

To determine the association between invasive cervical cancer (ICC) and HIV infection in Kenyan women. Case-control, with ICC patients as cases, and women with uterine fibroids as controls. Medical and socio-demographic data were collected from 367 ICC patients, and 226 women with fibroids. After informed consent, HIV testing was done. ICC patients were older than fibroid patients (48 versus 41 years; $P < 0.001$), with an HIV seroprevalence of 15% and 12% respectively ($P > 0.05$). However, cases younger than 35 years were 2.6-times more likely to be HIV positive than controls of similar age [35% versus 17%; odds ratio (OR), 2.6; $P = 0.043$]. ICC HIV-seropositive patients were, on average, 10 years younger than HIV-seronegative patients (40 versus 50 years; $P < 0.001$). Eighty per cent of HIV-seropositive and 77% of HIV-seronegative ICC patients were in FIGO stage IIb or above. However, the odds of having poorly differentiated tumours was three times higher for HIV-seropositive than for HIV-seronegative ICC patients (77% versus 52%; OR, 3.1; $P = 0.038$) after adjusting for histological cell type and clinical stage. Mean CD4 cell count was 833×10^6 cells/l in ICC and 1025×10^6 cells/l in fibroid patients ($P = 0.001$). Young women with ICC were more often HIV infected than women with fibroids of the same age groups. HIV infection was associated with poor histological differentiation of the tumours. These findings suggest an accelerated clinical progression of premalignant cervical lesions to ICC in HIV-infected women.