

HIV
AND OTHER BLOOD
BORNE VIRUSES
- guidance for anaesthetists -

Published by

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Contents

	Page
Section 1.	Introduction 1
Section 2.	Epidemiology of human immunodeficiency virus (HIV) and Hepatitis B Virus (HBV) 3
Section 3.	Transmission and occupational exposure 5
Section 4.	Screening 7
Section 5.	Precautions against infection 8
Section 6.	Resuscitation and intensive care 11
Section 7.	Protection against HBV 13
Section 8.	Post exposure management 14
Section 9.	The anaesthetist with HIV infection 16
Section 10.	The hepatitis B infected anaesthetist 21
	References 22

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PREFACE

AIDS is a new disease. The number of cases continues to rise. Infection carries not only a serious health risk but also, social and economic stigmata which tend to set AIDS apart from other diseases in the minds of us all.

With any new disease, research and study reveal fresh information year by year and consequently the Association has convened a new working party to reassess the current situation as it affects anaesthetists, their assistants, their families and loved ones, and of course, their patients.

The information in this report contains the best guidance available at the time of going to press. The working party will reconvene annually or earlier if indicated to reassess the latest information and offer appropriate advice as knowledge improves and the situation becomes clearer.

It behoves us all to heed the guidance issued in this report. Universal cross infection precautions will protect anaesthetists from occupational transmission of blood borne viruses and other infections which occur in immunocompromised patients.

Those who are concerned about the possibility of personal infection are earnestly advised to seek expert confidential advice which is readily available through the Association's Sick Doctor Scheme or directly through NHS advisory channels.

Finally, although infection with HIV is greatly feared, infection with HBV is much easier to acquire. Fortunately, immunisation against HBV is easily available to all NHS staff. It is strongly recommended that all anaesthetists and their assistants are immunised against hepatitis B virus.

P J F Baskett

Section 1.

INTRODUCTION

- 1.1 In 1988 the Association of Anaesthetists published a booklet 'AIDS and Hepatitis B: Guidelines for Anaesthetists'. That document summarised the epidemiology of the human immunodeficiency virus (HIV) and the hepatitis B virus (HBV). It described the modes of transmission of these viruses and made recommendations about the precautions which should be taken in anaesthetic practice to prevent their occupational transmission. It also drew attention to the obligations falling on anaesthetists who had reason to believe that they may be HIV positive.
- 1.2 Several factors have made it necessary to review these guidelines. The number of cases world wide of occupational transmission of HIV has increased. There is both anecdotal and published evidence that the precautions recommended to anaesthetists to safeguard against such transmission are not widely observed.¹ The importance of other blood borne viruses is becoming increasingly apparent. The United Kingdom Health Departments have recently issued advice about health care workers with HIV infection which has particular relevance to anaesthetists.²
- 1.3 Viruses which are blood borne present the possibility of occupational transmission to anaesthetists. They are:

HIV: the majority of those infected with HIV develop AIDS or other related diseases.

Hepatitis viruses: while HBV presents the most serious threat to anaesthetists Hepatitis C and D viruses are also blood borne. Up to 50% of people infected with the hepatitis C virus develop chronic liver disease. Occupational transmission of this virus has been reported.

Human T cell leukaemia virus (HTLV I): this virus causes adult T cell leukaemia and is also associated with tropical spastic paresis.

While these guidelines are primarily concerned with HIV and HBV, anaesthetists need to be aware of these other viruses.

Section 2.

EPIDEMIOLOGY OF HIV AND HBV

HIV

2.1 Since the first case of AIDS was recognised in 1981 the epidemic has escalated. The number of cases of AIDS reported world-wide in the first ten years of the epidemic is 215,000 and of these 126,126 have come from the United States of America. However, the total number of cases is many more than this due to under reporting. Infection is widespread in parts of Africa and South America.

The number of reported cases in the United Kingdom (UK) continues to rise. 5,894 cases of AIDS have been reported by the end of April 1992, 3,686 of whom have died. 19% of cases have occurred in heterosexual adults. About three new cases of AIDS are reported each day. Of the 69 known cases of AIDS in children, 31 have died.³

2.2 The actual number of HIV positive individuals in the UK is not known but is probably around 50,000. Attempts have been made to estimate the size of the epidemic by unlinked anonymous testing of mothers attending antenatal clinics and individuals attending genito-urinary clinics.⁴ In Inner London 1 in 500 mothers attending antenatal clinics are HIV positive. In the Thames Regions outside Inner London the prevalence falls to 1:1,440 and outside these Regions to 1:16,000. However, there is a much higher prevalence of infection in certain areas, notably Edinburgh and Dublin. One fifth of homo/bisexual men attending genito-urinary medicine clinics in London are infected with HIV compared with 4% outside London.

By the end of June 1991 there were 15,712 reports of individuals in the UK infected with HIV. Of these 1,489 probably acquired the infection through heterosexual intercourse.⁵ While the epidemic continues to be associated with intravenous drug abuse and with sexual intercourse

between men, it is quite clear that the virus is also present in heterosexual population.

HBV

- 2.3 Infection with HBV is a major problem throughout the world. In the UK, although some 2,000 clinical cases are reported each year, many cases are asymptomatic. The total number of cases is therefore considerably more.

Following infection an acute illness and/or the carrier state develops. The carrier state, which occurs in 5 to 10% of infected adults, is defined as 'the persistence of hepatitis B surface antigen in the circulation for more than six months'. About 1:500 of the adult population of the UK are carriers.

The long term consequences of infection include cirrhosis, chronic active hepatitis and primary liver cancer.

- 2.4 A second antigen, hepatitis Be antigen (HBeAg) is associated with the presence of infectious virus. Carriers of HBV who are HbeAg positive have high concentrations of virus in their blood and are likely therefore to be sources of occupational transmission.
- 2.5 It is inevitable therefore that anaesthetists are involved in the care of patients from whom occupational transmission of HIV and hepatitis viruses may occur.

Section 3.
TRANSMISSION AND OCCUPATIONAL
EXPOSURE

- 3.1 HIV is transmitted by blood, sexual contact and transplacentally from mother to fetus. Cases have occurred following artificial insemination. There is some evidence for infection of the baby from the mother during vaginal delivery and from breast milk. Certain other body fluids have been designated high risk for transmission; these are amniotic fluid, pericardial fluid, pleural fluid, synovial fluid, cerebrospinal fluid, peritoneal fluid, semen and vaginal secretions. Faeces, nasal secretions, sputum, saliva, sweat, urine and vomitus are **not** considered to present a significant transmission risk for HIV or hepatitis viruses in a health care setting **unless** they are visibly contaminated with blood.
- 3.2 HBV may be present in virtually all body fluids and secretions. However, transmission has only been firmly attributed to blood, semen and vaginal secretions. Transmission by a human bite has been reported.
- 3.3. Anaesthetists are at risk of occupational infection by blood borne viruses through contact with infected blood and blood stained body fluids. This may occur through needle stick and other sharps injury or through cuts and abrasions of the anaesthetist's skin.
- 3.4 By November 1992 occupational transmission of HIV had been reported in 146 cases.⁶ 97 of these occurred in the USA and may be categorised as follows:-
- (i) cases with documented sero-conversion following specific exposure 51
 - (ii) presumptive infection without other exposure 91
 - (iii) Other occupational /home care transmission 4
- Transmission most commonly followed a needle stick injury, usually with a hollow needle. However, in group (i) three

cases occurred following skin exposure. One of these was a member of a laboratory staff working with concentrated virus in a centrifuge. In another there was heavy soiling of the forearms and ungloved hands with blood for several minutes. The individual had dermatitis of the ear. The third case was a nurse whose hands, eyes and mouth were heavily contaminated with blood.

- 3.5 Up to September 1991 15 prospective studies have investigated the transmission rates of HIV following occupational exposure to the virus via percutaneous injury. These studies cover 2475 such exposures. Sero-conversion occurred in 9 cases, giving the risk of conversion after occupational exposure as 0.39%⁶
- 3.6 The risk of transmission following an occupational inoculation injury with HBV is very much higher.^{7,8} The reported range is 5 to 30%.

Section 4.

SCREENING

- 4.1 Screening of patients for HIV infection does not actually reduce the risk of occupational transmission.⁹ Protection lies in adopting the cross-infection control procedures set out below routinely, in the care of all patients. Furthermore, there is a window period of 3 months between infection and the appearance of antibodies. Inevitably therefore there are some patients who do pose a risk to anaesthetists who will not be identified by routine screening for HIV antibodies.
- 4.2 Given that there is a small but real risk of occupational transmission of HIV occurring it is understandable that many doctors wish patients to be screened for HIV antibodies. However, the General Medical Council has not sanctioned HIV testing without the explicit consent of the patient. Routine screening is not supported by the UK Health Departments. Where a patient's medical advisers believe that an HIV test is necessary to establish a diagnosis the patient's consent must be obtained before doing so. If a patient is unconscious and the test is essential for therapeutic purposes the views of the next of kin must be sought. Where there are no next of kin, it is reasonable under these exceptional circumstances, to test for HIV.
- 4.3 All anaesthetists have a duty to provide the highest standards of care to all patients irrespective of the patients' condition.

Section 5.

PRECAUTIONS AGAINST INFECTION

5.1 Anaesthetists must recognise first that they will inevitably be involved in the care of patients infected with blood borne viruses and secondly that they will not usually be able to identify such patients. Anaesthetists and those who work with them **are** at risk of being infected during the course of their clinical work. Council again emphasises the vital importance of adopting precautions against occupational transmission **as a routine part of anaesthetic practice.** The 1974 Health and Safety at Work Etc Act seeks to ensure the health, safety and welfare at work, of staff and patients. Reference is made in the Act to safe systems of work, safe handling and storage of dangerous or potentially harmful substances or articles. Anaesthetists and other hospital staff have a duty under the Act to exercise great care during their work practices to avoid risk of injury or infection to themselves or other persons.

Furthermore under the Control of Substances Hazardous to Health Regulations 1988 a full assessment of the risks to health which arise from any work must be carried out and in this respect 'a micro-organism or its products' may be a hazard to health.

The necessary precautions covering the full range of clinical activities undertaken by health care workers are set out in the document 'Guidelines for Clinical Health Care Workers; protections against infection with HIV and hepatitis viruses'. UK Health Departments, HMSO, 1990.¹⁰ The precautions of particular relevance to anaesthetists are as follows:

5.1.1 Gloves must be worn during the induction of anaesthesia, inserting intravenous cannulae, setting up intravenous infusions, and inserting and removing airways and tracheal tubes.

Where substantial spillage of blood may occur, as, for example, in setting up an intra-arterial line, a plastic apron, mask and eye protection should be worn.

Gloves should normally be discarded on taking the patient into the operating theatre and a fresh pair donned when the above procedures are carried out during or at the end of the anaesthetic. Equipment, notes and other articles must not be handled with contaminated gloves.

5.1.2 Needles which have been in contact with the patient should not be resheathed. Needles, syringes with the needles attached and other 'sharps' **must not** be handed directly from one person to another. They should always be placed in a tray and if necessary picked up from the tray by the other person. All needles and 'sharps' should be disposed of in an appropriately tough disposal bin.

5.1.3 While intact skin is impermeable to blood borne viruses, cuts and abrasions on the anaesthetist's skin which might become contaminated by a patient's blood or body fluids must be covered with a waterproof dressing. Care should be taken to prevent contamination of such skin with blood or blood-stained fluids. An anaesthetist with considerable skin lesions such as eczema, chapping or several scratches is particularly at risk of being infected.

5.1.4 As these infections are not airborne those parts of the breathing system outside the patient do not constitute a risk either to anaesthetists and their assistants or other patients unless they become contaminated with blood. Oropharyngeal airways, laryngeal mask airways, nasopharyngeal airways, tracheal tubes, other instruments used in the airway and contaminated breathing systems must either be disposed of or sterilised between patient use.

5.1.5 Where possible, non-disposable, contaminated equipment should be autoclaved. Where this is not possible the equipment should be thoroughly washed with detergent and water. It should then be left for the

period of time in 2% freshly prepared glutaraldehyde or other agent recommended by local infection control policies.

5.1.6 Floors and surfaces contaminated with blood or blood stained fluids should be washed with a solution of hypochlorite containing 10,000 ppm available chlorine. The floors and surfaces should then be washed with detergent and water. Gloves must be worn

5.2 Anaesthetists have a particular responsibility towards those who assist them in their clinical work, to ensure that they also observe these precautions routinely.

Section 6.
RESUSCITATION AND INTENSIVE CARE

- 6.1 To date there have been no reports of occupational transmission of blood borne viruses during basic life support resuscitation. Nevertheless, the possibility exists, however small that risk may be. Clearly this is increased if the face and/or the upper airway are contaminated with blood or blood stained saliva. It is therefore a sensible precaution to perform expired air ventilation through a protective device. Such devices must be the best design currently available, be effective in viral protection but still allow effective ventilation. All staff must be aware of their availability and be trained in their proper use. Gloves and plastic aprons should be kept with resuscitation equipment and donned before starting basic life support. **However, resuscitation must not be delayed in order to meet these requirements.**
- 6.2 Advanced life support and many procedures carried out in intensive care units are invasive and are likely to cause blood spillage. Thus the precautions and procedures set out in paragraph 5 above should be observed **routinely** in the care of **all** patients.
- 6.3 Gloves and a water repellent apron or gown should be worn during neonatal resuscitation. During neonatal resuscitation facial splashing may occur and the routine use of eye protection is recommended. Contaminated equipment, surfaces and mattresses should be treated as recommended in paragraph 5.1.6.
- 6.4 Resuscitation training manikins have not been shown to be a source of virus infection, Nevertheless, sensible precautions must be taken to minimise potential occupational transmission. Face shields and disposable face pieces should be used whenever possible. Manikins must be disinfected after each use according to the manufacturer's recommendations.

- 6.5 There are particularly difficult problems concerning potential organ donors. Several tests, including HIV testing, are essential in establishing whether or not a patient is a suitable organ donor. Clearly it is not possible to obtain such consent from an unconscious patient who is attached to a ventilator.

However, guidance from the Department of Health¹¹ makes it clear that in the Department's view relatives should have explained to them the need to test for HIV in assessing a patient's suitability as an organ donor. Careful and sensitive enquiry of relatives will help to determine whether or not the potential donor is a high risk of being infected with HIV. If a potential donor is found to be infected the donor's sexual partners and offspring will need help and counselling. Despite all the difficulties, the need for HIV testing should form part of the discussion with relatives about organ donation.

- 6.6 The decision to restrict treatment (including 'Do not resuscitate') in a patient who is HIV positive should only be made after full consultation with the medical and nursing staff caring for the patient. In addition, such restriction and their implications should be discussed with the patient and/or the family of the patient. Decisions should be clearly recorded in the patients' medical and nursing notes. They should be regularly reviewed and should never be regarded as irreversible. Local practice and policy decisions should be drawn up to reflect this. Restriction of treatment must never compromise general clinical care nor should the patient suffer as a result of the restriction.

Section 7.
PROTECTION AGAINST HBV

- 7.1 All anaesthetists (and other health care workers exposed to the possibility of occupational transmission) should be immunised against HBV. The vaccine is safe and effective. A small percentage of people do not mount an adequate antibody response. Thus screening for the adequacy of the response should be carried out two to four months after a vaccination course has been completed. A booster should be given to non-responders. If the antibody response remains inadequate consideration should be given to the use of hepatitis B immunoglobulin (HBIG) in the event of inoculation injury involving a known or suspected HBV positive patient. In view of the short term nature of immunoglobulin prophylaxis (approximately one month) this procedure should be considered with each subsequent occupational exposure.
- 7.2 Anaesthetic departments should ensure that all their members are aware of the necessity of being immunised against HBV and know their immune status. Modern vaccines confer protection for three to five years and periodic boosters will be required.

Section 8.
POST-EXPOSURE MANAGEMENT

- 8.1 While it is essential that great care is taken routinely to prevent inoculation injury and splashing with body fluids, it is also the duty of anaesthetists to ensure that the following procedures are adhered to if such an incident occurs during the care of any patient.
- 8.2 The major risk of infection results from percutaneous inoculation. Other possible routes of infection are exposure of open wounds or non-intact skin and splashing of infected material into the mouth or eyes. Blood contamination of intact skin is not considered a risk providing it is removed by washing with soap and water as soon as possible.
- 8.3 Following inoculation injury the puncture should be encouraged to bleed by squeezing the area. The wound should be thoroughly washed with soap and water.

Splashes into the eye should be washed immediately with sterile eye-wash solution or clean water. Splashes into the mouth should be irrigated with copious volumes of clean water.

- 8.4 Any incident involving occupational exposure of a member of staff must be recorded. Units must keep an accident record book. An accident report form must be completed and sent to the Unit's manager in accordance with the Health and Safety at Work Etc Act. It is clearly in the interests of an anaesthetist as an employee to ensure that this is carried out.
- 8.5 It is important for anaesthetists and other staff to identify a medical advisor whom they can consult for advice in the event of occupational exposure. It is much better to decide on this arrangement in advance rather than wait until an incident occurs. It is essential that the person concerned is knowledgeable about HIV and other infections, can be totally trusted to preserve confidentiality and is available after hours. This service may be provided by an occupational

health physician, microbiologist, virologist or HIV/AIDS physician. Such a doctor should be identified by every employing authority. Anaesthetic departments should ensure that all their members know who to consult should occupational exposure occur.

It is important that contact can be made rapidly and, if possible, within an hour of exposure. In conjunction with the medical advisor, the anaesthetist will then be able to plan the course of further action. This may involve an investigation of the HIV/hepatitis status of the patient concerned (in co-operation with the consultant in charge), a risk assessment based on the degree of exposure and the estimated infectivity of the patient and the rapid adoption of protective measures, for example, hepatitis B specific immunoglobulin, AZT (zidovudine), antibiotics, or anti-tetanus-immunisation.^{12,13,14}

- 8.6 The possible need for either storage of a serum sample or follow-up testing of the anaesthetist should be discussed and, if the risk is high, it may be necessary to consider a temporary change of life-style such as the adoption of safer sex practices.

Section 9.
THE ANAESTHETIST WITH HIV INFECTION

9.1 Responsibilities of an infected anaesthetist

9.1.1 In 1988 the General Medical Council set out the duties of doctors infected with HIV.¹⁵ Any anaesthetist who has any reason to believe that he/she may be infected with the virus must seek appropriate diagnostic testing and advice. Should infection be confirmed he/she must be under regular, expert medical care.

An infected anaesthetist must also seek expert advice about the extent to which his/her clinical practice should be modified. The UK Health Departments have set up a panel to advise individual health care workers how to obtain guidance on working practices as well as to provide specialist occupational advice to physicians of HIV positive health care workers, occupational physicians and professional bodies. An anaesthetist is a member of this panel.

9.1.2 An anaesthetist who suspects that he or she may be infected must be assured of complete confidentiality when seeking medical advice and care. This assurance will encourage such anaesthetists to come forward for appropriate medical help.

An anaesthetist who is seeking help may be able to obtain such help confidentially in their own hospital but may wish to attend a centre elsewhere which has extensive experience of HIV infection.

Alternatively, an anaesthetist may contact the Association office anonymously when he or she will receive advice through the already well established and proven Sick Doctor Scheme.

Through this mechanism an anaesthetist can be put in touch with an occupational physician expert in the field of HIV infection, who will arrange counselling, if appropriate, diagnostic testing and further advice.

Contact can also be made with the UK Health Department's Advisory Panel on HIV Infected Health Care Workers.

9.2 Secondary infections

9.2.1 Most of the opportunist infections occurring in the context of HIV-induced immune deficiency (AIDS related complex [ARC] and AIDS) are ones that only cause significant problems in people with cell-mediated immune deficiency. Many are latent in a substantial proportion of the population and others are ubiquitous. Furthermore, many are not readily transmissible from person to person. The few that could pose problems of nosocomial infection typically cause early symptoms in the HIV-infected person which would lead them to seek medical attention and to take sick leave.

9.2.2 The main examples of these are shingles, salmonellosis and tuberculosis. With shingles, infectivity starts with visible lesions; with salmonellosis, the systemic symptoms would be apparent and routine hygienic measures to prevent transmission of faecal-oral pathogens would be sufficient to protect patients; for tuberculosis, sputum positivity is less common than with tuberculosis in the immunocompetent patient and occurs later, when the patient will already have constitutional symptoms.

9.2.3 Notably, all of these pathogens could affect immunocompetent anaesthetists and would be covered by existing measures. The fully informed HIV-positive person is, if anything, more likely to be aware of the need to present early to his/her physician if symptoms develop and, where appropriate, would be advised to take time off work until they were recovered and no longer presented an infective hazard.

9.3 HIV encephalopathy

9.3.1 Previous guidelines expressed concern about the risk to patients from an anaesthetist who was developing an HIV encephalopathy with possible impairment of concentration and the ability to respond rapidly to changes in a patient's condition during an anaesthetic.

9.3.2 The vast majority of HIV encephalopathy presents well after the onset of clinically apparent immune deficiency. An infected anaesthetist with an encephalopathy will therefore have already been advised to stop work due to the severity of the disease. The use of zidovudine earlier in symptomatic disease, which is now standard practice, substantially reduces the incidence of encephalopathy, delays its appearance and reduces its severity. Early clinical signs of significant encephalopathy can be detected during routine clinical monitoring. It is essential therefore for patient safety that the HIV positive anaesthetist is under regular, expert medical care.

9.4 Transmission from an infected anaesthetist to patients.

9.4.1 To date there is only one report of transmission of HIV from an infected health care worker to patients. There is strong evidence that a dentist in the USA who was HIV positive infected five patients during the course of their dental treatment although the precise mechanism of transmission is not fully known.^{16,17,18}

9.4.2 In several studies^{19,20,21,22,23} of patients treated by HIV infected health care workers (three surgeons and one dental student) no evidence of transmission of the virus to patients has been found. However, the number of patients in these studies is small (1,246). It is not possible therefore to define precisely the risk of transmission from an infected health care worker to patients. There is a risk, albeit small. The question therefore arises "what restrictions, if any, should be placed on an HIV positive anaesthetist regarding his clinical practice?"

9.4.3 The UK Health Department's document "AIDS - HIV infected health care workers: occupational guidance for health care workers, their physicians and employers"² recognises that certain invasive procedures may place patients at risk of transmission of HIV from a health care worker. An invasive procedure is defined as 'surgical entry into tissues, cavities or organs or repair of major traumatic injuries, cardiac catheterisation and angiography, vaginal or Caesarean deliveries and other obstetric procedures during which bleeding may occur; the manipulation, cutting or removal of any oral or perioral tissues, including tooth structure during which bleeding may occur'. The document goes on to point out that 'the risk of injury to a health care worker depends on a variety of factors which include the type of procedure, skill of the operator, circumstances of the operation and physical condition of the patient. Examples of procedures where infection might be transmitted are those in which hands may be in contact with sharp instruments or sharp tissues (spicules of bone or teeth) inside a patient's body cavity or open wound particularly when the hands are not completely visible. Such procedures should not be performed by HIV infected health care workers'.

9.4.4 Procedures performed routinely by anaesthetists during the course of their clinical work do not fall within this definition. Anaesthetists do not normally use sharp instruments inside body cavities or open wounds. Their hands are visible. The likelihood of an anaesthetist's blood contaminating a patient's blood is very small indeed.

9.5.5 It is therefore reasonable for an HIV positive anaesthetist to continue in clinical practice provided that he/she

- Practices cross-infection precautions **routinely**
- understands the routes of occupational transmission of HIV

- has sought and is following advice about his/her practice
- is familiar with the guidance of the General Medical Council
- is under regular medical supervision

9.4.6 It is recognised that this advice is based on the evidence currently available. Council will review the evidence annually.

The UK Advisory Panel for HIV Infected Health Care Workers is available to give advice about working practices to the physicians, occupational physicians and employers of infected health workers. An anaesthetist is a member of the panel. The identity of any individual health worker is not known to the Panel. Advice may be sought via the Secretariat, AIDS Unit, Room 217, Friars House, 157-158 Blackfriars Road, London SE1 8EU. Tel: 0171 972 3272.

Section 10.
THE HEPATITIS B INFECTED ANAESTHETIST

10.1 Transmission of HBV from infected health care workers to patients is well documented.²⁴ Apart from renal dialysis units, outbreaks have mainly been associated with surgical operations, transmission occurring during invasive procedures as defined under 9.4.3. Clearly, such procedures must not be performed by an anaesthetist who is HbeAg positive or who is HBsAg positive with no e markers. Apart from this, on the evidence currently available a hepatitis infected anaesthetist may continue in clinical practice.

REFERENCES

1. O'Donnell N G, Asbury A J. The occupational hazard of immunodeficiency virus and hepatitis B infection. 1. Perceived risks and preventative measures adopted by anaesthetists: a postal survey. *Anaesthesia* 1992; **47**: 923-928.
2. UK Health Departments. *AIDS - HIV Infected Health Care Workers. Occupational guidance for health care workers, their physicians and employers. Recommendations of the Expert Advisory Group on AIDS.* 1991.
3. AIDS and HIV-1 infection in the United Kingdom: monthly report. *Communicable Disease Report* 1991; **41**: 185-188.
4. The unlinked anonymous HIV prevalence monitoring programme in England and Wales: preliminary results. *Communicable Disease Report.* 1991; R69-76.
5. AIDS Update. *British Medical Journal* 1991; **303**: 208.
6. CDSC. *Occupational Transmission of HIV. Summary of published reports.* October 1992.
7. Werner B G, Grady G F. Accidental Hepatitis B - surface antigen positive inoculations. *Annals of Internal Medicine* 1982; **97**: 367-369.
8. Seeff L B, Wright M P H, Zimmerman H J, et al. Type B hepatitis after needle-stick exposure: prevention with hepatitis B immune globulin. *Annals of Internal Medicine* 1978; **88**: 285-293.
9. Gerberging J L, Littell C, Tarkington A, et al. Risk of exposure of surgical personnel of patients' blood during surgery at San Francisco General Hospital. *The New England Journal of Medicine* 1990; **322**: 1788-1793.
10. UK Health Departments. *Guidelines for clinical health care workers: protection against HIV and hepatitis viruses.* 1990. HMSO: London.

11. Department of Health. *HIV infection, tissue banks and organ donation*. 1990. PL/CMO (90) 2.
12. Jeffrey D J. Zidovudine after occupational exposure to HIV. *British Medical Journal* 1991; **302**: 1349-1350.
13. CDC. Public Health Service statement on management of occupational exposure to human immunodeficiency virus, including considerations regarding Zidovudine post exposure use. *Morbidity and Mortality Weekly Reports* 1991; **39**: 1-14.
14. Department of Health. Occupational exposure to HIV and use of zidovudine. A statement from the Expert Advisory Group on AIDS. PL/CO (92)1.
15. General Medical Council. *HIV infection and AIDS: the ethical considerations*. 1988.
16. Possible transmission of human immunodeficient virus to a patient during an invasive dental procedure. *Morbidity and Mortality Weekly Reports* 1990; **39**: 489-493.
17. Update: transmission of HIV infection during an invasive dental procedure - Florida. *Morbidity and Mortality Weekly Reports* 1991; **40**: 21-27.33.
18. Update: transmission of HIV during invasive dental procedures - Florida. *Morbidity and Mortality Weekly Reports* 1991; **40**: 377-381.
19. Porter J D, Cruikshank J G, Gentle P H, et al. Management of patients treated by a surgeon with HIV infection. *Lancet* 1990; **335**: 113-114.
20. Armstrong F P, Milner J C, Wolfe W H. Investigation of a health care worker with symptomatic immunodeficiency virus infection; an epidemiologic approach. *Military Medicine* 1987; **152**: 414-418.

21. Comer R W, Myers D R, Steadman C D, et al. Management considerations for an HIV positive dental student. *Journal of Dental Education* 1991; **55**: 187-191.
22. Mishu B, Schaffner W, Horan J M, Wood L H, et al. A surgeon with AIDS: lack of evidence of transmission to patients. *Journal of the American Medical Association* 1990; **264**: 467-70.
23. Danilo R N., MacDonald K C, Rhaines F S et al. A look back investigation of patients of an HIV-infected physician. *New England Journal of Medicine* 1991; **325**: 1406-1411.
24. Breuer J, Jeffries D J. HIV and hepatitis B virus infection in health care workers; a risk to patients? *Reviews in Medical Microbiology* 1992;**3** 1-8.

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