Rape and subsequent seroconversion to HIV

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Infection with HIV may be transmitted to a victim of sexual assault.[1,2] Seroconversion to HIV occurred in the three months after a rape in a woman who had no other identifiable risk factors for HIV infection.

Case report

In May 1987 a 24 year old woman was examined and tested for HIV antibody because she had been raped two weeks previously. A man whom she knew had forced her to have vaginal and anal intercourse. He subsequently told her that he was positive for HIV antibody. She had had no blood transfusions, used no intravenous drugs, and had no sexual contact with bisexual men or men from central Africa and no other sexual contact in the previous nine months.

The results of tests for *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and *Trichomonas vaginalis* were negative, as were serological tests for treponemal infection and HIV antibody. Repeat testing for HIV antibody in August gave a positive result, which was confirmed by the enzyme linked immunosorbent assay (ELISA) and Envacore tests. The diagnosis was discussed with the victim, and she returned to her own country for follow up care. The assailant had attended a different department of genitourinary medicine in London. He had persistent generalised lymphadenopathy associated with HIV seropositivity when the rape occurred.

Comment

HIV infection can be transmitted during rape, but it is necessary to establish that the victim was seronegative before the incident and that the assailant was infected with HIV at the time of the assault.

Three other women who attended our unit after a rape were found to be positive for HIV antibody. None had had blood transfusions, used intravenous drugs, or been in contact with bisexual men. One had a boyfriend from central Africa. Serum taken at the time of the rape was not stored, so HIV infection could not be definitely attributed to the assault.

Routine testing for HIV infection of victims of heterosexual rape,[1] homosexual rape,[3] and child sexual abuse[2] has been discussed. After a rape many women request a test for HIV. Otherwise it may not be done or the doctor may think it is best not to do it, especially when the victim is distressed. Moreover, patients may have to wait several months for seroconversion to take place.

In Britain, unlike the United States,[4] victims of rape are not offered prophylactic antibiotic treatment for sexually transmitted diseases. We may have to consider giving prophylactic treatment with zidovudine after a sexual assault by a person known to be positive for HIV, though the after effects of zidovudine prophylaxis are not known. A trial is being conducted in the United States with medical staff who were exposed to HIV infection through needlestick injury.

An assailant may be asked to supply samples and agree to be tested for sexually transmitted diseases. A refusal may be noted in court.[5] He may prejudice the case against himself by refusing to be investigated, yet know that a positive diagnosis will alter the jury's perception of his crime.

We believe that all adult victims of rape should be offered a test for HIV, reassured that the risk of infection is low, and offered counselling. A serum sample should be taken at that time and stored in a secure freezer. A test should be considered two or three months later when seroconversion will probably have occurred if the person has become infected and when the person will be better able to make a rational decision about testing. If this sample is positive the stored sample can be analysed and if that is negative the likelihood that infection occurred as a result of the assault will be stronger.

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2 Gelbert GA, Mascola L. Rape and AIDS. *Pediatrics* 1989;**83**:644-5.
3 Osterholm MT, MacDonald KL, Danita RN. Sexually transmitted diseases in victims of sexual assault. *N Engl J Med* 1987;**316**:1024.
4 Glaser SB, Hammerschlag MR, McCormack WM. Epidemiology of STD's in rape victims. *Rev Infect Dis* 1989;2:246-54.
5 Lewington FR. New initiatives in the investigation of rape. *Med Leg J* 1988;**56**:111-24.

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Osteoporosis and immunosuppression in multiple myeloma

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Generalised osteoporosis may be the presenting feature of multiple myeloma. We report two cases in which the only clue to the underlying diagnosis was associated immunodeficiency with suppressed serum immunoglobulin concentrations.

Case reports

CASE 1

A 56 year old man presented with a one year history of pain in the chest and thoracic spine with morning stiffness. His previous history was unremarkable. He was in severe pain. General physical examination did not show any abnormality. Peripheral joints were normal. His cervical spine was restricted with pain on flexion. There were multiple areas of tenderness throughout the thoracolumbar spine, and spinal movements were reduced and painful. Straight leg raising was full but caused back pain. There was no neurological deficit.

X Ray films showed generalised spinal osteoporosis without fractures. A bone scan suggested only minor degenerative disease of the lumbar spine. A range of blood tests, including liver function tests, yielded normal results. Immunoelectrophoresis of serum proteins gave normal results on two occasions but on a third occasion suggested immunosuppression, with IgG concentration 5·3 g/l (normal 6-13), IgA 0·7 g/l (0·8-3·7), and IgM <0·3 g/l (0·4-2·2). No serum paraprotein was identified on several occasions. Immunoelectrophoresis of urine did not detect any Bence Jones protein. A trephine biopsy of the iliac crest showed a hypercellular marrow with 25% plasma cells, including many abnormal forms.

Multiple myeloma was diagnosed. Radiotherapy followed by melphalan and prednisolone improved his pain, although he developed severe kyphoscoliosis.