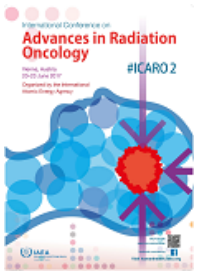

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Toxicity of radical radiotherapy with or without chemotherapy in HIV positive and negative women treated for locally advanced cervical cancer

Thursday, June 22, 2017 10:45 AM (5 minutes)

Introduction
WHO has reported 85% of cervical cancers occurring in low resource settings. It is the commonest cancer in women in many regions worst hit by the HIV/AIDS. Combined chemotherapy and radiotherapy (CRT) is the standard of care for women with cervical cancer in the developed world but the gains from CRT come at the cost of increased toxicity. Only a few data is available regarding the toxicity of radiotherapy (RT) in HIV positive (HIV+) women with cervical cancer who are treated in a low resource setting.
We designed a prospective case-control study comparing the acute toxicity of CRT versus RT alone in HIV+ve and HIV negative (HIV-ve) women receiving curative treatment for cervical cancer.
Material and Methods
Women attending the Mulago Hospital RT department receiving radical RT for FIGO stage IIB to IVA cervical cancer using a telecobalt unit with dose of 46 – 50 Gy delivered to the pelvis followed by a single brachytherapy (BCT) fraction using a caesium source of a single 25 – 30 Gy fraction (≠) were recruited. Eligible women for chemotherapy were treated with cisplatin at 40mg / m2 once weekly during external beam RT. The primary end point was the rate of grade 3 / 4 toxicity. Chi-square test, the independent samples t-test and the Mann-Whitney U test with the Logistic regression analysis were used as appropriate. Statistical analyses were carried out using SPSS version 18. The trial was approved by the local ethics committee.
Results
189 patients were recruited. 119 (63%) patients were HIV-ve, 70 (37%) patients were HIV+ve. 99% of HIV-ve women were treated with 50 Gy/25≠. 45% of HIV+ve women receiving RT only and 19% of HIV+ve women receiving CRT were prescribed 50 Gy/25≠. The majority of HIV+ve women were treated with 46 Gy/23≠. BCT data were collected in 159 (84%) cases. Of these, 147 (92%) were treated with a single 25 – 30 Gy fractions. 95% of women receiving 46 Gy to the pelvis were treated with the higher BCT dose of 30 Gy.
The HIV+ve group were more than ten years younger than HIV-ve participants ($p < 0.0005$) and had less advanced disease ($p = 0.003$). 44 of 70 (63%) HIV+ve women received 46 Gy/23 fractions, while HIV-ve women were almost all treated with 50 Gy/ 25 fractions ($p < 0.0005$).
Grade 3 toxicity scores according to HIV status.
HIV+ve patients were more likely to experience grade 3 skin toxicity ($p<0.0005$) and WBC toxicity ($p= 0.019$). More women treated with CRT experienced a break in treatment due to toxicity (though not statistically significant). Logistic regression suggests HIV+ve women were 25 times more likely to experience a grade 3 skin reaction (95% CI 2.7 – 234). Grade 3 WBC toxicity due to CRT was more evident in HIV-ve (23% vs to 4% for RT alone) compared to HIV+ve women (27% vs 21%) probably because toxicity to RT was already much higher than in the HIV-ve women. Grade 3 GIT and GUT toxicities were not common.
Conclusion: In our limited resource setting, grade 3 toxicity was more common in HIV+ve women than HIV-ve women treated either with RT alone or CRT. The use of CRT in a low resource setting especially in women with HIV infection warrants careful consideration if optimal therapeutic balance is to be achieved as resources required for optimal monitoring and treatment of the CRT side effects may be lacking and as RT alone is an effective treatment offering reasonable outcomes. Optimizing RT treatment is arguably a more valuable intervention in this setting.

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