

Correspondence

Reusable acupuncture needles are a potential risk for transmitting Prion disease

Sir,

It has been shown that the prion strain causing bovine spongiform encephalopathy (BSE) in cattle has infected humans, manifesting itself as variant Creutzfeldt-Jacob Disease (CJD)¹. Recently a number of reports have discussed the potential risk of transmitting variant CJD via infected surgical instruments.¹ Two papers are recommending that instruments used in patients suffering from variant CJD should be destroyed by incineration,^{1,2} as the prion has been shown to be highly resistant to standard sterilisation procedures.^{3,4} Due to the long incubating period, approximately 15 years,³ it is possible that a number of infected patients who have not yet become symptomatic will undergo an operation before their disease is identified. Destroying instruments from patients with known variant CJD, therefore, may not be sufficient to control spread of the disease via this route.

To the best of our knowledge CJD has only been identified in the brain, the spinal cord, retina,⁵ and lymphatic tissue.³ Moreover BSE has been identified in blood in sheep.⁶ Future research, however, might show that other forms of tissue can contain the infective agent for variant CJD.

Acupuncture is a technique widely adopted both within and without the medical profession. In the UK about 2000 medical practitioners are using acupuncture in their routine practice, and there are similar numbers of physiotherapists and lay practitioners.

An acupuncture needle is a surgical instrument and several cases of transmitting hepatitis B due to improper sterilisation of the needles have been reported.⁷ The incidence has probably decreased in the last couple of years as a result of the increased use of disposable needles, but reports of hepatitis B infections due to acupuncture still occur.⁸

The ratio between the use of disposable and reusable needles is unknown. An inquiry to two major retailers of acupuncture needles disclosed that roughly 2% of needles sold were reusable, and the majority of the customers were not medically trained. This figure is misleading, however, as such needles can be used for years. At present it is recommended to clean reusable needles mechanically,⁹ and sterilise them, for example by autoclaving at 121C for 15 minutes.

Whilst we do not have reports that variant CJD has been transmitted via acupuncture needles, we do know that standard sterilisation procedures are ineffective in destroying the prions responsible for variant CJD.^{3,4} In other fields of medicine, such as general surgery, neurosurgery, dentistry, etc. the instruments used are expensive, and a replacement with disposable instruments is neither practical nor economically viable at present. An acupuncture needle, however, is a cheap instrument (in the region of 5 to 10p per needle), and considering the potential hazards of re-useable needles, we contend that the use of single-use, sterile, disposable needles for acupuncture should be mandatory.

Reference list

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Invited reply:

The risk of transmission of variant CJD from reused and sterilised acupuncture needles is low but the industry should as a precaution use only disposable needles to remove any risk of transmission. There is currently no evidence to link any cases of variant CJD to date with any surgical procedures or with transmission by blood. Nevertheless, we cannot rule out a possible risk and so consider it prudent to take precautions to avoid this theoretical risk of transmission, wherever possible.

In August 1999 the Department of Health issued advice to the National Health Service and to healthcare organisations about minimising to risk of transmission of vCJD in the health-care setting.¹ The key issues for acupuncture, body piercing and tattooing industries are discussed below.

Because the prion agent is unusually resistant to currently available inactivation procedures, single-use instruments should be used wherever possible. Instruments, such as needles and acupuncture studs, designated for single use should be immediately discarded after use in approved containers and never re-processed. Suitable disposal containers, complying with British Standard specifications and legislation relating to the transportation of clinical waste, are available from NHS and medical supplies or may be supplied as part of a disposal contract with the local authority or waste disposal service operative. Guidance as to the law relating to the safe disposal of, and responsibilities for, clinical waste may be found in the BMA code of

Practice.² Further advice on the disposal of clinical waste and a listing of contractors may be obtained through the Environmental Services Association, 154 Buckingham Palace Road, London SW1W 9TR, 020 7824 8882.

Where no single use product is available, it is essential that all existing cleaning and sterilisation procedures operate to the highest standard in line with extant guidance.³ Seek advice on this issue with the Consultant in Communicable Disease Control in the local Public Health Department.

Additional information and advice on safety measures can be found in guidance produced by the Advisory Committee on Dangerous Pathogens (ACDP) and the Spongiform Encephalopathy Advisory Committee (SEAC).⁴

This also applies to instruments such as tongue depressors that come into contact with mucous membranes. This is in line with best practice in the control of infection advice for acupuncturists and others using needling techniques, dry or otherwise, issued by the World Health Organisation.⁵

Reference list

1. HSC 1999/178 - Variant CJD: Minimising the Risk of Transmission - at <http://www.open.gov.uk/doh.coinh.htm>
2. "The safe use and Disposal of Sharps" and in the HSC book "Safe Disposal of Clinical Waste" edition 1999
3. HSC 1999/179 - Controls Assurance in Infection Control: Decontamination of Medical Devices - <http://www.open.gov.uk/doh.coinh.htm>
4. Transmissible Spongiform Encephalopathy Agents: Safe Working and the Prevention of Infection, ISBN 0-11-322166-5, The Stationery Office, 020 7873 0011 or at www.official-documents.co.uk
5. WHO/EDM TRM/991 Guidelines on Basic Training and Safety in Acupuncture