Radiotherapy in Prostate Cancer Patients With Pelvic Lymphocele After Surgery: Clinical and Dosimetric Data of 30 Patients.


Abstract

INTRODUCTION: The purpose of the study was to evaluate the feasibility of irradiation after prostatectomy in the presence of asymptomatic pelvic lymphocele.

METHODS: The inclusion criteria for this study were: (1) patients referred for postoperative (adjuvant or salvage) intensity modulated radiotherapy (IMRT; 66-69 Gy in 30 fractions); (2) detection of postoperative pelvic lymphocele at the simulation computed tomography [CT] scan; (3) no clinical symptoms; and (4) written informed consent. Radiotherapy toxicity and occurrence of symptoms or complications of lymphocele were analyzed. Dosimetric data (IMRT plans) and the modification of lymphocele volume during radiotherapy (cone beam CT [CBCT] scan) were evaluated.

RESULTS: Between January 2011 and July 2013, in 30 of 308 patients (10%) treated with radiotherapy after prostatectomy, pelvic lymphocele was detected on the simulation CT. The median lymphocele volume was 47 cm³ (range, 6-467.3 cm³). Lymphocele was not included in planning target volume (PTV) in 8 cases (27%). Maximum dose to lymphocele was 57 Gy (range, 5.7-73.3 Gy). Radiotherapy was well tolerated. In all but 2 patients, lymphoceles remained asymptomatic. Lymphocele drainage—because of symptom occurrence—had to be performed in 2 patients during IMRT and in one patient, 7 weeks after IMRT. CBCT at the end of IMRT showed reduction in lymphocele volume and position compared with the initial data (median reduction of 37%), more pronounced in lymphoceles included in PTV.

CONCLUSION: Radiotherapy after prostatectomy in the presence of pelvic asymptomatic lymphocele is feasible with acceptable acute and late toxicity. The volume of lymphoceles decreased during radiotherapy and this phenomenon might require intermediate radiotherapy plan evaluation.

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KEYWORDS: Adjuvant radiotherapy; Lymphocele; Prostatectomy; Salvage radiotherapy; Toxicity

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