

UTILITY OF THE SNIPER BALLOON OCCLUSION MICROCATETER IN PROSTATE ARTERY EMBOLIZATION: EARLY INSTITUTIONAL EXPERIENCE.

ABSTRACT

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Purpose: To evaluate the role of Sniper Balloon Occlusion Microcatheter (Embolyx, Sunnyvale, CA) in prostate artery embolization (PAE).

Materials and Methods:

The Sniper microcatheter was utilized in 10 patients undergoing PAE for benign prostate hyperplasia or urinary retention between January 2019 through May 2019 with mean age 68.6 (SD 7.8). Bilateral PAE was performed in all patients. The primary endpoint measured was the volume of embolic agent administered after stasis utilizing the inflated balloon occlusion microcatheter. 20cc dilute mixture of 100-300 and 300-500 um Embosphere microspheres (Merit Medical, Jordan, UT) was used in all patients. Baseline International Prostate Symptom Score (IPSS), Quality of Life (QOL) and Sexual Health Inventory for Men (SHIM) scores were obtained, and patients were evaluated at 3- and 6-months post procedure. Adverse events were recorded using the Clavien-Dindo classification.

Results:

Mean total volume of embolic delivered per prostatic artery was 8.9 mL. Mean total volume of embolic delivered after stasis per prostatic artery was 4.4 mL (SD 1.85) (R=4.6 mL [SD 1.58] and L=4.2 mL [SD 2.16]). Mean percentage of additional embolic volume delivered after stasis per prostatic artery was 100.5% (SD 40.9) (R=106.6% [SD 45.1], and L= 94.3% [SD 37.5]).

Mean prostate volume (PV) decreased from 84.3mL at baseline to 59.5mL at 3 months (↓37%, n = 4), (not statistically significant). Mean IPSS improved significantly from 26.5 at baseline to 5.1 at 3 months (decreased 81%, n =8, p<0.001) and to 11.0 at 6 months (decreased 58%, n = 7, p<0.01). Mean QOL improved significantly from 4.9 at baseline to 1.0 at 3 months (decreased 80%, n = 8, p<0.01) and 2.0 at 6 months (decreased 60%, n = 7, p<0.01). SHIM score demonstrated mixed results with a mean of 13.7 at baseline to 13.3 at 3 months and 10.25 at 6 months (not statistically significant). One patient had hematochezia post procedure which was self-limiting (CD grade 1). No other adverse events reported.

Conclusion: Use of the Sniper Balloon Occlusion Microcatheter safely resulted in delivery of higher volumes of embolic agent administered by approximately 100%, as well as significant reduction in IPSS and QOL at 3 and 6 months follow up.