

Seroprevalence of HIV Infection in Patients of Invasive Cervical Carcinoma

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Summary

Study examines the seroprevalence of HIV infection in patients of cervical carcinoma.

An anonymous unlinked study of 100 consecutive, patients of cervical carcinoma and age matched controls were tested for HIV infection. 4% in test and 1% in control group were HIV positive. Mean age of patients was 46.3 years while that of HIV positive was 31.25 years. 3/11 (27%) in the age group of 21-30 years were positive. Of the 69 patients less than 50 years seroprevalence is 5.8%. All seropositive patients have squamous cell carcinoma with no other clinical evidence of immunosuppression. 4% in all, 5.8% in less than 50 years and 27% in the age group 21-30 years. Seroprevalence is high compared to 1% in controls and 3% in antenatal clinic of the hospital. Mean age of 31-25 years is 2 decades lower than 50.3 years of cervical cancer in India. High index of suspicion is needed in the absence of any other clinical indicator.

Introduction

Cervical carcinoma is the commonest cancer among Indian women and its incidence is projected to keep on increasing. Similarly the HIV epidemic is bound to become the biggest public health problem in India in the near future. In 1993, Centre for Disease Control Atlanta added invasive cervical carcinoma to their expanded list of conditions for AIDS surveillance case definition. Therefore the relationship between the two diseases in India where both are highly prevalent needs to be studied. The two diseases share common etiologic factors predominantly those concerning sexual behaviour which is the prime mode of spread of HIV in India and is also the common mode of HPV transmission thus compounding the problem. An association between the two diseases has profound diagnostic, therapeutic and prognostic implications. The infrastructure in a

developing country cannot afford universal screening of all cervical carcinoma patients for HIV, hence a need exists to find patients at a higher risk of associated HIV infection.

Aims and Objectives

The study was designed to examine the seroprevalence of HIV infection in cervical carcinoma and compare with other female population and to check for other clinical indicators of immunosuppression

Method

The subjects of this anonymous unlinked study were 100 consecutive patients of histologically proved invasive cervical carcinoma attending gynaecology outpatient department of Sassoon General Hospitals, Pune from July to October 1996.

Patients were interviewed with respect to age, complaints, risk factors for HIV, past or present history for indicators of immunosuppression, menstrual and obstetric history.

Examination was carried out to clinically stage the disease according to FIGO classification, to check for clinical indicators of immunosuppression. HIV infection status was determined initially by ELISA and confirmed by Western blot method.

Patients were treated according to routine protocol of Sassoon General Hospitals. 100 age matched control patients attending gynaecology outpatients department were also tested and analysed in the same manner

Results

4 in the test group (4%) and one in the control group were HIV positive.

All the infected patients came from urban areas.

All cases and controls were from the low socioeconomic strata

Mean age of all patients was 46.3 years, that mean age of HIV positive patients was 31.2 years and HIV negative patients was 46.9 years.

The age group 21-30 years showed a seroprevalence of 27% (3/11 patients)

69 patients in the study were below 50 years, of which 4 were HIV positive, a seroprevalence of 5.8%. The husbands of 2 of the HIV patients were available for interview and gave history of promiscuity and STD's. However this history was also obtained from 3 of the 8 HIV negative patients in the age group 21-30 years.

All the HIV positive patients were asymptomatic as regards HIV infection, nor was any other clinical evidence of immunosuppression found on examination. However the 40 year old HIV infected control gave a history of hemiplegia 2 years previously.

All HIV infected patients had a histopathologic diagnosis of squamous cell carcinoma.

Discussion

A seroprevalence of 4% in all cervical carcinoma patients, 5.8% in those aged below 50 years and 27% in the age group 21-30 years is definitely high as compared

to the seroprevalence of 1% in the control group, 1.2% reported from various blood banks and 3% seen in antenatal clinic of Sassoon General Hospitals. Bradbeer 1987, first studied the relation between cervical dysplasia and HIV infection due to the observed increased incidence of anorectal dysplasia in HIV positive homosexual men and increased patients had changes suggestive of CIN on smear and/or biopsy.

Maiman et al, 1988 studied prevalence of HIV infection in a colposcopic clinic of 66 patients tested. 7 were positive (10.6%), which was greater than 2% observed in obstetric services and 3% in women in STD clinics. Spurrett et al, 1988 in a similar study, found that 5 of 6 HIV positive females were positive for CIN. None of these had any other clinical marker of immunodeficiency.

Byrn et al (1988) studied 15 HIV positive patients and found dyskaryosis suggestive of CIN in 4, i.e. 36% as compared to 12% in the general population. Rogo and Kavoo 1990 studied seroprevalence of HIV in 200 patients of cervical cancer. Seroprevalence rate of 1.5% was compared to 2% in general population lower than the 18-59% observed in high risk groups.

The mean age of 31.2 years for the infected patients in this study is 2 decades lower than that reported (50.3 years) in the ICMR studies of cervical cancer in India.

The seroprevalence of 27% in the 21-30 years age group is an indicator that all young patients with cervical carcinoma must be treated for HIV infection, since no other clinical indicators for immunosuppression were found in these patients. Maiman et al 1990 extensively studied the relationship between HIV infection and cervical neoplasia and the course of cervical neoplasia in HIV infection. Maiman et al (1993) reported a prevalence of HIV infection of 19% in women under the age of 50 with invasive cervical carcinoma. Also no HIV positive women had other HIV related symptoms. They also observed that the disease runs a more malignant course in HIV positive patients and recommend HIV testing in all young women with cervical cancer especially in areas with a high seroprevalence and formation of new therapeutic strategies to treat patients. In view of these findings, it is suggested-a high index of suspicion for HIV should be maintained in all cases of cervical carcinoma. All patients of cervical carcinoma below the age of 30 could be tested for HIV. All HIV positive women must be regularly screened with PAP smears.

Cancer of cervix is the commonest cancer among

Indian women, the number is projected to rise to 139000 in the year 2000 Prabhakar (1992). The effect of HIV on the incidence is not known and needs to be determined. In India with predominantly heterosexual transmission of HIV. The average age 50.3 years at present of cervical cancer patients would be lowered and have a tremendous impact on the mortality and the morbidity of this disease. Since all patients presented only with carcinoma of the cervix and no other indicator of immunosuppression, there is a need to find out if this malignancy is a presenting feature of AIDS in the Indian population. As no previous data on the relationship between HIV and carcinoma of the cervix in India or the subcontinent existed, and adequate sample size could not be determined, further studies in this field in India and the other developing countries is the need of the day.

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