Editorial

AIDS: minimising the occupational risks

The undoubted increase in the incidence of the acquired immune deficiency syndrome (AIDS) is causing a degree of public alarm which appears to be out of all proportion to its threat to public health. Many of those whose work may potentially bring them into contact with patients with AIDS are expressing the most fears that they may contract the disease by, for example, giving mouth to mouth resuscitation to a sufferer or by coming into contact with their blood or body fluids at the scene of an accident. These fears appear to be groundless but a risk does exist for having more direct contact with patients with AIDS.

The great majority of patients with the disease have antibodies to human T-cell lymphotropic virus III (HTLV-III) and this virus is the putative infective agent. Infection with the virus may cause a variety of clinical conditions but criteria for the diagnosis of AIDS have been laid down by Krause.1 According to this author, the diagnosis depends on finding two of the following clinical signs or symptoms: fever or lymphadenopathy or both lasting for more than three months, a weight loss in excess of 10% of the baseline, chronic diarrhoea, night sweats, and fatigue. In addition, two of the following abnormal laboratory tests should be demonstrated: reduced numbers of helper T cells, a diminished helper-suppressor T cell ratio, decreased lymphoproliferative responses, and increased serum globulin concentrations. Opportunistic infections are common, including oral candidiasis and pneumonia caused by Pneumocystis carinii. Kaposi’s sarcoma also occurs commonly in those with the disease.

Antibodies to HTLV-III may be found in the asymptomatic close sexual contacts of those with AIDS and also in a substantial number of other homosexuals; about a third of haemophiliacs who have received pooled clotting factors may also have antibodies.2 In the general population, however, the prevalence of antibodies to the virus is extremely low; the prevalence in blood donors has been reported as zero in the United Kingdom1 and as 0-16% in West Germany.3 There is little evidence, therefore, that the virus has spread far into the community.

What are the risks for those who have close contact with patients with AIDS? The evidence suggests they are low, probably lower than those of contracting hepatitis B. Hirsch and his colleagues studied 33 hospital employees who had accidentally exposed themselves to blood from patients with AIDS.4 Thirty of these studied had reported needlestick injuries, one had had blood splashed into her eye, and in the two others blood from patients had come into contact with open cuts on their hands. The time from the injury to their examination varied from two weeks to 20 months. Even though all the patients concerned in the accidents were seropositive, in none of the employees was antibodies in HTLV-III detected. This result is encouraging but two others are less so. A 34 year old hospital worker developed AIDS and died from a massive P carinii infection; he fitted none of the known high risk categories but he had pricked his palm with a needle 14 months previously while handling waste for disposal, and the presumption is, therefore, that the disease was related to that injury.5 A more definite case is reported in the Lancet. A white women who had lived in central southern Africa was admitted to hospital suffering for AIDS. During her admission, one of the nursing staff pricked her finger on a needle containing blood drawn from an arterial line. The nurse developed a fever, malaise, and lymphadenopathy that resolved after about three weeks. Blood taken 27 days after the injury was seronegative but specimens taken on days 49 and 57 were positive with anti-HTLV-III titres of 12 and 24 respectively.

There can be no doubt, therefore, that hospital staff coming into contact with patients with AIDS must take every possible care to avoid high risk accidents such as needlestick injuries or mucosal contact with potentially infectious material such as blood or saliva. Guide lines for the protection of health workers were published in the United States in 19836 and more recently in the United Kingdom by the Advisory Committee on Dangerous Pathogens (ACDP).7 Among the recommendations in the latter report is the suggestion that those who may be directly exposed to the body fluids and tissues of patients with AIDS, and those undertaking laboratory work on viable HTLV-III virus should be asked to volunteer blood samples. It is recommended that these should be taken before starting...
work and at six monthly intervals thereafter and the serum tested for antibodies to HTLV-III and then stored. There is no suggestion as to who should coordinate the blood sampling and no advice is given as to the action to be taken if a positive or rising titre of antibody is found.

Some of the recommendations contained in the ACDP guide lines have been criticised as being too stringent and likely adversely to affect patient care and jeopardise diagnostic and research work. Further discussion on these points seems required but the recommendation that local codes of conduct be drawn up should be implemented without delay with the full involvement of the occupational health department. These codes should emphasise the necessity for ensuring that needles and syringes are handled and disposed of properly; needlestick injuries that lead to the inoculation of blood from patients are always potentially dangerous and must be taken seriously. If they are avoided then the risks of occupational AIDS will be minimal.

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References


Correspondence and editorials

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