Adherence of neomycin to the tubing of a plate pouring machine

Margaret Macaulay *et al* [1] have shown that neomycin may become bound to silicone rubber tubing used for preparing media in the laboratory and may be carried over into diagnostic sensitivity test agar (DST, Oxoid) to inhibit the growth of coagulase negative staphylococci.

We have shown that neomycin, kanamycin, and gentamicin used in concentrations commonly recommended for anaerobe selective media may be carried over to other media through the same tubing, inhibiting the growth of any suitably sensitive organism. The consequences of any such media being used in the primary plating of specimens are obvious.

In this laboratory we use separate, identifiable tubing for pouring media containing these antibiotics, after which at least 3 litres hot water is flushed through. All non-inhibitory media, including MacConkey agar, are shown to support the growth of a sensitive *Staphylococcus aureus* (NCTC 6571) before being released for use. Those plates poured first in each batch should be selected for testing.

We believe that unless other laboratories are equally thorough in their testing of poured media, some may have a serious carry over problem of which they are unaware.

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Reference

[1] Macaulay ME, Storey J, Riordan T. Adherence of neomycin to the tubing of a plate pouring machine. *J Clin Pathol* 1985;**38**:115–6.

Fine needle aspiration cytology

I enjoyed reading the review article published in your January 1985 issue.[1] I think, however, that pathologists should be more aware of the fact that smears made from needle biopsies of the brain have been standard practice in numerous departments of neuropathology for many years.[2] No doubt this has been contributed to by the value of burr hole biopsy to neurosurgeons and the soft consistency of the biopsy.

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References

[1] Lever JV, Trott PA, Webb AJ. Fine needle aspiration cytology. *J Clin Pathol* 1985;**38**:1–11.
[2] Adams JH, Graham DI, Doyle D. *Brain biopsy: the smear technique for neurosurgical biopsies.* London: Chapman & Hall, 1981.

As a firm believer in the value of fine needle aspiration cytology I was delighted to see a review article on the subject in the *Journal of Clinical Pathology*.[1] The authors have provided a comprehensive overview in a comparatively short article.

The authors state, quite correctly, that up to 35% of percutaneous fine needle aspirations of lung may be complicated by simple pneumothorax. The great majority of these, however, are small, symptomless, and resolve spontaneously, and only 2–10% of cases require chest drainage.[2,3] Pneumothorax is therefore not as fearsome a complication as it may at first appear. Aspiration is contraindicated only in severe emphysema and pulmonary hypertension.[4]

As the authors have shown, fine needle aspiration is a safe and reliable method of diagnosis, applicable to virtually any site within the body.

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[1] Lever JV, Trott PA, Webb AF. Fine needle aspiration cytology. *J Clin Pathol* 1985;**38**:1–11.
[2] Kline TS. *Handbook of fine needle aspiration biopsy cytology.* St Louis: CV Mosby Company, 1981.
[3] Frable WF. *Thin needle aspiration biopsy.* Philadelphia: WB Saunders Company, 1983.
[4] Tao LC, Pearson FG, Delarne NC, Langer B, Saunders DE. Percutaneous fine needle aspiration. *Cancer* 1980;**45**:1480.

Streptococcus milleri found in pulmonary empyemas and abscesses

As a species *Streptococcus milleri* has only recently gained wide acceptance, although some of its members were first described 40 years ago. It is increasingly recognised as a cause of pyogenic disease and is particularly associated with deep seated abscesses within internal organs.

Bartlett and Finegold[2] studied the anaerobic bacteriology of pleuropulmonary infections especially of empyemas and abscesses. They found a variety of anaerobic bacteria usually as mixed infections, but interestingly they consistently found that the anaerobic streptococci were most often isolated in pure culture from these sites. These workers did not fully report the identification of the anaerobic streptococci, but some were possibly *S milleri*. Their work and our isolation of pure cultures of anaerobic streptococci from pulmonary empyemas and abscesses prompted us to undertake a fuller study.

Material and methods

Pleural aspirates from empyemas and pulmonary abscesses as well as fluid from pleural drainage sites not due to these conditions were studied. Samples (10–15 ml) of pleural fluid or pus were transferred into citrated bottles, and a further 1 ml was inoculated into freshly prereduced Robertson's cooked meat broth. The bottles were sealed and sent to the laboratory.

The pleural fluid, pus, or broth was inoculated on to standard laboratory media (selective and non-selective) and incubated in air, 5% CO_2, and anaerobic conditions at 37°C. Any suspicious organisms resembling streptococci were fully identified by biochemical methods described elsewhere.[3]

Results

Of 23 samples from patients with either empyemas or pulmonary abscesses, eight yielded *S milleri* in pure culture when fistulae to the gastrointestinal tract were

Table 1 *Results of culture of specimens from patients with pulmonary empyemas and abscesses*

Results of culture	*No of specimens*
No bacterial growth detected	6
Mixed coliforms; anaerobes and *Streptococcus milleri*	5*
Mixed coliforms and anaerobes	3†
Staphylococcus aureus only	1
S milleri only	8
Total	23

*Four patients had fistulae with the gastrointestinal tract.
†All had fistulae with the gastrointestinal tract.