Cyst of Entamoeba histolytica stained with acidine orange. Tungsten illumination using dark ground condenser. ×400

fluorescence has been observed several weeks after preparation.

It is possible to use the high power dark ground condenser and a tungsten light source as the stain enhances the visual effect of the chromidial bar within the cyst.

AH MOODY
Hospital for Tropical Diseases
4, St Pancras Way,
London NW1 0PE

References


Bacteriological examination of removed cerebrospinal fluid shunts

This paper by Dr Bayston and his colleagues1 has been read here with interest and their method (A) should prove adequate as a groundplan for a protocol for the detailed examination of internal prosthetic shunts, Hickman lines and similar devices suspected to be colonised. METHOD A resembles in many details the routine procedure adopted in this Hospital in 1969, since when some 600 complete ventriculo-caval shunts have been examined. The understandable clinical euphoria which followed the successful implantation and function of ventriculo-caval shunts in 1957 had somewhat abated by 1960. By this time the author had examined several shunt systems “infected” by coagulase-negative staphylococci2 almost always accompanied by bacteraeamia, and often by ventriculitis, caused apparently by the same organism. The investigational procedures were then relatively crude, none of us had had previous experience of such colonisation, and the author regrets that it was not until 1968 that he devised a more critical and searching method, early results of which were reported in 1970.

The complete shunt is placed in a sterile 6" (15-2 cm) Petri dish and sent immediately to the laboratory; it is first examined macroscopically and by plate microscope before the dish lid is opened. Any external pus or detritus is sampled separately with a swab moistened in sterile broth, and in all cases the whole length of the exterior of the shunt is similarly swabbed. Whenever practicable, the surgeon is encouraged to swab the tissue track immediately after shunt removal with a fine wire swab. The surface of each component of the shunt system is thoroughly treated with an iso-propanol swab and fluid aspirated from that site with a fine gauge needle and syringe. It is often necessary to flush the interior of the shunt with about 0-2 ml of sterile infusion broth.

In most cases a sample of ventricular fluid, not taken through the proximal catheter, is collected, together with blood culture bottles inoculated at the time of surgery. All swabs and fluid are cultured aerobically and anaerobically onto blood-agar plates, onto MacConkey plates, and most of the residuum is cultured in aerobic and anaerobic broth medium. A potent β-lactamase, either by Whatman or Merck, is added to all cultures when a β-lactam antibiotic has been administered to the patient. The β-lactamase is itself tested for sterility. A Gram film is made of each sample. The MacConkey plate is often valuable in distinguishing two or even three biotypes of Staphylococcus albus which may occasionally be concurrently present. All culture and subcultures are incubated for at least 7 days.

Finally, any thrombus or concretion, usually in the shunt lumen or round the tip of the distal catheter, is cut out, fixed in formal saline and thin sections prepared; these are stained by a conventional cytochemical method and by a histological Gram's stain.

Dr Bayston et al are so very right when they point out the two risks of “mixed infection” and of overdiagnosis in what they term the “conventional” method used in some inexperienced or unhappening departments, and they are to be thanked for demonstrating this so effectively.

It is a pleasure to acknowledge the high technical skills of Mr CH Frankcombe, who has shared the shunt investigations in this Hospital, and as always the unstinting support of our paediatric surgeons, Mr HB Eckstein and Mr DM Forrest and their surgical teams.

RJ HOLT
Queen Mary's Hospital for Children,
Carshalton, Surrey

References


Not gliding but twitching motility of Acinetobacter calcoaceticus

The surface spreading phenomena as well as the movements of individual cells of strains of Acinetobacter calcoaceticus are due to twitchings5 and not to gliding motility as suggested by Mukerji and Ghopale in a recent letter.5

The movements of Acinetobacter reported by Barker and Maxted6 quoted by Mukerji and Ghopale, likewise, in the light of all available experimental evidence were also due to twitching as later admitted by Barker in a letter to me.

JØRGEN HENRICHSEN
Statens Seruminstitut,
Amager Boulevard 80,
DK-2300 Copenhagen S,
Denmark

References

Letters to the Editor

Dr Mukerji replies as follows:

I am well aware of the work done by the authors (references 1-5 above) on twitching motility and fimbriation of A anitratus. The authors, however, have failed to appreciate my observation 6 regarding the peculiar "pendular type" of motility detected in batch 2 of NCTC 7844 (strain of Schaub and Hauber) which was characteristic of a myxobacterium. Two subsequent batches did not show the same activity, probably because this property was affected by cell wall injury caused by freeze-drying. However they did develop surface gliding movement and other fresh isolates showed flexion and extension motility on our medium. 1 I hope the authors will agree that fimbriae did not produce the latter type of movement? There is other evidence to support NCTC 7844 being a myxobacterium. 3 It secreted viscous gum and showed the characteristic capacity 4 to penetrate soft agar in Stanier's salt agar base on testing for cellulolytic and proteolytic activities. For the former, strips of filter paper were put under the surface of agar and the strain inoculated over the strips. In 2-3 days the strains secreted viscous gum, produced etching around the growth and assumed rod-like morphology with a refractile outline which failed to stain well with Gram's. For proteolytic activity 0-1% skimmed milk was incorporated in the agar; the strain produced superficial pitting of the agar and etching phenomena outside the growth. This occurred within 3-5 days which suggested the capacity of the cells to penetrate soft agar (1%). These findings suggest that NCTC 7844 is a myxobacterium. This could be confirmed by hybridisation experiments with myxobacteria but as far as I know these experiments have not been carried out.

S MUKERJI
Habib Hospital, 159 Jail Road East, Bombay 400 009, India

References

Necrotising granulomatous prostatitis after transurethral resection

We enjoyed the recent article published in the September issue of your Journal by Lee and Shepherd. 1 We would like to add our experience of two cases who also had transurethral resection for benign prostatic hyperplasia and who later had recurrence of obstructive symptoms. Material removed at the second transurethral resection showed an identical histological picture to that described by Lee and Shepherd (Figure) and there was also no histological or clinical evidence of other causes of localised or generalised granulomatosis. However, tissue eosinophilia which was mentioned first by Hedelin et al 2 was not a feature in our material. It is of interest to note that the time interval of finding active necrotising granulomata was very variable and in our second case (Table) was after eight years.

As we also support their contention that these granulomata, which bore a striking resemblance to rheumatoid nodules, are the effect of trauma, we would like to postulate that they are related to tissue necrosis caused by diathermy in the initial transurethral resection procedure. The persistence of these necrotising granulomata for a very long time, as in our second and their first case, together with a striking resemblance to rheumatoid nodules, would support the speculation that tissue necrosis is the cause of this reaction as it was hypothesised in the evolution of genuine rheumatoid nodules.

We think by now there is enough evidence in the literature 2 to suggest that the relation of transurethral resection and necrotising granulomatous prostatitis is constant and hope that it will prevent further unnecessary investigations and in some cases empirical antituberculorous treatment of the patients in question.

Time intervals between first operation (no granuloma) and second operation (granuloma found) in two cases

<table>
<thead>
<tr>
<th>Case 1</th>
<th>Case 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yr)</td>
<td>65</td>
</tr>
<tr>
<td>Operation 1</td>
<td>Transurethral resection—no granuloma</td>
</tr>
<tr>
<td>Interval between first and second operation</td>
<td>3 months</td>
</tr>
</tbody>
</table>

A large necrotising granulomatous reaction bordered by a pallisading layer of histiocytes (arrows) and a few multinucleated giant cells (arrow heads). Haematoxylin and eosin ×70.
Not gliding but twitching motility of Acinetobacter calcoaceticus.

J Henrichsen

*J Clin Pathol* 1984 37: 102-103
doi: 10.1136/jcp.37.1.102-b

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