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ACQUIRED IMMUNE DEFICIENCY SYNDROME

AIDS

BOOKLET 3

GUIDANCE FOR SURGEONS, ANAESTHETISTS AND DENTISTS DEALING WITH PATIENTS INFECTED WITH HTLV III

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Guidance for Surgeons, Anaesthetists and Dentists dealing with patients infected with HTLV III

Summary of Guidance for Surgeons, Anaesthetists and Dentists dealing with patients infected with HTLV III

This summary must be read in conjunction with the rest of the Guidance.

S.1 HTLV III infection is not easily transmitted but health care personnel should take steps to see that the procedures described in this guidance are followed in order to minimise exposure to infectious material and to reduce the risk of transmission of HTLV III. The procedures described amount to very little more than what is usually taken to be good clinical procedures.

S.2 HTLV III can be transmitted by blood, blood products and semen. The virus has also been isolated from saliva, tears and breast milk and may occur in other body fluids and could possibly be spread by these.

S.3 Generally, the precautions taken should be along similar lines to those taken for Hepatitis B.

S.4 The most likely potential method of transmission of HTLV III to health care personnel is by the percutaneous inoculation of infected blood by a contaminated needle, other sharp instrument or broken glass.

S.5 Protective clothing for surgeons, anaesthetists, dentists and other health care personnel caring for HTLV III antibody positive patients are described in paras 3.5, 4.11, 4.13, 5.3, 5.7, 7.6.

S.6 Open cuts, fresh abrasions, other open skin lesions and sites of vascular access on HTLV III antibody positive patients or on health care personnel attending them must be covered with e.g. waterproof and other suitable dressings.

S.7 When dealing with contaminated equipment, personnel should wear a disposable plastic apron under a gown, mask, protective eyewear and gloves and disposable overshoes. Special care is required if any sharp instruments are to be handled as gloves provide little protection.

S.8 Contaminated gloves, disposable gowns and containers, swabs etc should be double bagged, labelled with a hazard warning and incinerated according to approved local practice. Glassware should be autoclaved before being either recycled or discarded if disposable.

S.9 Disinfection of external surfaces of equipment, bench surfaces etc that may have been contaminated and cannot be autoclaved is described in para 4.15.

S.10 The handling of contaminated linen and similar non disposable items is described in para 4.16.

Guidance for Surgeons, Anaesthetists, Dentists and other Health Care Personnel dealing with patients infected with HTLV III

1. Advice and Guidelines previously issued

Advice concerning the Acquired Immune Deficiency Syndrome (AIDS) has already been issued as ACDP Guidelines 1 HC(85)2 (in Scotland reference SHHD/DS(85)10 and in Wales reference WHC(85)4) and as the booklet 'AIDS-General Information for Doctors" in England and Wales which was enclosed with the letter from the Chief Medical Officer CMO(85)7 (in Scotland reference SHHD/CAMO(85)8).

Some of the information covered in CMO(85)7 has been updated in this guidance. Appendix 1 is a brief summary of the clinical features of AIDS.

2. The aim of this Guidance

This guidance is intended for Surgeons, Anaesthetists and Dentists and may also be of use to other health care personnel who undertake invasive procedures. The most important is that good standard clinical procedures must be used when treating all patients who may be infectious including those who are HTLV III antibody positive.

3. The infectivity of HTLV III antibody positive patients and transmission of infection

3.1 On the basis of present knowledge, all HTLV III antibody positive individuals should be considered capable of transmitting the infection. They are likely to remain infected for life. Experience to date both in the UK and the USA indicates that HTLV III infection is not easily transmitted to health care personnel who care for patients who are HTLV III antibody positive. Nevertheless, because of the serious nature of the infection, good standard clinical procedure must be carried out to minimise exposure to infectious material and to reduce the risk of transmission of HTLV III.

3.2 HTLV III has been isolated from blood, semen, tears, breast milk and saliva, however infection appears to be transmitted principally by sexual intercourse - predominantly between male homosexuals - or by the transfusion or inoculation of contaminated blood or blood products. HTLV III appears to be less transmissible than the Hepatitis B virus and is readily inactivated by heat and disinfectants as described below. HTLV III infection can be transmitted by blood, blood products, semen. The virus has been also isolated from saliva, tears and breast milk and may occur in other body fluids. Virus in semen may be important in relation to certain surgical procedures. Faeces, urine and pus should be considered a possible hazard when they are contaminated with blood.

3.3 There is no evidence that social contact with HTLV III positive individuals presents a risk of transmission of infection. Furthermore, there is no evidence that the infection is transmissible by airborne droplets resulting from coughing or sneezing, nor by sharing washing, eating and drinking utensils, other articles in general use or the sharing of toilet facilities.

3.4 Transfusion or inoculation of infected blood. The virus has been isolated from the blood of antibody positive individuals and the infection has been transmitted by the transfusion of contaminated blood and blood products. The most likely potential method of transmission of HTLV III to health care is by the percutaneous inoculation of infective blood by a contaminated needle, other sharp instrument or broken glass. However no cases of AIDS has been reported in health care workers following accidental inoculation of infected blood or other material. In the USA[3] health care workers without other risk factors who cared for HTLV III antibody positive patients but did not have parenteral or mucous membrane exposure to infectious material have not developed a confirmed positive HLTV III antibody test. A prospective study on health care workers by CDSC[4] was started in January 1985 and 30 cases of parenteral or mucous membrane exposure were reported - all with negative HTLV III antibody tests. There is evidence that HTLV III is less easily

transmissible than Hepatitis B following accidental inoculation. There is no evidence of airborne spread of HTLV III. The development of a positive HLTV III antibody test in a nurse has been reported in the UK following a severe needlestick injury which involved the injection of a small amount of blood from a patient with AIDS. [DN - to be updated]

3.5 As HTLV III could theoretically infect via small scratches, cuts, bites, burns or via the conjunctiva or abrasions in other mucous membranes, Health care personnel should wear gloves, mask and protective eyewear and disposable overshoes as well as a disposable plastic apron under a gown, if there is a risk of becoming contaminated with possibly infected material during invasive anaesthetic, surgical or dental procedures. At other times during normal clinical procedures on the ward and elsewhere, health care personnel need only wear a plastic apron and gloves when handling blood and other body fluids.

3.6 Salivary route. As HTLV III has been isolated from saliva, there is the theoretical possibility that kissing with the exchange or large amount of saliva may allow the transmission of the virus although this has not been documented. Saliva may be contaminated with blood particularly during dental procedures. Therefore for practical purposes the transmission of HTLV III must be considered a possibility in those exposed to large amounts of saliva during their professional work.

3.7 Transfer of infected material from contaminated work surfaces, equipment, instruments etc. to health care personnel could occur and the same precautions must be taken when working with these.

4. HTLV III antibody positive patients in hospital

4.1 Health care staff should be informed, in advance if possible, of patients who will be under their care or of material they may be asked to handle which could present a risk of infection. However only staff directly dealing with patients and particularly those undertaking invasive procedures need know the precise nature

of the risk ie that these patients are HTLV III antibody positive. Similarly, these staff should be informed when a patient is found to be HTLV III antibody positive whilst under their care.

Confidentiality of health care data

The strictest confidentiality must be maintained when a HTLV III antibody individual is identified. Where a person is tested for HTLV III infection or its complications and it is thought to have been sexually transmitted, health authorities have an obligation to maintain confidentiality of information under the terms of the National Health Service (Venereal Diseases) Regulations 1974 (SI 1974.9). For all HTLV III positive patients the normal rules of medical confidentiality apply and unless the patient has given his consent, personal health data relating to him must not be disclosed to anyone for any purpose other than the health care of that patient, except where the disclosure is necessary to prevent the spread of infection. Disclosure of this information for purposes other than medical or public health could lead to serious consequences for the informant. Adequate safeguards to protect against unauthorised disclosure must be adopted. [Normally it is inappropriate to test a patient for HTLV III antibodies without their consent unless it is part of a clinical investigation of signs and symptoms. If a patient refuses to be tested then they should be treated on the assumption that they are positive if they are deemed to be in a high risk group.]

4.2 Isolation techniques are needed for HTLV III antibody positive patients when they are bleeding or likely to bleed, are incontinent of body fluids, have open or drained wounds, have disturbed level of consciousness or have an infection that requires isolation (eg pulmonary tuberculosis). These patients should be nursed in isolation according to the ACDP guidelines[1] (HC(85)2), which will usually imply the use of a single room. Health care personnel caring for patients with these complications will ordinarily only need to wear disposable gloves and a plastic apron together with protective eyewear if there is a risk of splashing. However health care personnel should wear a disposable plastic apron under a gown, gloves, mask and protective eyewear if there is a risk of becoming contaminated with possibly infected material during invasive anaesthetic, surgical or dental procedures.

4.3 Asymptomatic patients who do not fall into the categories listed in para 4.2 may be admitted to an open ward and should be allowed the same activities as other patients.

4.4 Normally patients may use communal lavatories unless they have bloody diarrhoea in which case the lavatory should be cleaned after each use with a disinfectant suitable for lavatories.

4.5 Normally patients may use crockery and cutlery which is washed after use in the same way as for other patients unless gross contamination is likely to occur in which case disposable types should be used.

4.6 Resuscitation equipment (eg airway, sucker etc) for each patient should be kept next to the bed. The equipment should be disposable, or if not, then sterilisable preferably by autoclaving (see Appendix 2).

4.7 Specimens must not be sent to the laboratory without a standing agreement between the clinician and senior laboratory staff.

4.8 Precautions to avoid transmission of HTLV III. The following recommendations [4.9-4.16] are made in addition to those in the ACDP Guidelines[1] (HC(85)2).

4.9 Particular care should be taken when using needles or sharp instruments on HTLV III antibody positive patients. Needles should not be resheathed after use due to the risk of needlestick injury and disposable equipment should be used whenever possible for parenteral procedures. Special care must be taken in the handling and disposal of cartridges of local anaesthetic and needles used during dental procedures.

4.10 Open cuts, fresh abrasions, other open skin lesions and sites of vascular access on HLTV III antibody positive patients should be covered with waterproof or other suitable dressings.

4.11 Personnel should wear a disposable plastic apron under a gown, disposable plastic gloves and disposable overshoes when dealing with blood, secretions and excreta and when mopping up spillages from HTLV III antibody positive patients. When

splashing is a possibility (eg open surgery or endoscopic procedures) eye protection must be worn and eye wash bottles should be available.

4.12 Open cuts, fresh abrasions, other open skin lesions on health care personnel must be covered with waterproof dressings whilst caring for HTLV III antibody positive patients.

4.13 When dealing with contaminated equipment, personnel must wear a disposable plastic apron under a gown, mask, protective eyewear and gloves and disposable overshoes. Special care is required if any sharp instruments are to be handled as gloves provide little protection.

4.14 Contaminated gloves, disposable gowns and containers, swabs etc must be double bagged, labelled with a hazard warning and incinerated according to approved local practice. Glassware must be autoclaved before being either recycled or discarded if disposable.

4.15 External surfaces of equipment, bench surfaces that may have been contaminated and cannot be autoclaved must be treated with freshly prepared sodium hypochlorite 10,000 ppm available chlorine (household bleach eg Domestos or Chloros diluted 1 part bleach to 10 parts water) and left in contact with it, where possible, for 30 minutes. Other external surfaces of non-disposable equipment where only suspected contamination has occured must be wiped with 2% glutaraldehyde or 10,000 ppm hypochlorite. Hypochlorite may damage metal surfaces and fabric. Freshly prepared 2% glutaraldehyde (eg Asep, Cidex or Totacide) can be used to soak non-disposable equipment that cannot be autoclaved. The equipment must first be decontaminated in 2% glutaraldehyde for 1 hour and then this solution discarded. Then the equipment should be physically cleaned with detergent and warm water to remove all blood and other organic matter, rinsed and left to soak in 2% glutaraldehyde for 3 hours.

4.16 In hospitals contaminated linen must be contained in a water soluble plastic bag (either alginate stitched or Polyvinyl alcohol (PVA) clearly labelled and double bagged according to local practice for infected linen. The linen must not be sorted in the laundry, but the bag transferred directly into the hot wash of a washing machine and washed at the temperature designated for infected laundry, usually 93°C for 10 minutes. Outside hospitals, all non-disposable items such as gowns, white coats and towels may be safety washed in the hot wash of an ordinary washing machine. The washing temperature should be 90°C for 10 minutes. The temperature employed in the cycle is adequate to inactivate the virus, therefore decontamination of the washing machine is not necessary. [DN - temperatures to be checked]

5. Surgery on HTLV III antibody positive patients

5.1 It is unnecessary to designate a theatre and staff solely for operations on infected patients. The precautions required will be similar to those taken currently for operative procedures on patients deemed 'dirty' including those with Hepatitis B. Infected patients who require surgical treatment should be dealt with separately or at the end of a surgical list to enable the operating theatre and anaesthetic room (if used-see para 6.2) to be cleaned.

5.2 If possible the patient trolley and theatre table should have a surface (eg laminate) that can readily cleaned with disinfectant (see para 4.15). The trolley and the table should be covered with a water repellant sheet and a disposable sheet on top.

5.3 All health care personnel in the theatre must wear a disposable plastic apron under a disposable gown, mask and gloves. Protective eyewear must be worn if there is any danger of splashing with possibly infectious material.

5.4 When handling contaminated equipment, personnel must wear gown, mask, protective eyewear and gloves. Special care is required if any sharp instruments are to be handled as gloves provide little protection.

5.5 If blood or other possibly infectious material is spilt during the operation outside the operative field, it must be cleaned by saturating with sodium hypochlorite 10,000 ppm (household bleach eg Chloros or Domestos diluted 1 part bleach to 10 parts water) and then wiping with disposable paper towels.

5.6 During Obstetrical and Gynaecological surgical procedures (including deliveries) on HTLV III antibody positive women, the same precautions and procedures recommended for other surgical procedures should be used. Lochia may be contaminated with blood and should be treated as possibly infectious. The placenta should be disposed of in the same way as other contaminated material. There is evidence that breast milk from an antibody positive mother may contain HTLV III and therefore this breast milk should not be used to breast feed or be used in a milk bank.

5.7 During Ophthalmic surgical procedures on HTLV III antibody positive patients, the same precautions and procedures recommended for other surgical procedures should be used because tears may contain HTLV III. Eye examinations or other procedures involving contact with tears should be performed by health care personnel wearing disposable gloves. Masks, gowns and protective eyewear are required only when performing invasive (eg operative) procedures or when there is any danger of splashing. The following recommendations are adapted from MMWR 30 August Vol. 34 No. 34 pages 533-534 (1985) and should be followed:

(a) Instruments that come into direct contact with the external surface of the eye should be wiped clean and then treated with (i) a 10 minute exposure to a fresh solution of 3% hydrogen peroxide: or (ii) a fresh solution containing 10,000 ppm sodium hypochlorite and left in contact, where possible, for 30

minutes: or (iii) 70% ethanol: or (iv) 70% isopropanol. The instrument should be thoroughly rinsed in water and dried before reuse. Personnel handling contaminated equipment should observe the precautions outlined in para 5.4

5.8 All equipment used should, if possible, be disposable or if not then sterilisable preferably by autoclaving (see Appendix 2). After the operation, external surfaces (eg theatre table) that may have been contaminated and cannot be autoclaved, must be disinfected (see para 4.15).

5.9 Handling of contaminated disposable items is discussed in paras 4.14 and of contaminated non disposable linen and similar items in paras 4.16.

5.10 Additional details about preparing the theatre before and disinfecting and cleaning the theatre after the operation that may be helpful to health care personnel are given in the report of the Royal College of Nursing AIDS Working Party[2]

5.11 During invasive procedures on HTLV III antibody positive patients the surgeon and others in the theatre will be at risk from cuts, needle pricks and splashing of possibly infectious material. Cuts and abrasions in the skin should be washed in running water with soap, or if available an antiseptic suitable for skin whilst splashes into mucous membranes should be treated as soon as practicable by washing in cold running water. Eye wash bottles should be available during invasive procedures.

5.12 All theatre staff involved in the operation should be made aware when an infectious patient is to be operated on.

5.13 Surgical specimens taken from histopathology etc should be handled as little as possible and processed according to ACDP Guidelines[1] (HC(85)2).

6. Anaesthetics on HTLV III antibody positive patients

6.1 Precautions taken should be along similar lines to those currently taken for patients with Hepatitis B.

6.2 The patient should be induced in the operating theatre (if practicable) in order to avoid extra cleaning of the anaesthetic room.

6.3 All equipment used (eg masks, oral and nasopharyngeal airway pieces and corrugated tubing for anaesthetic machines or ventilators) should, if possible, be disposable or if not then sterilisable preferably by autoclaving (see Appendix 2). Treatment of non disposable equipment and external surfaces is discussed in paras 4.15 and 4.16.

6.4 Great care is required for sites of vascular access and these should be covered with a waterproof or other suitable dressing.

7. Dentistry on HTLV III antibody positive patients

7.1 General dental practitioners should be able safely to treat HTLV III antibody positive patients in their surgeries by following the precautions outlined in this guidance. There may be occasions when a dentist will wish to establish whether a particular patient is HTLV III antibody positive. In such cases the procedure is for the patient to be referred to their own medical adviser who will arrange for counselling and the necessary test. If such a person does not wish to be tested, then they should be assumed to be a high risk individual for purposes of infection control.

7.2 Good standard clinical technique to avoid transmission of any infection should be practised by all involved in dental procedures on all patients. Precautions taken should be along similar lines to those currently taken for patients with Hepatitis B5.

7.3 General dental practitioners should remember that they have responsibility for the protection of all their employees including dental hygienists and dental assistants. Dental hygienists must take the same precautions as dentists during dental procedures on HTLV III antibody positive patients.

7.4 Only dental staff who are directly involved in dental procedures on these patients need be informed in advance that the patient is HTLV III antibody positive. Special precautions are not required for these patients in the waiting room. The patient's appointment should be made at the end of the day's list.

7.5 Cuts and abrasions on dental personnel should be covered with waterproof or other suitable dressings whilst caring for HTLV III antibody positive patients.

7.6 Protective clothing, including gowns and gloves must be worn by those dental personnel directly involved in dental procedures and in view of the aerosols containing blood and saliva that may be generated by low and high speed dental drills, ultrasonic scalers and irrigation/air syringes, the wearing of protective eyewear and masks is essential. High volume evacuation systems must be used and conventional scaling techniques are recommended.

7.7 Disposable equipment and materials should be used whenever possible including napkins, mixing surfaces and mouthwash containers. Disposable needles must be used. A fresh cartridge of local anaesthetic must be used on each patient.

7.8 All instruments used that are not disposable should if possible be sterilisable, preferably by autoclaving (see Appendix 2). Sterilisable handpieces must be used.

7.9 Freshly prepared 2% glutaraldehyde (eg Asep, Cidex or Totacide) can be used to soak non-disposable equipment that cannot be autoclaved. The equipment should first be decontaminated in 2% glutaraldehyde for 1 hour and then this solution discarded. The equipment should then be physically cleaned in detergent and

warm water to remove any organic matter, rinsed and then left to soak in 2% gluteraldehyde for 3 hours. All working surfaces, including spittoon and receivers, should be physically cleaned to remove any contaminated material and should be swabbed down with a solution of 2% glutaraldehyde and left in contact with it, if possible for 3 hours or alternatively treated with 10,000 ppm sodium hypochlorite (household bleach eg Domestos or Chloros diluted 1 part bleach to 10 parts water) for 30 minutes. Other external surfaces of non-disposable equipment where only suspected contamination has occured should be wiped with 2% glutaraldehyde or 10,000 ppm hypochlorite. Hypochlorite may damage metal surfaces and fabric. Evacuation systems must be cleaned by flushing after each patient with a solution of 2% glutaraldehyde. After the last patient 2% glut raldehyde should be added to the vacuum system collector and left for a minimum of 3 hours.

7.10 When handling contaminated equipment, personnel should wear gown, mask, protective eyewear and gloves. Special care is required if any sharp dental instruments and needles are to be handled as gloves provide little protection. Care will be required when removing needles from the dental cartridge syringe. These, together with other disposable sharp instruments and used dental cartridges should be placed in a suitable container for disposal.

7.11 Impressions should be taken in a silicone based material. These, together with dentures and other appliances to be sent to the laboratory should first be decontaminated in 2% glutaraldehyde for 1 hour. They should then be rinsed and transferred to a fresh solution of 2% glutaraldehyde and left to soak for a further 3 hours or overnight if more convenient. The prolonged immersion will not affect the dimensional stability of impressions taken in a silicone based material.

7.12 Disposable material must be used to provide intra-oral X-ray film support. The Radiographer should be forewarned and wear disposable gloves.

7.13 All disposable materials, napkins etc should be double bagged in plastic bags and safety disposed of, preferably by incineration. For procedures in hospitals see para 7.10.

7.14 Dental personnel directly involved in dental procedures should wear a gown which can withstand a washing temperature of 90°C for 10 minutes. All non-disposable items such as gowns, white coats and towels may be safety washed in the hot wash of an ordinary washing machine. The washing temperature should be 90°C for 10 minutes. The temperature employed in the cycle is adequate to inactivate the virus, therefore decontamination of the washing machine is not necessary. In hospitals these items should be double bagged and clearly labelled according to approved local practice for infected linen which is contained in a water soluble plastic bag (either alginate stitched or Polyvinyl alcohol (PVA)) and washed at the temperature designated for infected laundry, usually 93°C for 10 minutes.

7.15 Dental procedures requiring a general anaesthetic will require the procedures outlined in section to be followed.

8. Venepuncture on patients with AIDS or suspected of being HTLV III antibody positive

If blood is taken from a person suspected of having AIDS or being HTLV III antibody positive then the following procedures outlined in the ACDP Guidelines[1] HC(85)2 (and reprinted in 'AIDS-General Information for Doctors' CMO(85)7) should be observed.

a. When blood or other specimens are taken, gloves and a disposable plastic apron and/or gown must be worn and discarded safely after use. Eye protection is recommended.

b. Only the minimum essential quantity of blood (required for optimal patient care) should be withdrawn and then only by designated staff who are trained and experienced. Those who withdraw blood or other body fluids must ensure that the outside of any specimen container is free from contamination.

c. Disposable units must be used for blood collection. Needles must be removed from syringes before the blood is discharged into the specimen container and immediately discarded into a puncture-proof disposable bin used solely for that purpose and designed for incineration. Only needle locking or similar units should be used to aspirate fluid from patients. Accidental puncture wounds in staff must be treated immediately by encouraging bleeding and liberal washing with soap and water. Any such accident or contamination of broken skin or mucous membrane must be promptly reported to and recorded by the person with overall responsibility for the work (see 9.2)

d. Specimens must not be sent to the laboratory without a standing agreement between the clinician and senior laboratory staff. They must be in robust screw-capped and leak-proof containers (evacuated or not) bearing a hazard warning label. Securely capped specimen containers should be sent in separate sealed plastic bags, kept upright if possible and transported to the laboratory in a sound secondary container, which can be disinfected. the accompanying request forms must be kept separate from the specimen to avoid contamination and also clearly indicate the hazard. Pins, staples or metal clips must not be used to seal the bags and for safety, the carrying handles of the secondary container should not be attached to the lid.

9. Accidental inoculation or contamination

9.1 In the event of accidental inoculation or when personnel get blood, saliva

or other infectious material from a HTLV III antibody positive patient into the eye or mouth, the affected area should be washed with running water. A cut or abrasion in the skin that is inoculated should be washed in running water with soap or, if available, an antiseptic suitable for skin. The possibility of of transmission of other infections (eg Hepatitis B) should be considered.

9.2 Accidental inoculation or contamination should be reported to the senior member of staff with overall responsibility for the work and responsible for recording accidents and to the Control of Infection Officer. The Communicable Disease Surveillance Centre (CDSC) and the Communicable Diseases (Scotland) Unit are conducting a survey of accidental needlestick injury and other incidents or accidental inoculation with HTLV III and should be contacted for details (CDSC Tel. 01-200-6868 or CD(S)U Tel. 041-946 7120).

9.3 General dental practitioners or their staff who sustain an inoculation injury should contact a local physician with an interest in HTLV III infection. If necessary an enquiry should be made to the local District Medical Officer or in Scotland, the Community Medical Specialist (Communicable Diseases and Environmental Health) at the local Health Board who will advise which physician to consult.

References.

1. Advisory Committee on Dangerous Pathogens. AIDS-Interim Guidelines DHSS HC(85)2. [DN - to be updated]

2. First report of the Royal College of Nursing AIDS Working Party: Nursing guidelines on the management of patients in hospital and the community suffering from AIDS. RCN 20 Cavendish Square London W1MOAB.

3. S H Weiss et al: JAMA 11 January 1985; vol. 253; no. 2; pages 221-225.

4. Communicable Disease Report: CDR 85/22

5. Expert Group on Hepatitis in Dentistry EAGA(2)11 January 1979.