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# PAEDIATRIC HIV INFECTION

S K Sayal, A S Bal, C M Gupta

Four cases of HIV infection in children between one to eight years of age are reported. Three were males and the other one female. One child was born to known HIV infected mother. The female child was victim of sexual abuse and had disseminated tuberculosis with syphilis and gonorrhoea. Other two children were having systemic as well as dermatological disorders for which HIV test was done and found positive.

**Key words : Paediatric, HIV infection**

The first case of Acquired Immunodeficiency Syndrome (AIDS) in paediatric age was reported in USA by Centre for Disease Control in 1982.[1] Today paediatric AIDS has emerged as a major cause of child morbidity and mortality in many countries. The rising HIV infection rate in women is accompanied by corresponding rise in paediatric HIV infection by perinatal transmission which is major route of transmission of HIV in children. It is estimated that about 1.5 million children are infected with HIV through perinatal route.[2] The projected cumulative total of HIV infection in children below 5 year by years 2000 is estimated to about 5 millions by WHO.[3] It is also projected that majority of these children will be orphaned because the infected mothers are likely to die of AIDS within 5 to 10 years of giving birth.[3]

From the Department of Dermatology and Venereology, Armed Forces Medical college and Command Hospital (SC), Pune.

Address correspondence to:
Col S K Sayal
Department of Dermatology, Venereology and Leprology Command Hospital (SC), Pune-411 040

**Case 1.** A 8-year-old female child presented with fever, cough and weight loss of 6 months duration. She also complained of vaginal ulcer and discharge of 15 days duration. She gave history of repeated sexual abuse by 13 year old boy in neighbourhood. Examination revealed generalised lymphadenopathy, hapatosplenomegaly with features of fibrosis right lung base. The venereological examination revealed a solitary, 1 x 1cm sized, well-defined, punched out, nontender ulcer (fig.1)

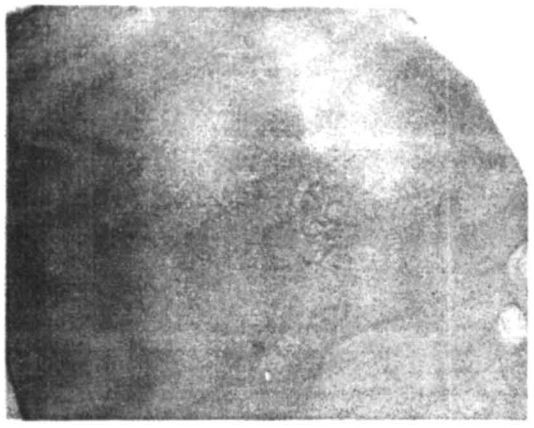

Fig. 1 : Perianal warts in an HIV-positive four-year old underweighed child (case II)

with purulent discharge per vagina and inflammed vaginal mucosa. Gram staining of vaginal smear showed diplococci. Culture for N.gonorrhoea on modified Thayer-Martin medium was positive. VDRL was reactive on two occassions. Lymphnode biopsy revealed tuberculous lymphadenitis. ELISA for HIV-1 was positive which was further confirmed by western blot test. Child's parent refused for screening for HIV. After establishing the diagnosis of AIDS with gonorrhoea and syphilis child never came for follow up.

**Case 2.** A 4 1/2-year-old male child presented with perianal mass of 3 years duration and fever with weight loss of 2 months duration. Clinical examination revealed grossly undernourished child of 7 kg weight (expected weight for age and height - 17kg) with pallor and generalised lymphadenopathy. Systemic examination was unremarkable. Dermatological examination revealed a 2 x 2cm sized brownish nodule with verrucous surface in perianal region (Fig. 2). Routine haemogram and urinalysis were normal. VDRL was nonreactive. ELISA was positive for HIV-1 which was confirmed by positive western blot test. The father of child on interrogation gave history of repeated exposures with commercial sex workers 3-6 years ago. parents were advised for HIV testing but declined for it and never reported for follow up.

**Case 3.** A 1 1/2-year-old female child was diagnosed to have chorioretinitis due to toxoplasmosis by ophthalmologist as his serum Ig M antibodies for toxoplasmosis was positive in high titre. He was put on trimethoprim sulphamethoxazole and pyramethamine. Within a week's time child developed fever with generalised erythematous maculopapular rash all over body which was followed by haemorrhagic vesicobullous eruptions with conjunctival congestion and mucosal involvement. He was diagnosed as Stevens-Johnosn syndrome. Skiagram of the chest showed bilateral bronchopneumonia. The ELISA for HIV-1 was reactive which was confirmed by western blot test. Child developed septicemia and died after 3 days. Parents were advised for HIV screening but did not report for the same.

**Case 4 .** A one-year-old child born to known HIV positive parent presented with multiple itchy eruption on extremities of 7 dyas duration. Clinical examination revealed an underweight child of 6 kg weight (expected weight for age 10 kgs) with generalised lymphadenopathy. Systemic examination was remarkable. Dermatological examination revealed multiple closely packed excoriated papulo-pustular lesions involving both hands and feet especially interdigital areas, wrists, forearms, arms, ankles, legs, thighs, anogenital areas and trunk. He was diagnosed to have scabies with secondary infection and treated accordingly. On investigation his ELISA for HIV-1 was found reactive which was confirmed by western blot test.

## Discussion

The paediatric HIV infection is defined is HIV infection occurring in children under

13 years of age. Worldwide, perinatal transmission accounts for about 80% to 90% of all AIDS and HIV infection among children. Other routes of transmission common in some countries are transfusion of infected blood and injection by contaminated needle. Transmission of HIV infection by breast feeding can also occur.[4] Some cases of paediatric HIV infection have been attributed to paediatric sexual abuse.[5] Three out of four cases in our study probably had perinatal transmission, though HIV status of parent could not be ascertained except in one case. One of our cases was a victim of sexual abuse and therefore in addition to HIV infection she also had gonorrhoea and syphilis. Weight loss and generalised lymphadenopathy with scabies and perianal wart were presenting symptoms of other two cases. One child presented with toxoplasmosis leading to chorio-retinitis and subsequently developed Stevens-Johnson syndrome probably due to trimethoprim-sulphamethoxazole.

The altered host immunity due to HIV infection may result in atypical and aggressive presentation of common skin disorders. Therefore any case in paediatric age group presenting with such disorders with prolonged fever, weight loss, generalised lymphadenopathy or chronic diarrhoea should be subjected to HIV testing. It is sad truth that quite often a number of paediatric cases having HIV infection remain undiagnosed for long for want of diagnostic facilities and knowledge in our country. Health education at all levels and provision of HIV test kit at basic medical unit level will be a long way to detect and prevent HIV infection especially so in paediatric age group.

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