Letters to the Editor

Demonstration of bacterial capsular polysaccharide in CSF by counter immuno-electrophoresis

The demonstration of bacterial capsular polysaccharide in cerebrospinal fluid (CSF) by counter immuno-electrophoresis (CIE) has provided a useful addition to the usual diagnostic tests (Greenwood et al., 1971; Coonrod and Rytel, 1972; Higashi et al., 1974; Myhre, 1974), particularly in patients who have been given antibiotics. Unfortunately, with group B meningococci the method often fails because of the poor precipitating activity of commercially available antisera (Tobin and Jones 1972). However, group B meningococci share a capsular antigen with Escherichia coli K1 (McCracken, 1976) which can be used as a control to validate the activity of antimeningococcal group B antisera.

Equine group B meningococcal antiserum is available on request from Dr John B. Robbins of the Department of Health and Welfare, USA1, but, according to the accompanying instructions, the antiserum is unsatisfactory when CIE is carried out using agarose as supporting media. Also, it has been found with rabbit antimeningococcal group B antiserum that reaction with E. coli K1 antigen may be apparent only when using modified electrophoresis systems in CIE (Fallon and McIllmurray, 1976).

I should like to draw the attention of those who use the method that the equine globulin kindly supplied by Dr. Robbins does give precipitation (to titre) with purified K1 polysaccharide, also provided, when CIE is performed using ready prepared agarose plates (Millipore, UK) in barbital buffer, pH 8.6, at 12 mA for one hour. Three commercially available antimensingococcal antisera (Wellcome Polyvalent A-D, Wellcome group B, and Difco Polyvalent A-D) did not form a precipitate with the K1 antigen or with a specimen of CSF from a patient with established group B meningococcal meningitis. However, dilutions of up to 1 in 8 of this CSF sample did precipitate with neat horse antiserum provided by Dr Robbins. A sample of neat CSF (but not in dilution) from a patient with established group C meningococcal meningitis cross-reacted with the equine globulin, a finding also observed by Dr Robbins. Therefore, long-term usage will be required to determine the absolute specificity of this equine globulin.

These preliminary findings suggest that the sensitivity of CIE for the detection of group B meningococcal antigen would be improved by using the antiserum provided by Dr. Robbins. However, in neonates CIE alone will not differentiate between E. coli K1 and group B meningococcal meningitis.

References


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Letters to the Editor

Starch serum agar—a differential medium for the isolation of Corynebacterium vaginale (Haemophilus vaginalis)

Recently, many reports have been published on the bacteriological and clinical aspects of infection with Corynebacterium vaginale, a Gram-variable rod first isolated from the genitourinary tract by Leopold (1953). There is also increasing evidence that the organism may cause vaginitis and cervicitis in women and urethritis in men (Dunkelberg and Woolvin, 1963; Lewis et al., 1972; Åkerlund and Mårud, 1974). Casman’s blood agar (Casman, 1947; Dukes and Gardner, 1961) is generally used for its isolation, but colonial differentiation from other genitourinary flora is often difficult. Dunkelberg’s peptone starch dextrose (PSD) agar (Dunkelberg et al., 1970) gives better results but colony-differentiation on the primary culture plates remains a problem.

A new differential medium, starch serum agar (SS), has been devised and found to give consistent results. Its

References

Higashi, G. I., Sippel, J. E., Girgis, N. I., and Hassan, A. (1974). Counterimmuno-