

ACCELERATED HYPERFRACTIONATED RADIOTHERAPY FOR CERVICAL CANCER: MULTI-INSTITUTIONAL PROSPECTIVE STUDY OF FORUM FOR NUCLEAR COOPERATION IN ASIA AMONG EIGHT ASIAN COUNTRIES

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Purpose: To evaluate the toxicity and efficacy of accelerated hyperfractionated radiotherapy (RT) for locally advanced cervical cancer.

Methods and Materials: A multi-institutional prospective single-arm study was conducted among eight Asian countries. Between 1999 and 2002, 120 patients (64 with Stage IIB and 56 with Stage IIIB) with squamous cell carcinoma of the cervix were treated with accelerated hyperfractionated RT. External beam RT consisted of 30 Gy to the whole pelvis, 1.5 Gy/fraction twice daily, followed by 20 Gy of pelvic RT with central shielding at a dose of 2-Gy fractions daily. A small bowel displacement device was used with the patient in the prone position. In addition to central shielding RT, intracavitary brachytherapy was started. Acute and late morbidities were graded according to the Radiation Therapy Oncology Group and Radiation Therapy Oncology Group/European Organization for Research and Treatment of Cancer criteria.

Results: The median overall treatment time was 35 days. The median follow-up time for surviving patients was 4.7 years. The 5-year pelvic control and overall survival rate for all patients was 84% and 70%, respectively. The 5-year pelvic control and overall survival rate was 78% and 69% for tumors ≥ 6 cm in diameter, respectively. No treatment-related death occurred. Grade 3-4 late toxicities of the small intestine, large intestine, and bladder were observed in 1, 1, and 2 patients, respectively. The 5-year actuarial rate of Grade 3-4 late toxicity at any site was 5%.

Conclusion: The results of our study have shown that accelerated hyperfractionated RT achieved sufficient pelvic control and survival without increasing severe toxicity. This treatment could be feasible in those Asian countries where chemoradiotherapy is not available. © 2008 Elsevier Inc.

Radiotherapy, Accelerated hyperfractionation, Cervical cancer, Developing country, Overall treatment time.

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