower urinary tract symptoms in men with benign prostatic hyperplasia

A. Cocci, M. Salvi, E. di Trapani, G. Musi, G. Cozzi, O. De Cobelli, M. Rinaldi, P. Minafra, G. De Rienzo, S. Cimino, P. Verze, V. Mirone, V. Morgera, G. Cacciamani, L. Bianchi, G. Cito, M. Borghesi, M. Guerra, R. Schiavina, E. Brunocilla, M. Spilotros, A. Tuccio, M. Gacci, M. Carini, G. Russo (*Firenze*)

Aim of the study: transurethral resection of the prostate (TURP) is considered the gold standard for minimally invasive treatment of lower urinary tract symptoms due to benign prostate enlargement of <80 ml. However, new technologies are facing and waterablation is gaining new interest in treating lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH). The Aquabeam system uses high-velocity water jets to robotically ablate prostatic tissue under real-time ultrasound guidance, with hemostasis achieved via a catheter balloon tamponade and a novel traction device or electrocautery. The present abstract is focus on the complications of this technique.

Materials and methods: Waterablation was performed in 36 patients with symptomatic BPH in a multicenter prospective study. Baseline, peri-operative and 1-month urinary function data were collected, including uroflowmetry, international prostate symptom score (IPSS), IPSS-Quality of life (IPS-QoL) and post void residual (PVR). The primary end point was evaluated as complication rates graded by Clavien-Dindo score (CDS).

Results: Mean age was 67.5 (SD 1.83) years, baseline mean IPSS was 20.4 (SD 1.15), baseline mean peak flow was 9.05 (SD 0.65) and mean prostate volume was 85.9 cc (SD 6.08). Complications in 1-day post-operative were none in 25 subjects (67.74%), grade 1 in 5 (16.13%), grade 2 in 5 (12.90%) and grade 3 in 1 patient (3.23%). In particular, we

found haematuria in 6 patients (16.67%) and fever in 3 (8.33%) and one urosepsis (2.78%). At the removal of catheter, we found 1 case of stress urinary incontinence (2.78%) and 3 had acute retention of urine (8.33%). We observed only 1 case of re-intervention (2.78%). At 1 month, we found 5 cases of dysuria (19.23%) and 5 cases of medical therapy prescription (19.23%) (4 cases of alpha-blocker and 1 of duloxetine).

Discussion: The present study is the first multicenter experience for Waterablation to treat LUTS/BPH. The most common complications are haematuria (16.67%) and fever (8.33%). The present study could be an important starting point for the best selection of the patients on this new technique.