**Background**

- Organ preserving therapies are of particular interest in the treatment of localized prostate cancer (PCa) with a goal of decreasing morbidity while maintaining oncologic control.
- Active surveillance (AS) has emerged as a key strategy for specific patients with favorable and intermediate risk PCa while avoiding overtreatment and associated morbidities of radical therapy.
- This study reports long term oncologic and quality of life outcomes, of patients with low and intermediate risk PCa that underwent subtotal prostate cryoablation (hockey-stick template) in the setting of a single-center clinical trial.

**Methods & Inclusion Criteria**

- We performed a prospective open-label, controlled trial to evaluate the efficacy of subtotal prostate ablation in patients with PCa. Between 8/2009 and 1/2012, 72 men were screened for trial eligibility and 47 underwent confirmatory biopsy, of whom 23 were treated with regional cryoablation.
- All men underwent confirmatory 12-core, extended scheme biopsy using robotic assistance to eliminate user bias, standardize the biopsy across the study’s time course and minimize sampling bias.
- Men were eligible to proceed with regional cryoablation if confirmatory biopsy revealed grade group (GG) 1 or 2 disease in fewer than 50% of unilateral cores and no more than 50% involvement of any single core. Contralateral GG1 with <2mm involvement was also eligible.

**Description of the Hockey-stick template Subtotal Prostate Ablation**

- We utilized the “anterior hockey-stick” ablation strategy. This consists in performing a hemi-ablation of the prostate that includes the index lesion but also ablation of the anterior aspect of the contralateral side of the gland. We favored this approach due to the possibility of unfound PCa existing in the contralateral side of the prostate. This still leaves 25% of the original prostate intact with the intention that the remaining tissue will mitigate possible morbidities of whole-gland ablation.

**Patients Characteristics**

- **Number of positive cores (N, %)**
  - 13 (56.5)
  - 10 (43.5)
- **Contralateral GG1 on diagnostic biopsy**
  - Yes: 3 (13)
  - No: 20 (87)
- **Adverse events (N, %)**
  - Grade I- II: 2 (9)
  - Grade III or above: 1 (4)*

  * patient that required suprapubic tube placement postoperatively due to urinary retention and difficult foley placement.

**Oncological Outcomes**

- Freedom from radical therapy rate was 69%. A total of 12 (52%) patients did not have evidence of disease at time of last follow-up. A single patient had <1mm of in-field tumor with therapy effect (No Gleason grade) on 36-month biopsy.
- New out of field GG1 cancer was discovered on subsequent biopsies in 8 patients and 1 GG2 and GG3 were discovered. Out of all these, 1 patient opted for radiation therapy, 1 patient underwent re-do cryoablation while 7 others continued on AS without subsequent GG increase at the time of last follow-up.

**Functional Outcomes**

- All patients had preserved urinary control with 0% of patients requiring pads for urinary incontinence beyond 6 months.
- Erectile function decline was less than 20% of baseline. IIEF score median decrease from 29 (IQR 19.5-30) at baseline to 18 (IQR 6-22) at 24 months (P<0.13).

**Conclusion**

- Focal (hockey-stick template) cryoaablation of the prostate provides oncologic control to targeted tissue with minimal impact on sexual and urinary function in well selected patients. Further studies are needed to evaluate this ablation template in the MRI-targeted era and higher risk populations.

**Questions/Comments?**

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