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Purpose or Objective
To examine factors associated with treatment toxicities for cervical cancer patients, with/without HIV infection, who initiated radiation therapy (RT) or chemoradiation therapy (CRT) in a limited-resource setting.
Materials and Methods
Between April 2013 and November 2020, women with locally advanced cervical cancer, with/without HIV infection, initiating RT/CRT in Botswana were prospectively enrolled in an observational cohort study. We evaluated treatment received and the following grade 2 or higher (grade ≥ 2) toxicities during treatment: renal, anemia, neutrophil count, white blood cell count (WBC), albumin, GI, GU, vaginal/pelvic, and dermatitis. Association of antiretroviral therapies (ART) with toxicities were analyzed using logistic regression modeling.
Results
Of 1,034 women treated for cervical cancer, we included the 952 women treated with RT/CRT. Of those, 69% of patients were HIV-infected with median CD4 count cells/mm^3 of 420,14% had detectable viral load, 94% were on ARTs. There was no difference in treatment received in the HIV-infected vs. uninfected groups in terms of RT dose and chemotherapy cycles.57% patients initiated curative RT/CRT. Grade ≥ 2 toxicities were as follows: 11% (n=52/459) renal; 48% (n=222/459) anemia; 32% (n=145/459) with neutrophil count; 64% (n=294/458) WBC; 28% (n=87/308) albumin; 5% (n=20/437) GI; 1% (n=3/411) GU; 11% (n=48/425) vaginal/pelvic; 48% (n=204/421) dermatitis. Significant differences in toxicities grade ≥ 2 were observed by HIV status for anemia (58% in HIV-infected vs. 14% in HIV-uninfected, p=0.005), neutrophil count (75% in HIV-infected vs. 22% in HIV-uninfected, p=0.054), and WBC (71% in HIV-infected vs. 22% in HIV-uninfected, p=0.036). Rates of the following grade ≥ 2 toxicities were different between patients receiving CRT vs. RT alone: renal (71% in CRT vs. 31% in RT, p=0.026); anemia (73% in CRT vs. 26% in RT, p<0.001); neutrophil count (98% in CRT vs. 3% in RT, p<0.001); WBC (94% in CRT vs. 6% in RT, p<0.001); albumin (21% in CRT vs. 47% in RT, p<0.001). In HIV-infected, associations with toxicities grade ≥ 2 were observed between renal and receipt of tenofovir (OR=2.43, p=0.018); neutrophil count and receipt of azidothymidine (AZT) (OR=2.60, p=0.0001); WBC and receipt of AZT (OR=2.04, p=0.005); GI and protease inhibitors (OR=12.197, p=0.042).
Conclusion
In this cohort of women with locally advanced cervical cancer in Botswana, who predominantly have well-managed HIV infection, HIV-infected/uninfected received similar treatments. Patients with/without HIV infection tolerated treatment similarly except for differences in bone marrow toxicities. Patients receiving CRT were more likely to have renal and bone marrow toxicities compared to patients receiving RT alone.

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PO-1316 Stereotactic radiotherapy in recurrent prostate cancer after postoperative or definitive irradiation

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Purpose or Objective
After definitive or postoperative radiotherapy (RT), treatment strategies available for local relapse include re-irradiation (through external beam RT or brachytherapy), high-intensity focused ultrasound and cryotherapy . In 2017, we published a retrospective analysis reporting clinical outcomes of a monocentric cohort of patients treated with stereotactic re-irradiation through cyberknife R robotic system in our department (re-SBRT), showing promising results in terms of biochemical response and safety of this technique. Here we present the updated results after 4 years of median follow up.
Materials and Methods
Data from 50 patients consecutively treated at our institution from June 2012 to February 2016 were retrospectively reviewed. All patients were affected by biochemical relapse defined by European Urology Association criteria, with evidence of intraprostatic lesion or prostate bed macroscopic recurrence detected by 18F-choline positron emission tomography and magnetic resonance imaging. Metastatic or regional nodal disease was excluded by imaging, and all patients were previously treated with external beam radiotherapy to prostate or prostate bed. All patients underwent re-SBRT using the CyberKnife R robotic radiotherapy system (Accuray Inc., Sunnyvale, CA, USA) on the prostate gland or to the macroscopic recurrence in the prostatic bed, a total dose of 30 Gy in five fractions was prescribed to the 80% isodose line to cover 95% of the planning target volume. PSA was assessed at 2 months, 6 months, and every 3 months following re-irradiation. Toxicity was assessed by the Common Terminology Criteria for Adverse Events toxicity scale (CTCAE v.4.03).
Results
After a median follow up of 48.2 months (6.4-86.3), 25 patients (50%) experienced biochemical relapse after re-irradiation, with 13 patients (26%) showing evidence of metastatic disease. One cancer related death was reported. Median biochemical relapse-free survival (BRFS) was 43 months (28-49), while median metastasis free survival (MFS) was not reached. Univariate analysis showed that Gleason score ≥8 and concomitant androgen deprivation therapy (ADT) during treatment were related to worst median BRFS (46 vs