Correspondence

Neomycin blood agar as a selective medium for vancomycin resistant Enterococcus faecium

We read with interest the article [medium] for Neomycin blood agar [presumably was from both of the following sources. Further, we believe that an overall strategy for the isolation of these increasingly prevalent nosocomial pathogens should be developed.

Using cephalixin arabinose agar (CA), a medium developed for the selective isolation of E. faecium, in association with a broth enrichment technique, we examined 92 swabs from 70 environmental sites and 22 rectal swabs during the investigation of a nosocomial outbreak on a renal unit. All swabs were plated directly onto CA, and CA containing 4 mg/ml vancomycin (Eli Lilly). The swab was then placed into cephalixin arabinose (CA) broth prepared by the addition of cephalixin and arabinose to one litre of sterile brain heart infusion broth (Unipath). Plates were examined for E. faecium, following 24 and 48 hours' incubation at 37°C in air. CA broth was subcultured onto both of the above media following enrichment for 24 hours.

Thirty eight E. faecium strains were isolated from the environmental and patient samples. Of these, 28 (74%) were vancomycin sensitive and 10 (26%) were vancomycin resistant. When the isolation of E. faecium from direct culture and broth enrichment was compared, 16 strains (42%) were isolated on direct culture, and the remaining 22 strains (58%) were isolated from broth enrichment only. Of the 10 vancomycin resistant strains, only two (20%) were isolated on direct plating. It was interesting to note that vancomycin resistant strains often required 48 hours' incubation to produce typical colonies. This delayed growth was presumably because of the time required for the induction of the Van B resistance phenotype by the broth enrichment technique.

Our investigations show that the isolation rate of E. faecium during nosocomial outbreaks may be seriously underestimated if a broth enrichment procedure is not used, as only 16 (42%) of 38 E. faecium strains were isolated on direct culture. Moreover, only 20% of strains of VRE were isolated on direct culture. It is likely that the additional strains detected after broth enrichment were present in low numbers, and easily have been missed if the broth enrichment step was not used, regardless of the type of selective media used. This effect might, however, be compounded if a selective medium inhibitory to VRE was used without an enrichment stage.

In order to implement a successful infection control strategy it is essential that accurate information is available about the numbers of cases of clinical infection or colonisation, and the extent of any environmental contamination with VRE. Our study suggests that outbreak management based on results of screening exercises using only direct culture techniques may be inappropriate.

We agree with Chadwick and Oppenheim[1] that comparative studies of screening media are warranted, but also recommend the use of a broth enrichment step in association with an appropriate selective medium such as CA for the isolation of VRE during the investigation of nosocomial outbreaks.

M FORD
FK GOULD
KE ORR
Microbiology Department, Freeman Hospital, Freeman Road, High Heaton, Newcastle upon Tyne NE7 7DN


Coronary artery dissection

Bateman et al. describe an interesting spectrum of clinical presentation of spontaneous coronary artery dissection. Despite its rarity, the entity shows a striking constancy in the vessels involved and the presence of an inflammatory infiltrate rich in eosinophils. These features were also seen in a recent necropsy in our department. The patient, an obese 43 year old woman with no recent pregnancy, had a background of mild hypertensive disorder not requiring medical therapy. She complained of severe back pain one evening, and died the following morning. At necropsy, the heart weighed 400 g. The left anterior descending coronary artery was occluded by thrombus from its origin, and a dissection, clearly visible grossly, extended the length of the artery. There was no atheroma, and histologically, no abnormal accumulations of mucin and no evidence of systemic vasculitis. No intimal tear was identified. Like cases 1 and 2 reported by Bateman et al, in which there was an interval between onset of symptoms and death, there was an adventitial in-filtrate with prominent chronic inflammation and eosinophils. The dissection in our case was mostly between the media and adventitia, internal to the external elastic lamina, with small foci in the outer media. We have seen dissection in this location in a previously reported case,2 as have others.3 It seems likely that it overlaps with the dissection in the outer third of the tunica media, and does not justify the description of "unusual" as suggested.4 Finally, increased awareness of this entity may mean that early presentation may result in salvage of some cases.

EE MOONEY
GSA MCDONALD
Department of Histopathology,
St James' Hospital,
Trinity College,
Dublin, Ireland


Effects of interleukins on the proliferation and survival of chronic lymphocytic leukaemia cells

Mainou-Fowler et al. report in their interesting study of the in vitro response of B chronic lymphocytic leukaemia (B-CLL) cells to interleukins that the effects of interleukin-4 (IL-4) on the cells are heterogeneous. They show that "IL-4 enhanced cell proliferation by ... 235% (123-400%) in four of 12 B-CLL cases" and they propose that this variability in response is a result of variable B-CLL cell maturity and defective expression of receptors for growth factors. They suggest that their observations may be a result of heterogeneous expression of the IL-4 receptor (IL-4R). As we have shown that B-CLL cells express IL-4R, we report here the expression of the expression of two species of high affinity receptor by these cells. Briefly, the presence of high affinity IL-4R was determined by 2'si labelled IL-4 binding and Scatchard analysis using MLA-144 cells as a positive control.1 While a high affinity IL-4R was detected in all six samples examined, there was evidence in some cases of expression of a distinct, and previously unreported, high affinity IL-4R. Thus, four of six samples expressed the conventional high affinity IL-4R, Kd 17-95 pM, which was of similar affinity to the IL-4R expressed by MLA-144, Kd 22-65 pM. One sample expressed a high affinity receptor, Kd 293-549 pM. The IL-4R was initially thought to be composed

Dr Bateman and Gallagher comment: We read Drs Mooney and McDonald's further report on coronary artery dissection with interest. The intimal dissection in our first case remains unusual.
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M Ford, J D Perry, F K Gould and K E Orr

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