

NOTE: Tables and reusable instruments and aprons must be adequately disinfected after use. Either autoclaving or chemical disinfection of instruments is acceptable, but the method chosen must be adequate to inactivate the hepatitis B virus.

REFERENCES

- 1) Aurelius MB. Autopsy safety. In: Collins KA, ed. *Autopsy Pathology and Reporting*. 3rd ed. Northfield, IL: College of American Pathologists; 2017; chap 12.
- 2) Nine JS. High-risk autopsy cases. In: Collins KA, ed. *Autopsy Pathology and Reporting*. 3rd ed. Northfield, IL: College of American Pathologists; 2017; chap 13
- 3) Wetli CV. Autopsy safety. *Lab Med*. 2001;32:451-453
- 4) Burton JL. Health and safety at necropsy. *J Clin Pathol*. 2003; 56(4):254-60.

ANP.34150 Special Handling of Transmissible Spongiform Encephalopathies (TSE) Phase II



The laboratory handles cases of suspected transmissible spongiform encephalopathies (TSE), including Creutzfeldt-Jakob disease (CJD), using procedures that minimize the risk of transmission.

NOTE: In addition to practicing standard precautions during the autopsy, procedures must be written for the special precautions to be taken for autopsies on patients in whom the diagnosis of TSE is suspected. Pathologists should consider taking these special precautions as well in cases of (a) rapidly progressive dementia, (b) dementia with seizures, especially myoclonic seizures, and (c) dementia associated with cerebellar or lower motor neuron signs. The recommended method for handling these brains to reduce infectivity is immersion of tissue blocks in 95% formic acid. Aerosol formation must be avoided during removal of the brain.

If there is any suspicion of TSE, the autopsy should be limited to the brain, and the tissue treated as outlined below. There should be very few exceptions to this rule.

Autopsy brain tissues should be handled as follows:

The intact brain is fixed in formalin for 1-2 weeks before cutting. Tissue blocks (representative regions of neocortex, basal ganglia, and cerebellum) are taken, agitated in at least 50-100 mL of 95-100% formic acid for one hour, and then returned to formalin for two days before embedding. Alternatively, one may take the necessary diagnostic sections from the fresh brain, fix them in formalin for 2-7 days, treat with formic acid for one hour, fix again in formalin for two days, and then embed in paraffin. This method significantly reduces infectivity.

At the conclusion of the autopsy, the area of incision and other contaminated skin surfaces are washed with freshly opened undiluted commercial household bleach (sodium hypochlorite). As sodium hypochlorite deteriorates after several months, a newly opened container should be used for each autopsy. After 10 minutes, the skin may be washed with water. All gowns, gloves, plastic sheets, and other disposable supplies are placed in a red or orange biohazard bag and incinerated. Alternatively, they may be autoclaved (132° C steam) and discarded. Hard surfaces are decontaminated with freshly opened undiluted bleach or NaOH. 1N NaOH is adequate unless there will be dilution by surface liquid, in which case 2N NaOH should be used. Bleach and NaOH are equally effective, but NaOH is preferred for steel instruments and surfaces because it is less corrosive than bleach. The disinfectant should remain in contact with the surface for at least 15 and preferably 60 minutes. Autopsy instruments should have any visible blood removed, then decontaminated with undiluted bleach or 1-2N NaOH as above. Alternatively, they may be autoclaved for one hour at 132° C and 20 psi (140 kPa).

For information on handling slides and blocks, refer to the checklist requirement in the Histology Laboratory Safety section of this checklist.

REFERENCES

- 1) Nine JS. High-Risk Autopsy Cases. In: Collins KA, ed. *Autopsy Pathology and Reporting*. 3rd ed. Northfield, IL: College of American Pathologists; 2017; chap 13.
- 2) Wetli CV. Autopsy safety. *Lab Med*. 2001;32:451-453
- 3) Burton JL. Health and safety at necropsy. *J Clin Pathol*. 2003; 56(4):254-60.

ANP.34160 Safe Handling of Bariatric Patients Phase II