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Abstract

Stereotactic Radiotherapy as a Boost after External Beam Radiotherapy for High Risk Prostate Cancer Patients

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Abstract

Objectives: It has been proven the effect of HDR brachytherapy after external radiation in high risk prostate cancer patients. Stereotactic body radiotherapy as a less invasive method has similar dosimetric results with HDR brachytherapy in different studies. The aim of this study is to evaluate the PSA response, acute side effects and quality of life of patients who had undergone SRS as a boost after external RT.

Methods: A total of 34 patients diagnosed with high risk prostate cancer between 2014-2015 treated with SRS boost to prostate and proximal seminal vesicles (21 Gy in 3 fractions) combined with whole pelvis RT (50 Gy in 25 fractions). Biochemical control has been evaluated with PSA levels before and after treatment, acute adverse events with RTOG grading scale and quality of life with EPIC scoring system.

Results: The mean follow-up of 34 high risk prostate cancer patients was 23.9 months (range 16.8-27.6 months). The mean initial PSA level was 22.4 ng/mL. None of patients has experienced biochemical or clinical relaps of disease. Grade 2 or higher acute GI and GU toxicity was observed 14% and 29% respectively. None of patients has developed grade 3-4 late toxicity. Grade 2 late GI and GU toxicity occurred in 17.6% and 8% of patients. After the first year after treatment, GU and GI scores reduced averege of 20% and 17.6% in the EPIC quality of life test.

Conclusions: SRS boost treatment after whole pelvis irradiation with IMRT has been used with a good biochemical control and acceptable toxicity in high risk prostate cancer patients. Larger randomised trials and and their long term results must be followed.

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