



SCOTTISH HOME AND HEALTH DEPARTMENT

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To: Chief Administrative Medical Officers

Copied to: Community Medicine Specialists
(Communicable Diseases and Environmental Health)

3 December 1984

Dear Doctor

GUIDANCE FOR HEALTH CARE PERSONNEL DEALING WITH PATIENTS INFECTED WITH HEPATITIS B VIRUS

The employment in certain posts of the National Health Service of staff who have been found to be carriers of hepatitis B surface antigen (HBsAg) has already been the subject of previous advice (SHHD/CAMO(82)1 dated 5 January 1982).

The Advisory Group on Hepatitis has now considered the question of advice to health care personnel who are treating patients who are hepatitis B surface antigen (HBsAg) positive. The Group's recommendations are contained in an appendix to this letter.

Any queries regarding this letter should be directed to Dr R G Covell, Room 2, St Andrew's House, Edinburgh (Telephone 031 556 8501 Ext 2532).

Yours sincerely

William M Prentice

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Principal Medical Officer

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4.3 Virus can also infect via minute scratches, cuts, bites, burns or via the conjunctivae or abrasions in the mucous membranes.

4.4 Transfer of infective material can occur via contaminated surfaces, equipment, instruments etc.

4.5 There is no evidence of airborne spread.

5. HBsAg positive patients in hospital

5.1 HBsAg positive patients may be admitted to an open ward.

5.2 They should be allowed the same activities as other patients and to use communal lavatories, crockery and cutlery.

5.3 Isolation techniques are needed only when a patient is bleeding or likely to bleed.

6. Precautions to avoid transmission

6.1 Particular care should be taken when using needles or sharp instruments on HBsAg positive patients. Parenteral procedures should be kept to a minimum.

6.2 Cuts and abrasions, whether on HBsAg positive patients or attendant staff, should be covered with waterproof dressings.

6.3 Personnel should wear gowns, disposable plastic aprons and disposable gloves when dealing with blood, secretions and excreta and when mopping up spillages from an HBsAg positive patient. Eye protection will be required when splashing is a possibility. Spillages should be reported to a senior member of staff who should supervise clearing up. Care should be taken when dealing with broken glass.

6.4 External surfaces of equipment, bench surfaces and non-disposable equipment that may have been contaminated and cannot be heat sterilised should be treated with 2 per cent activated glutaraldehyde or sodium hypochlorite containing 1000 ppm available chlorine. Both disinfectants should be freshly prepared. (NB Sodium hypochlorite can damage metal equipment including stainless steel.) Contaminated gloves, paper tissues and cotton wool etc should be incinerated. Disposable glassware should be autoclaved before being discarded.

6.5 The practice of changing needles but not the syringe when injecting a number of patients with the same substance could transmit hepatitis B from one patient to another and must be avoided.

7. Surgery on HBsAg positive patients

It would be impractical and unjustifiable to designate a theatre and staff solely for operations on infective patients. The precautions required will vary according to circumstances, but the surgeon and his assistants will be at risk from needle pricks and cuts. All theatre staff should be aware when a known infective patient is operated on and relevant accidents should be reported to a senior member of staff.

8. Clothing and linen from HBsAg positive patients

8.1 Unsoiled worn clothing and used linen present no danger and can be processed in the normal way.

GUIDANCE FOR HEALTH CARE PERSONNEL DEALING WITH PATIENTS INFECTED WITH HEPATITIS B VIRUS

This document deals with the precautions suggested in order to minimise the transmission of hepatitis B virus from patients to staff.

1. General background

Hepatitis B is relatively uncommon in the United Kingdom. A few per cent of the population become infected at some time in their lives. About 1 in 1000 blood donors in the adult population is a hepatitis B carrier (ie a carrier of Hepatitis B surface Antigen (HBsAg) (virus marker) and some 1100 cases of acute clinical Hepatitis B are reported through laboratories each year. The majority of acute infections are sub-clinical and many are mild, but a small number of severe and fatal illnesses also occur. Approximately 5-10 per cent of those adults who become infected become carriers of the virus. Carriers and patients with acute infections are identified by the presence of the surface antigen of the virus (HBsAg) in their blood. Some will have sufficient complete infective virus circulating in their blood to represent a hazard to health care personnel.

2. Identification of HBsAg positive patients

Some patients are known to be HBsAg carriers because they have been tested when donating blood. Others are identified as HBsAg positive by tests carried out because of acute or chronic liver disease. However, it should be noted that the majority of carriers and patients with asymptomatic acute infections who enter hospital for some reason or another, or see their family doctor, will not have been identified as being HBsAg positive. Routine screening of all patients for HBsAg is impracticable as well as unnecessary in a country with a low overall prevalence rate.

3. Classification of HBsAg positive patients

3.1 Laboratory help should be sought if there is doubt about whether an HBsAg positive patient is a carrier or is suffering from an acute infection.

3.2 The infectivity of the blood of HBsAg carriers can be assessed by testing for hepatitis B 'e' antigen (HBeAg) and its antibody (anti-HBe). During the early years of carrying the virus a carrier's blood contains HBeAg and is highly infective. Later HBeAg is replaced by anti-HBe and the infectivity of the blood is greatly reduced. Many HBsAg carriers will be found to have anti-HBe. They are less likely to transmit the virus to others.

3.3 The blood of patients with acute hepatitis B should be regarded as highly infective.

4. Transmission of infection within the health care environment

4.1 Infection is almost always transmitted by blood, serum, or plasma. Other body fluids may contain minute amounts of virus but are of little importance in the spread of infection unless contaminated with blood.

4.2 The most common and important method of transmission to health care personnel is by the direct percutaneous inoculation of infective blood by a needle or other sharp instrument.

8.2 Blood-stained materials and disposable gowns and gloves should be incinerated. Disposable linen and drapes should be used when contamination with blood is likely.

9. Withdrawal of blood

9.1 Gloves and gowns should be available for staff taking blood on the wards. Surgical-type gloves should be worn for all parenteral procedures and used only once.

9.2 If blood samples are required for more than one test a single large syringe should be used.

9.3 Used needles and syringes should be placed in a wide-mouthed, rigid "sharps" disposal container and sent for incineration.

10. Transfer of laboratory specimens

10.1 All specimens from patients with suspected acute hepatitis B virus infection, and from known or suspected HBsAg carriers, should be distinctly marked with an appropriate yellow warning label (eg "Hepatitis Risk").

10.2 All specimens should be sent in a leakproof screwcap container within a plastic bag, sealed but not stapled. The accompanying card or letter should be attached to the outside of the bag. The best containers are robust blood collection tubes, but it must be ensured that the screw cap has a liner and that the cap is properly tightened.

11. Handling HBsAg positive blood in the laboratory

Detailed procedures for handling HBsAg positive specimens are documented in the Health Services Advisory Committee: Safety in Health Service Laboratories: Notes for Guidance (No 1 Hepatitis B). (In Press)

12. Accidental inoculation or contamination

12.1 In the event of accidental inoculation or when a member of staff gets blood from an HBsAg positive patient into a cut or abrasion or into the eye or mouth the affected area should be washed well immediately. The member of staff responsible for reports of accidents should be notified promptly and should telephone the nearest Public Health Laboratory¹ or Hepatitis Reference Laboratory for advice. Health Authorities should have a clear written policy for the reporting of all accidents.

12.2 Supplies of hepatitis B immunoglobulin are held by the Public Health Laboratory Service² and this should be given as soon as possible after the incident and preferably no later than 48 hours. (For Scotland see Footnote page 4).

12.3 In the case of accidental inoculation with blood from a patient of unknown HBsAg status, the patient should be tested for HBsAg as soon as possible to assess the possible significance of the incident. This is particularly important when the patient falls into a high risk category.

13. Hepatitis B Vaccine

Guidance on the use of hepatitis B Vaccine in health care personnel is contained in SHHD/CAMO(82)12 dated 15 October 1982 and also in the Health Departments Memorandum "Immunisation against Infectious Disease" April 1984, and the NHS Circular No 1984 (GEN)5 dated 8 March 1984 - Health and Safety at Work: Vaccination and Immunisation Policy for NHS staff.

14. Counselling of HBsAg carriers

It is recommended that anyone found to be an HBsAg carrier should be counselled about the ways in which the infection may spread and the precautions which can be taken to reduce the risk to others. It is helpful if the infectivity of individual carriers has been assessed by tests for HBeAg/Anti-HBe.

15. Concluding observations

15.1 There is a continuing small risk for health care personnel of contracting hepatitis B at work. Even though it is unusual for such infections to be severe, it is sensible to try to minimise the risk by taking the precautions outlined above when dealing with HBsAg positive patients. Some of these precautions are also of value in reducing the chances of cross-infection between patients.

15.2 It is important to remember that many HBsAg positive patients remain unidentified. The avoidance of needle pricks and cuts and the careful disposal of "sharps" when dealing with any patient helps to reduce the risk of hepatitis B.

15.3 Unnecessary restrictions and precautions may cause distress to HBsAg carriers and should be avoided.

15.4 Good communication between general practitioners, consultants and all health care personnel involved is essential for the current management of HBsAg positive patients.

Footnote

¹Public Health Laboratory Service in England and Wales

²Supplies are held by the Blood Transfusion Service in Scotland and by the Virus Reference Laboratory in Northern Ireland. In Scotland advice following accidental exposure may be obtained from the Hospital Control of Infection Officer or the local Community Medicine Specialist (Environmental Health).