

## **Morbidity of Focal therapy in the Treatment of Localized Prostate Cancer**

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**Introduction and objective.** Focal therapy (FT) for prostate cancer seems to be part of a natural evolution in the quest to improve upon the management of early organ-confined disease. To assess the morbidity of the initial experience of FT in a tertiary referral center for radical prostatectomy.

**Methods.** One thousand and one hundred patients with clinically localized prostate cancer were treated at our institution between 2009 and 2011. Among those, 275 patients were considered to have indolent disease defined as: PSA < 10 ng/ml, Gleason sum of 6 or less, clinical stage T2a or less (D'Amico criteria, low risk patients) and unilateral disease with a maximum of 1/3 positive biopsies. One hundred eighty patients were considered for active surveillance and 95 patients underwent focal therapy using High Intensity Focused Ultrasounds, Brachytherapy, Cryotherapy or Phosphodynamic Therapy (PDT). These patients underwent a volume-adjusted saturation biopsy to confirm FT indication. Complications were assessed as described by Clavien and verified up to one month postoperatively. Data was prospectively collected and retrospectively analyzed.

**Results.** Ninety five patients, mean age 62 years (45-75), had a prostate hemiablation by 1 of 4 available energies. Energy subgroups were as follows: HIFU: 20 (21%), Brachytherapy 6 (6%), Cryotherapy 47 (50%) and PDT 22 (23%). Preoperative characteristics were: mean PSA was 6.6 ng/ml (2.4-17.8), Gleason score = (3 + 3) 6, mean prostate volume was 46 cc (20-104). Mean IPSS was 7 (0-22) and mean IIEF5 was 17 (1-25). After treatment, the average rate of PSA at 3, 6 and 12 months were 3.8 ng/ml, 3.5 ng/ml and 3.4 ng/ml, respectively. Overall treatment-related complications were 15% (14/95). Complications were classified as Clavien I: 2 cases, Clavien II: 9 and Clavien III: 4 cases.

**Conclusion.** Focal therapy for highly selected population of prostate cancer is feasible and had acceptable morbidity with only 4% important complications. However, prospective data regarding oncologic and functional outcomes are still needed before considering this approach as therapeutic option.