

CORRESPONDENCE

The benefit of taking a control sample when performing bronchoalveolar lavage

Contamination of bronchoscopes is well described.¹⁻³ However, while cleaning and disinfecting bronchoscopes are clearly described in standardisation documents,¹⁻³ the performance of a control sample prior to bronchoscopy is not suggested.^{4,5} Here, we offer an argument for such a procedure, supported by our experience with a 2-year-old boy with cystic fibrosis who underwent flexible bronchoscopy and bronchoalveolar lavage (BAL).

The bronchoscope in question had been used on a previous case on the same list, then supposedly cleaned and decontaminated, prior to reuse. We performed a 'control lavage', by suctioning sterile 0.9% NaCl through the instrument channel, before the boy's procedure. However, it was only afterwards that the bronchoscopist noted the cloudy appearance of the control sample, suggestive of contamination. Subsequent investigation determined that the scope had not been adequately cleaned, due to human error, despite availability of appropriate equipment and standards.

BAL samples from the first case on the list, the control sample, and the index case were positive for *Haemophilus influenzae*. Molecular typing demonstrated that the *H influenzae* from the first case, and the control sample, were identical, but distinct

from that found in the index case. The patient was pyrexial and coughing within 24 h of the procedure. The symptoms gradually resolved over 6 weeks, while on broad-spectrum antibiotic cover.

Our case suggests potential benefits of performing a simple 'control lavage'. First, a contaminated bronchoscope will result in 'false-positive' BAL results. The control BAL sample is the only way to detect this error and avoid inappropriate treatment. Second, the BAL culture results may be 'true-positives', with the pathogen flushed into the patient's airways during lavage. This is an iatrogenic infection and a gross medical error. Left undetected the error can be repeated in multiple patients, on multiple lists. Obtaining a control BAL provides an opportunity to limit 'outbreaks' of bronchoscope contamination to one list. Finally, where gross contamination is discovered, it will be possible to halt the procedure, thus avoiding the nosocomial infection. These recommendations may not be relevant to adult patients undergoing diagnostic bronchoscopy for assessment of lung cancer.

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