

Scientific Session 12

Arterial Embolization:  
Prostate

Monday, April 4, 2016  
3:00 PM – 4:30 PM  
Room: 110

QMax (mL/s)	6.2 ± 2.9	9.9 ± 3.9	14.5 ± 5.1
PSA (ng/mL)	8.3 ± 7.5		2.4 ± 1.5
PV (cm <sup>3</sup> )	112.8 ± 28.4		73.9 ± 19.3

3:10 PM

Abstract No. 110

**A meta-analysis of prostatic artery embolization in the treatment of symptomatic benign prostatic hyperplasia**

M. Kuang<sup>1</sup>, A. Vu<sup>1</sup>, S. Athreya<sup>2</sup>; <sup>1</sup>Michael G. DeGroot School of Medicine, McMaster University, Hamilton, ON; <sup>2</sup>St. Joseph's Healthcare, Hamilton, ON

**Purpose:** To summarize current evidence on outcomes and complications of prostatic artery embolization (PAE) as a treatment for patients with lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH).

**Materials:** A database search of MEDLINE, Embase, Web of Science, and Cochrane Library was performed for published literature up to August 2015 concerning PAE in the treatment of BPH. Inclusion and exclusion criteria were applied by two independent reviewers, and disagreements were resolved by consensus. Peer-reviewed studies concerning PAE with BPH with a sample size >10 and at least one measured parameter were included.

**Results:** The search yielded 193 articles, of which 10 studies representing 788 patients, with a mean age of 66.97 years, were included. Patients had LUTS ranging from moderate to severe. 6 months following the procedure, mean PV was reduced by 30.35 ml (P<0.05), PSA was reduced by 1.66 ml (P=0.11), PVR was reduced by 58.89 ml (P<0.05), Qmax was increased by 5.92 (P<0.05), IPSS was reduced by 12.80 points (P<0.05), QoL was reduced by 2.14 points (P<0.05), and IIEF was reduced by 0.45 points (P=0.46) compared to baseline values. At 12 months, PSA was reduced by 1.96 ml (P<0.05) and IIEF was reduced by 1.13 points (P=0.34) while other outcomes remained statistically significant. Minor complications included rectal bleeding (5.71%), hematuria (4.95%), urinary tract infection (UTI) (4.3%), hematospermia (5.08%), dysuria (4.57%), and post-procedural acute urinary retention (7.60%). Major complications included vesicular artery dissection during catheterization (0.13%), persistent UTI requiring hospitalization (0.13%) and focal bladder wall ischemia (0.13%). All complications were appropriately managed.

**Conclusions:** Review of results at 6 and 12 months following PAE for symptomatic BPH has shown statistically significant improvement in mean PV, PSA, PVR, Qmax, IPSS, and QoL. Few major complications were reported. These findings suggest that PAE is a promising alternative to TURP, however larger randomized-control trials with longer follow-up periods are required to further assess its effectiveness in clinical practice.

3:00 PM

Abstract No. 109

■ **DISTINGUISHED ABSTRACT**

**Prostatic artery embolization for prostates greater than 80 cm<sup>3</sup>: early results from a US trial**

J. Isaacson<sup>1</sup>, H. Yu<sup>1</sup>, M. Raynor<sup>1</sup>, C. Burke<sup>1</sup>; <sup>1</sup>University of North Carolina, Chapel Hill, NC

**Purpose:** To determine if lower urinary tract symptoms (LUTS) secondary to benign prostatic hypertrophy (BPH) can be effectively and safely treated by prostatic artery embolization (PAE) in men with glands 80-150 cm<sup>3</sup>.

**Materials:** Inclusion criteria for enrollment included prostate volume 80-150 cm<sup>3</sup>, severe LUTS secondary to BPH and a low suspicion for prostate cancer. Baseline data included International Prostate Symptom Scoring (IPSS), Quality of Life score (QoL), International Index of Erectile Function (IIEF), maximum urine flow rate (Qmax), post-void residual volume (PVR), serum prostate specific antigen level (PSA) and prostate volume (PV). PAE was performed with 300-500 micron gelatin spheres. 1 and 3 mo follow-up data included IPSS, QoL, IIEF, PVR and Qmax. Cystoscopy and anoscopy were performed at 1 mo follow-up. Technical success was defined as bilateral embolization and clinical success was defined as 25% reduction of IPSS or 1 pt decrease in QoL.

**Results:** Technical success was achieved in 100% (11/11) patients. Clinical success was 82% (9/11) at 1 mo and 88% (7/8) at 3 mo. See accompanying table for longitudinal data. There were only self-limiting minor complications including small access site hematoma (1/11), hematospermia (1/11), urinary retention (1/11) and urinary incontinence (2/11).

**Conclusions:** PAE was safe and effective in this small cohort of men with prostate volume of 80-150 cm<sup>3</sup>.

Mean ± SD	Pre-PAE	1-mo F/U	3-mo F/U
IPSS	24.3 ± 4.3	11.3 ± 7.5	5.6 ± 6.6
QoL	4.8 ± 1	1.6 ± 1.9	0.9 ± 1.3
PVR (mL)	126.4 ± 118.5	59.3 ± 30.7	85.9 ± 62.4