

Letters to the Editor

Dear Editor

Do you clean or contaminate your bronchoscope?

The editorial by Harvey and Yates (1) was a useful reminder of the need to review cleaning and disinfection procedures in our bronchoscopy units. Adequate manual cleaning remains a vital part of the process before the bronchoscope is placed in an automatic washing machine (2). Disinfection of the machine itself and frequent exchange of detergent, disinfectant and rinse water is essential. Sterile or filtered water should be used for preparation of the detergent and for rinsing the bronchoscope after disinfection.

I disagree, however, with Harvey and Yates regarding guidelines for instruments used on patients with suspected *Mycobacterium tuberculosis*. The British Thoracic Society Guidelines referred to (3) mentions 30–40 min for disinfection, not 20 min. An immersion time of 60 min has been suggested (4) and is currently used in many units. It should also be stressed that immunosuppressed patients are at special risk for cross-infection. Bronchoscopes should be soaked in 2% glutaraldehyde for 60 min before use in immunosuppressed patients (3). In a recent national audit of bronchoscopy procedures (5), we found that of 159 units who responded to our survey, inadequate disinfection was carried out before, between or at the end of a list in 35%. Disinfection procedures for bronchoscopes after use in cases of suspected tuberculosis or before use in immunosuppressed patients were inadequate in 49% of units. Procedures were particularly likely to be faulty before or after emergency bronchoscopies. Correct disinfection procedures were more likely to be carried out in dedicated endoscopy units and where nursing staff had been on an external training course. There is obviously a need to disseminate guidelines more widely and to re-audit their implementation.

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References

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3. Woodcock A, Campbell I, Collins JVC *et al.* Bronchoscopy and infection control. *Lancet* 1989; **ii**: 270–271.
4. Ayliffe GAJ, Babb JR, Bradley CR. Disinfection of endoscopes. *J Hosp Infect* 1986; **7**: 296–299.
5. Honeybourne D, Neumann CS. An audit of U.K. bronchoscopy procedures: patient safety. *Thorax* 1994; **49**: 1060P.

Reply to Dr Honeybourne

We thank Dr Honeybourne for his interest in our editorial and, of course, agree with his comment that cleaning and disinfection guidelines need to be disseminated more widely. One of us was party to the original BTS Guidelines (1) which we said at the time was a 'best buy' policy. A 30–40 min immersion time in 2% alkaline glutaraldehyde was the *in vitro* inactivation time for *Mycobacterium tuberculosis* and we commented that 'these data would apply to a heavily contaminated and 'unwashed' bronchoscope. Although later in the recommendations, a 60-min immersion in 2% alkaline glutaraldehyde followed by rinsing in sterile water or alcohol was recommended prior to use of the bronchoscope in immunocompromised patients, there was no data to support this longer immersion time. Dr Honeybourne refers to an immersion time of 60 min (2) in a letter written by members of the Hospital Infection Research Laboratory in his hospital. They mention that the current (1986) manufacturer's recommendations for mycobactericidal activity was immersion for 10 min in 2% glutaraldehyde, but they also point out that immersion times of 45 min and 1 h have been suggested.

The reason we chose to recommend 20 min as a sensible compromise was based on the work of Hanson *et al.* (3) — also a co-author of the original BTS Guidelines. They contaminated fibre-optic bronchoscopes using isolates of *M. tuberculosis* cultured from sputum. As already commented, simple cleaning reduced contamination of the bronchoscopes significantly and *all* bronchoscopes were free of detectable mycobacteria after 10 min immersion in 2% alkaline glutaraldehyde. As a consequence of this