

EP-1539 Early experience and quality of life in SBRT prostate cancer boost of 9 Gy in a phase II trial.

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Purpose or Objective

Extracranial stereotactic body radiation therapy (SBRT) allows delivering high doses per fraction with high accuracy to the prostatic gland in a low number of fractions. Dose escalation in normofractionated radiation prostate cancer trials showed an increased toxicity. In order to evaluate the feasibility and toxicity of a regimen of a single dose hypofractionated prostate stereotactic boost a phase II study was undertaken. Self-reported quality of life (QoL) measures were also obtained in order to better define the possible deleterious effect of treatment.

Material and Methods

Patients included were diagnosed of prostate cancer with T3aN0M0 Gleason score 8 or less (N+risk<25%) and IPSS 0-12. Hormonal-therapy was prescribed according to risk classification. Image Guided RT with Cone Beam CT was mandatory. Dose SBRT was delivered at a prescribed planning target volume (PTV) 9 Gy after 60 Gy 2 Gy per fraction in 30 days, using with RapidArc VMAT, with 6 MV FFF photons. Equivalence of dose at 2 Gy per fraction, using Linear Quadratic Model is round 87Gy. RTOG-EORTC and CTCAE v4.0 morbidity scores were used to assess toxicities. Health-related quality of life questionnaire was administered centrally by telephone interview before treatment and during follow-up (at 3, 6 and 12 months). Study was planned following a Simon's 2-stage design. Due to a low recruitment rate firsts 22 evaluable patients were studied.

Results

First's 22 patients included were analyzed. Mean age was 69.6 years old. Median follow-up was 9 months (2-50) with more than 60% having at least 6 months of follow-up. According to D'Amico risk classification for trial and inclusion criteria all of them were high risk. All patients completed the treatment as programmed with good tolerance. No toxicity greater than grade 2 was observed. EPIC urinary values were 81.26 and 80.49 at 6 and 12 months respectively. EPIC hormonal was 63.83 and 64.09 at 6 and 12 months respectively. EPIC bowel values for these points in time were 93.30 and 92.50. Non PSA relapse was seeing during this short follow-up. Acute GI grade 2 toxicities were 9.2% for a week after treatment. At the 1st month GI Grade 2 toxicity showed the same percentage. At the 3rd month GI Grade 2 was reduced to 4.5%. Acute GU grade 2 toxicity was 31.8%. At the 1st month GU Grade 2 toxicity decrease to 9.1%. One patient showed late GU Grade 2 at 6 months.

Conclusion

SBRT regime of 9 Gy to the prostate after normofractionated 60 Gy for high risk prostate cancer is feasible and well tolerated in selected patients. Decline in QoL values are seen EPIC hormonal QLQ measures are related to prolonged hormonal treatment in high-risk patients. Long-term follow-up is needed for assessment