

*Drs Bignardi and Khong comment:*

Drs Feldman and Salisbury criticised us for not testing our anti-Salmonella O6:7 serum against other organisms, but what we used belongs to a panel of sera (Central Public Health Laboratory, Colindale) which is widely and successfully used in this country for the identification of *Salmonella* serotypes. Using a slide agglutination technique intra- and interspecific cross reactions can certainly occur, though they are not likely to persist if a tube technique with multiple dilutions down to the expected titre is attempted. While some cross reactions are well known, such as that between group B salmonellae and *Yersinia pseudotuberculosis* serogroup II and that between group D salmonellae and *Yersinia pseudotuberculosis* serogroup IV, other possible cross reactions have attracted less attention. All practising microbiologists recognise these problems so that the identification of *Salmonella* isolates is never based on seroagglutination alone but on a combination of seroagglutination and biochemical testing.

We would agree that some monoclonal antibodies might produce better immunohistochemical staining, but we do not think that this would eliminate the problem of cross reactivity which may be due to close affinity or identify among antigens carried by strains belonging to different and even completely unrelated bacterial species. Feldman and others tested their monoclonal antibody against a few other strains.<sup>1</sup> We think that this might give a sense of false security and that it would be much better to identify clearly what is one's target. In the case we described, *Salmonella virchow* was isolated from necropsy specimens and identified according to conventional microbiological criteria. The purpose of the immunoperoxidase staining was not to identify an unknown pathogen but to assess which organs had been involved.

We are sorry to have overlooked the work of Feldman and others,<sup>1</sup> but their use of a commercially available polyclonal antiserum is not apparent from the title of their article. The quotation of the other three reports<sup>2-4</sup> is inappropriate as these authors seem to have used only purposely produced antisera.

Feldman and Salisbury seem to have missed our point. The production of antisera is beyond the scope of the average diagnostic laboratory, but we showed that an easily available polyclonal serum can be used to identify the site of infection when routinely processed tissue is available and the infectious agent has been identified by conventional methods.

**References**

- 1 Feldman RG, Law SM, Salisbury JR. Detection of group B streptococcal antigen in necropsy specimens using monoclonal antibody and immunoperoxidase staining. *J Clin Pathol* 1986;39:223-6.
- 2 Ferreira Alves VA, Vianna MR, Yasuda PH, De Brito T. Detection of leptospiral antigen in the human liver and kidney using an immunoperoxidase staining procedure. *J Pathol* 1987;151:125-31.
- 3 Narayanan RB, Ramu G, Sinha S, Sengupta U, Malaviya GN, Desikan KV. Demonstration of Mycobacterium leprae specific antigen in leprosy lesions using monoclonal antibodies. *Indian J Lepr* 1985;57:258-64.
- 4 Winkler B, Reumann W, Mitao M, Gallo L, Richart RM, Crum CP. Immunoperoxidase localisation of chlamydial antigens in acute salpingitis. *Am J Obstet Gynecol* 1985;152:275-8.

**Value of throat swabs in meningococcal meningitis**

We were interested to read the article by Cartwright and Jones on the investigation of meningococcal disease, in particular their discussion of the value of throat swabs as an aid to diagnosis.<sup>1</sup>

Patients with meningococcal meningitis have often (quite correctly) received antibiotics before being admitted to hospital. In anticipation of negative cerebrospinal,

blood (and throat) cultures from the patient, an "epidemiological" approach using throat swabs from contacts has sometimes been used to attempt to identify the infecting strain.

Cartwright and Jones point out that as many as 25% of young adults are likely to carry meningococci in the throat, suggesting a very poor predictive value of an isolate from a contact. We have confirmed this by looking back at our cases of confirmed meningococcal meningitis over the past three years in which contacts also had throat swabs taken (table).

Of the five cases of confirmed meningococcal meningitis in which contacts also carried a meningococcus in the throat, the organisms were indistinguishable in both index case and contact on only one occasion (case 3). Furthermore, in this instance another close contact was carrying a completely different meningococcus.

This pronounced lack of correlation between organisms causing meningococcal disease and those carried by close contacts suggests that the practice of taking throat swabs from contacts as an aid to diagnosis is of no value.

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**Reference**

- 1 Cartwright KAV, Jones DM. Investigation of meningococcal disease. *J Clin Pathol* 1989;42:634-9.

Table Comparison of isolates of meningococci from cases and contacts

Case no	Isolate from patient	Isolate from contact
1	Group C NT	a) Group B NT b) Group B15 P1 16 c) Group NG
2	Group C 2a P1 15	a) Group B NT
3	Group B4 P1 16	a) Group B4 P1 16 b) Group NG NT P1 15
4	Group B NT	a) Group B4 P1 15
5	Group B P1 16	a) Group NG 4 P1 15 b) Group B 2b

**Book reviews**

**Perfecting the World. The Life and Times of Dr Thomas Hodgkin 1798-1866.** Amalie M Kass, Edward H Kass. (Pp 642; £24.50.). Harcourt Brace Jovanovich Ltd. 1988. ISBN 0 15 171700 1.

Thomas Hodgkin had powers of penetrating observation which put him ahead of most of his generation yet history has failed to acknowledge this. When the Governors of Guy's Hospital, led by their Treasurer, rejected Hodgkin's promising candidature they initiated his belittlement by history as well. Now we have the benefit of the authors'

knowledge of medicine, history, and importantly, of Quaker conviction to present a new biography of Thomas Hodgkin, a man hitherto little known other than by the diseases called after him. Hodgkin was an observer of clinical and pathological medicine second to none and his students knew this, as did his distinguished colleagues Addison and Bright.