Abstract

To determine the impact of HIV infection on acute morbidity and pelvic tumor control following external beam radiotherapy (EBRT) for cervical cancer. METHOD: 218 patients receiving EBRT who also had HIV testing after informed consent was obtained were evaluated. Acute treatment toxicity was documented weekly during treatment and 1 month post-EBRT. Pelvic tumor control was documented at 4 and 7 months post-EBRT. Clinicians were blinded for HIV results. RESULTS: About 20% of the patients were HIV-positive. Overall, 53.4% of the patients had radiation-related acute toxicity (grade 3-4). HIV infection was associated with a 7-fold higher risk of multisystem toxicity: skin, gastrointestinal tract (GIT) and genitourinary tract (GUT) systems. It was also an independent risk factor for treatment interruptions (adjusted relative risk 2.2). About 19% of the patients had residual tumor at 4 and 7 months post-EBRT. HIV infection was independently and significantly associated with 6-fold higher risk of residual tumor post-EBRT. The hazard ratio of having residual tumor after initial EBRT was 3.1-times larger for HIV-positive than for HIV-negative patients ($P = 0.014$). CONCLUSION: HIV is associated with increased risk of multisystem radiation-related toxicity; treatment interruptions and pelvic failure (residual tumor) following EBRT. HIV infection is an adverse prognostic factor for outcome of cervical cancer treatment