ABSTRACT

AIM OF THE STUDY

To evaluate the feasibility and efficacy of concomitant boost using 3D-CRT in patients with locally advanced cervical cancer.

MATERIALS AND METHODS

This is a prospective study of 29 patients with locally advanced FIGO Stage III.B who were treated with Concomitant boost using conformal technique. External beam radiotherapy TD 49.4 Gy was delivered to the whole pelvis(apart from the primary GTV) along with a concomitant boost to the primary GTV TD 54.6 Gy concurrent with weekly CDDP (40mg/m^2) followed by intracavitary brachytherapy. Treatment planning was done with forward planning conformal therapy using field in field technique based on the recommendations of ICRU 83. Treatment related morbidity was assessed based on the CTCAE ver 4.0 and RTOG grading of acute toxicity. A repeat CT and re plan was done at 36 Gy. A volumetric assessment of tumour shrinkage was assessed based on RECIST criteria and clinical response was assessed at 30 Gy, 50 Gy and at follow up.

RESULTS

Among 29 patients who received concomitant boost radiotherapy, 18 patients (62.06%) tolerated radiotherapy well without radiation related morbidity. Grade I/II proctitis was seen in 5 patients (17.2%). 1 patient (3.4%) developed Grade II Nausea and vomiting. 2 patients (6.89%) developed Grade I skin reaction and 3 patients (10.3%) developed Grade I Diarrhea. Chemotherapy was delivered to 18 patients of whom only 8 patients (44.4%) completed the complete course of chemotherapy.

Among the patients who received chemotherapy, 5 patients (27.7%) tolerated chemo well without any acute morbidity and 3 patients developed Grade III acute morbidity which required radiotherapy to be pended. 6 patients (33.3%) developed Grade I/II CINV. Grade I/II neutropenia was seen in 2 patients (11.1%) and Grade III Neutropenia was seen in 2 patients (11.1%). 7 patients (38.8%) developed Grade I/II Hypokalemia,. 1 patient (5.5%) developed Grade III Hyponatremia and 1 patient (5.5%) developed Grade 1 Hyponatremia. In this analysis, 1 patient (5.5%) had Cisplatin induced Sensory neural hearing loss and 1 patient (5.5%) had Hypomagnesemia. 11 Patients (37.9%) had treatment breaks of more than 10 days of whom 9 patients received chemotherapy but none of the treatment breaks were related to toxicity. After completion of treatment, patients were reassessed after 6 weeks. 21 patients (72.41%) had a complete response and 8 patients (27.5%) had residual or progressive disease. All 8 patients had local failure, of which 2 patients also had distant metastasis (para-aortic node / SCL node).

CONCLUSION

Concomitant boost using conformal technique is feasible in locally advanced cervical cancer with acceptable toxicity profile. The patients enrolled in this study were locally advanced Stage III.B with bulky disease. Although the local response rates with concomitant boost appears to be satisfactory, long term follow up and further randomized studies with standard chemoradiation is necessary before coming to any conclusion.

Key words : Concomitant boost, Stage III.B, Conformal technique, Feasibility,