to carry out an audit study of their department, of which this study is a part; and the doctors, secretaries, and patients whose cooperation made this study possible.

References


SHORT REPORTS

Aeromonas spp in travellers’ diarrhoea

Travellers’ diarrhoea affects millions of people each year, particularly travellers from industrialised countries when visiting less developed regions such as Asia, Africa, and Central and South America. The main known causes are enterotoxigenic Escherichia coli and strains of Shigella and Salmonella. Parasites such as Giardia lamblia and Entamoeba histolytica account for a smaller proportion of episodes. Aeromonas spp are becoming acknowledged as important enteric pathogens but are not recognised as a cause of travellers’ diarrhoea. They have, however, been reported in travellers with diarrhoea from India, Bangladesh and China. During the past two years we have had referred to us for enterotoxin assay strains of Aeromonas hydrophila isolated as the only enteric pathogen from eight patients with travellers’ diarrhoea. We report on these eight cases.

The patients

Two patients were children aged 2 and 12 who had been in Singapore, one of them en route to Australia from Europe. The six adults with diarrhoea had visited Bali, Singapore, India, China, or Italy. One 55 year old man, whose symptoms began during a visit to Italy, suffered recurrent diarrhoea with blood and mucus and accompanied by abdominal pain for two months. His symptoms resolved within two days of the start of treatment with co-trimoxazole, to which most strains of A hydrophila are sensitive, and did not recur. Three of the adults who developed diarrhoea in South East Asia continued to have recurrent diarrhoea for four to 12 months after they returned to Australia and before their faeces were cultured in a laboratory that recognised A hydrophila as an enteric pathogen. Two of these adults recovered rapidly after starting treatment with co-trimoxazole; the third patient recovered spontaneously. Both children had diarrhoea of short duration and did not require treatment.

Comment

Examination of faeces from travellers with diarrhoea should include methods appropriate for isolation of Aeromonas spp. Not all strains will grow on widely used media such as MacConkey agar. Some Aeromonas spp ferment the lactose in these media, making the colonies indistinguishable morphologically from Esch coli and giving false negative oxidase reactions, which may result from changes in pH caused by fermentation of sugars in selective media. The Aeromonas strains isolated from adults were recognised with the use of deoxycholate citrate agar and xylose lysine deoxycholate agar. In experienced hands, the appearance of non-lactose fermenting colonies on deoxycholate citrate agar and acid forming colonies on xylose lysine deoxycholate agar has yielded a high incidence of isolation of A hydrophila, although rapid lactose fermenters will be missed. We have found that the yield of isolation of Aeromonas from faeces is higher when blood agar is used for primary isolation. We recommend that a blood agar plate containing 10 mg ampicillin/l be added to the media used for examining faeces from patients with diarrhoea. The use of layered plates permits easier recognition of β haemolysis surrounding colonies of A hydrophila, which is often, but not always, associated with enterotoxigenic A hydrophila. Oxidase positive colonies can be identified with multitest systems or simply and inexpensively with Kaper’s medium.

Aeromonas spp should be included in the list of possible enteric pathogens to be sought in patients with travellers’ diarrhoea. These organisms will not be overlooked if laboratories adopt appropriate methods to isolate Aeromonas spp from faeces.


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