

PROSTATE CANCER: SALVAGE THERAPY WITH HIGH INTENSITY FOCUSED ULTRASOUND AFTER RADIATION FAILURE

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INTRODUCTION AND OBJECTIVES: To evaluate the efficacy and safety of a salvage therapy by transrectal High Intensity Focused Ultrasound (HIFU) for locally recurrent prostate cancer, after External Beam Radiation Therapy (EBRT) failure.

METHODS: All patients were treated under general or spinal anesthesia, using the Ablatherm™ device (EDAP-TMS). The HIFU treatment was delivered in one or two sessions, at the 3 MHz frequency, and with a 4.5 sec. shot duration. Patients follow-up included sextant biopsies and PSA level measurements. Any positive biopsy or 3 consecutive increases in the PSA level was considered as a failure for the disease free rate (DFR) calculation.

RESULTS: 22 patients were included in this series. The main baseline characteristics before HIFU were: mean age 65 ± 7.6 years, mean prostate volume 21.7 ± 9.61 cc, mean PSA level 9.73 ± 10.94 ng/ml, and all had positive biopsies with Gleason scores ≤ 6 for 4 patients, $=7$ for 4 patients, and ≥ 8 for the remaining 14 patients. It should be noted that the Gleason scores before EBRT were ≤ 6 for 7 patients, $=7$ for 7 patients, ≥ 8 for 6 patients, and unknown for 2 patients. The mean number of treatment session was 1.2/patient. The mean patients follow-up was 10 months (range: 3 to 45 months). After HIFU treatment, 86% of the patients presented negative biopsies (19/22), and 59% had a nadir PSA level < 0.5 ng/ml (13/22), this nadir level being obtained within 3 months. When considering the defined evaluation criterion combining biopsy and PSA results, an overall 62% DFR is observed. The adverse events related to HIFU included 4 cases of grade I grade II incontinence, 2 cases of urethral stenosis, and 1 prostatitis.

CONCLUSION: HIFU appears as a promising treatment option with a curative chance for the patients with local recurrence after EBRT. The incidence of serious side effects after HIFU treatment was lower than the incidence reported after other types of salvage therapy.

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