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Hemi salvage HIFU in unilateral radio-recurrent prostate cancer: A prospective two-centre study

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Objective: To report the oncological and functional outcomes of Hemi Salvage HIFU (HSH) in patients with unilateral prostate cancer (PCa) recurrence following primary radiation therapy (RT).

Material & Methods: Between 2009 and 2012, 48 patients were prospectively enrolled in two European centres. Inclusion criteria were biochemical failure following primary RT, positive magnetic resonance imaging (MRI) and ≥ 1 positive biopsy in only one lobe.

HSH was performed under spinal or general anaesthesia using the Ablatherm® Integrated Imaging device. Patients with obstructive voiding symptoms at the time of treatment underwent an endoscopic bladder neck resection or incision during the same anaesthesia to prevent the risk of post-operative obstruction

Biochemical failure was defined by using Phoenix criteria (prostate specific antigen [PSA] nadir + 2 ng/ml). Functional outcomes were assessed using International prostate symptom score (IPSS). Urinary incontinence was graded according to the Ingelman-Sundberg score using International Continence Society (ICS) questionnaire. European Organization for Research and Treatment (EORTC) quality of life (QoL) questionnaires (QLQ-C-30) and International Index of Erectile Function-5 (IIEF-5 points) were used.

Results: A mean post-HSH PSA nadir of 0.69 ± 0.83 ng/mL was attained. A mean follow-up was 17.1 ± 8.8 months. Disease progression occurred in 16 patients (33.3%). Local recurrence was found in the untreated lobe in 4 patients, and bilaterally in 4 patients. Six patients developed metastases and 2 had rising PSA without local recurrence or radiological proven metastasis. Progression-free survival (PFSR) at 12, 18, and 24 months were 83%, 64%, and 52%, respectively.

No significant changes of IPSS and EORTC-QLQ-30 scores were observed: QLC-30 35.7 ± 8.6 VS 36.8 ± 8.6 ; IPSS: 7.01 ± 5.6 VS 8.6 ± 5.1 .

Thirty-six patients (75%) were pad-free, and 8 patients (16.7 %) required 1 pad a day. Severe incontinence occurred in 4 patients (8,3%).

Erectile function decreases from mean \pm standard deviation (mean) of 11.2 ± 8.6 (7.5) to 7.0 ± 5.8 (5) 12-month follow-up. No patient experienced rectal fistula. Pubovesical fistula has appeared in one patient.

Conclusion: Hemi Salvage HIFU is a feasible therapeutic option in patients with unilateral radio-recurrent PCa that offers limited urinary and rectal morbidity and QoL preservation.