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Abstract

Radioablation for Prostate Cancer Patients: 200 Patients Treatment Results

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Abstract

Objectives: This is an update regarding the treatment results of 200 prostate cancer patients' (PCP) radioablation. The purpose of this study is re-evaluation (after 2 years) of this treatment modality results of low (LR) and intermediate risk (IR) (including T2c) PCP and failure analysis.

Methods: 200 PCP (95 LR, 86 IR, 19 T2c) 53 – 83 y.o. (mean 69) treated between 2011 and 2014. 48% used neoadjuvant ADT. The patients were irradiated every other day with a fraction dose of 7.25 Gy to the total dose 36.25 Gy (5 fractions in 9 days). Fiducials based tracking was performed. The patients were controlled on the treatment completion day, 1, 4, 8 months later and subsequently every 6 months. The PSA concentration, ADT usage, acute and late adverse effects (EORTC/RTOG) and other symptoms were evaluated. FU ranged from 1 to 63.6 months (mean 32.2, median 32.9).

Results: The adverse effects percentage was very low; only 1 month after treatment the percentage of acute urinary reaction exceeded 40%. Only single G3 adverse effects were noted. Over 4 months the median PSA concentration declined from 3.75 to 0.27 ng/ml. 9 (4.5%) failures were noted, in the comparison to 0.5% (1 patient) 2 years ago. 3 patients had nodal and 1 bone dissemination, 1 nodal metastases and local relapse, 2 local relapses and 2 biochemical failures. 4 patients with failures were re-treated with salvage radioablation. More failures were noted among IR and patients without neoadjuvant ADT. No failure in the T2c group was found. Median time to failure was 32.4 months. Cox analysis revealed that the failure risk increases with the value of maximal PSA before treatment.

Conclusions: 1. CK based radioablation of LR and IR PCP is a safe and highly effective treatment modality.

2. The main prognostic factor of failure after this treatment is probably the maximal PSA concentration before treatment.

3. The neoadjuvant ADT in IR group should be considered.

4. The lack of failures in the T2c group enables us to suggest that even more locally advanced

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patients (T3) with low PSA and maximal Gleason 3+4 could be treated with this modality.