

Postoperative accelerated radiotherapy with cytoprotection followed by three-dimensional conformal boost in patients with early endometrial/cervical cancer

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ABSTRACT

Aims and background. Adjuvant external beam radiotherapy is highly recommended for uterine carcinomas invading beyond the inner half of the myometrium or cervical stage IIa carcinomas. The addition of a booster intracavitary dose is widely used.

Methods. We assessed the feasibility and toxicity of a hypofractionated accelerated conformal radiotherapy scheme (2.7 Gy per fraction, for 14 consecutive fractions to the pelvis) supported with the cytoprotective agent amifostine (HypoARC). The amifostine dose was individualized (500-1000 mg daily subcutaneously). A booster dose of radiation was given to the vagina and stump using a 6-field 3D-conformal technique (3 x 4 Gy or 4 x 3 Gy) instead of intracavitary radiotherapy.

Results. Grade 2 diarrhea appeared in 9/25 (36%) and grade 1 cystitis in 7/25 (28%) cases. Analysis according to the amifostine dose level clearly showed reduced toxicity in patients receiving a daily dose of 750-1000 mg ($P < 0.009$). Within a median follow-up of 31 months (range, 11-52), there was only one case with grade 2 colitis (the patient had received no amifostine). None of the patients treated has relapsed locally or to distant organs within a median of 31 months of follow-up.

Conclusions. It is concluded that HypoARC followed by 3D-conformal booster dose to the vagina is feasible and convenient for patients and for busy radiotherapy departments, as it reduces the overall time by 50%. When supported by high-dose daily amifostine, it has an impressively low rate of early and late radiation toxicity.

Key words: acceleration, conformal boost, endometrial cancer, hypofractionation.

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