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 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.

RW SMYTH
PJ OWEN
Microbiology Department, General Hospital, Birmingham

Reference


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 biopsies to neurosurgeons and the soft consistency of the biopsy.

HUME ADAMS
Department of Neuropathology, Institute of Neurological Sciences, Southern General Hospital, Glasgow

References


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.²³ 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.

AF MUTC
Department of Pathology, Royal Infirmary, Glasgow G4

References


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 Finegold⁴ 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 empyemys 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 prerelaxed Roberton’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% CO₂, and anaerobic conditions at 37°C. Any suspicious organisms resembling streptococci were fully identified by biochemical methods described elsewhere.⁵

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>
<thead>
<tr>
<th>Streploccoccus milleri found in pulmonary empyemas and abscesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a species Streploccoccus milleri has only recently gained wide acceptance, although some of its members were first described as pathogenic only recently. It is of particular interest that in our series of samples from patients with either empyemas or pulmonary abscesses, eight yielded S milleri in pure culture when fistulae to the gastrointestinal tract were present.</td>
</tr>
</tbody>
</table>

Letters to the Editor

Number of specimens

<table>
<thead>
<tr>
<th>Results of culture from patients with pulmonary empyemas and abscesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No bacterial growth detected</td>
</tr>
<tr>
<td>Mixed coliforms; anaerobes and Streptococcus milleri</td>
</tr>
<tr>
<td>Mixed coliforms and anaerobes</td>
</tr>
<tr>
<td>Staphylococcus aureus only</td>
</tr>
<tr>
<td>S milleri only</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

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

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

Downloaded from http://jcp.bmj.com/ on June 21, 2017 - Published by group.bmj.com
Letters to the Editor

Table 2  Results of culture of specimens from patients with other pulmonary effusions

<table>
<thead>
<tr>
<th>Results of culture</th>
<th>No of specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>No bacterial growth detected</td>
<td>29</td>
</tr>
<tr>
<td>Mixed coliforms and anaerobes</td>
<td>29*</td>
</tr>
<tr>
<td>Anaerobes only</td>
<td>10*</td>
</tr>
<tr>
<td>Staphylococcus aureus only</td>
<td>1</td>
</tr>
<tr>
<td>Mixed anaerobes and Streptococcus milleri</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

*Eighteen patients had fistulae with the gastrointestinal tract.
†Eight patients had fistulae with the gastrointestinal tract.

Results

2 bacterial isolates were represented (Table 1). On the other hand five isolates of S milleri were mixed with coliform anaerobes when recovered from eight other patients, of whom seven had such fistulae. The overall isolation rate of S milleri was 57%. When pleural fluid from patients with conditions other than those above was examined coliform and anaerobic organisms predominated while S milleri represented less than 3% of the total isolates (Table 2). Clearly, in patients with deep seated pulmonary involvement S milleri was most often isolated either in pure culture (no gastrointestinal fistulae) or as part of a mixed flora (with gastrointestinal fistulae). S milleri, however, was less frequently isolated when there was no extensive pulmonary disease, despite the presence of gastrointestinal fistulae.

Pulmonary abscesses have many underlying clinical causes and bacterial isolates include a mixture of anaerobes, coliforms, and microaerophilic streptococci. In this series it seems clear that S milleri is the main causative agent in empyemas and pulmonary abscesses when the infection is strictly contained within the pulmonary cavity and occurs as part of a mixed flora when gastrointestinal fistulae are present. The natural habitat of the organism includes the mouth, upper respiratory tract, gastrointestinal tract, and vagina. Although bacteraemia with metastatic abscess formation can occur, it is more likely that in our patients invasive and purulent lesions occurred as a result of regional spread of the organism from the mouth and respiratory tract to the pulmonary cavity as a result of local disease, trauma, or surgery.

SA WAITKINS
JG RATCLIFFE
C ROBERTS
Public Health Laboratory,
Fazakerley Hospital,
Liverpool

References


Book reviews


This is an unusual book which grows in attractiveness the longer it is used. The format is unusual: five basic chapters on the normal and abnormal structure of muscle followed by an alphabetical ordered descriptive pathology of individual muscle diseases, so that, for example, ischaemic myopathy precedes limb girdle dystrophy which is followed by malignant hyperpyrexia syndrome. I found this irritating but as I became familiar with the format the disadvantage became trivial. It is a beautifully produced book with splendid photographs at light, semi thin, and ultrastructural levels. The chapter on pathological reactions is thorough and the sections on individual diseases informative. It is probable that the book had a long gestation at the printers: relatively few references are in the past three or four years. The book is not cheap but this reflects the quality of production. It is a good buy for the departmental library.

G SLAVIN


For a text book to achieve four editions is a mark of great success.

The fourth edition of Zilva and Pannall is very much the mixture as before but with text clarified and brought up to date. A new chapter on drug monitoring has been added.

The book is intended for medical students and junior hospital staff but it is probably the best general book for those preparing for the primary MRC Path providing they supplement it with intelligent reading around.

BRENDON SLAVIN


This book comprises 27 papers presented at a symposium organised by the IMLS in April 1984. Inevitably the standard varies, but the scope is remarkably wide ranging and topical, and covers blood transfusion, cellular pathology, clinical chemistry, haematology, immunology, and microbiology.

Many of the papers give a wealth of practical advice on the selection of methods and reagents, trouble shooting, and internal quality control, as well as the lessons learnt from external quality assessment schemes in each discipline. Several are more philosophical and give thought provoking ideas and comments on the current state of their particular art. Perhaps the most challenging comment comes in the Chairman’s introduction: that good performance must mean “good” for the patient, and this means not only ensuring the analytical reliability of the result but also its usefulness in terms of its effect on the clinical outcome. Quality control of the request would be a good theme for a future symposium.

All who work in clinical laboratories can learn something from this useful little book.

PMG BROUGHTON


This publication is a compilation of papers presented at the 2nd Pfefferkorn conference held in the USA in April 1983. The publishers, who sponsored the conference, are also known for their annual conferences and journal on Scanning Electron Microscopy. The present book follows the format of the SEM journals, utilising, in the main, camera ready copy of typescript manuscripts submitted by the authors.

The contents cover a wide range of technical topics, including the chemistry of fixation methods, resin embedding and sectioning techniques, methods for the preparation of frozen and frozen hydrated tissues, freeze-etching, and many others. The individual papers, 28 in total, vary somewhat in their approach but in general
Streptococcus milleri found in pulmonary empyemas and abscesses.
S A Waitkins, J G Ratcliffe and C Roberts

J Clin Pathol 1985 38: 716-717
doi: 10.1136/jcp.38.6.716-c

Updated information and services can be found at:
http://jcp.bmj.com/content/38/6/716.3.citation

Email alerting service

These include:
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/