

# LEADING ARTICLE

## PLESIOMONAS SHIGELLOIDES ASSOCIATED WITH HUMAN INFECTIONS

Y S Lam

M Yeo

**Dept of Pathology  
Alexandra Hospital  
Alexandra Road  
Singapore 0314**

S Y S Lam, BSc, MSc  
Bacteriologist

**Dept of Pathology  
Singapore General Hospital  
Outram Road  
Singapore 0316**

M Yeo, MBBS, FRCPA  
Bacteriologist

*Plesiomonas shigelloides* is a gram negative bacillus that has been isolated from the stools of diarrhoeic patients living in sub-tropical and tropical areas, Japan, Australia and only rarely from Europe and the United States. This organism is often found in soil, water, aquatic environments and the intestinal contents of domestic animals (1). The enteropathogenicity of *P. shigelloides* has been studied but little is known. Extraintestinal infections caused by *P. shigelloides* have also been reported eg neonatal septicaemia and meningitis (2), septic arthritis (3) and acute cholecystitis (4).

Previous studies (5, 6, 7) have shown that although *P. shigelloides* will grow well in pure culture on many media, recovery is poor when it is in a mixed culture. An evaluation of media for the culture of *P. shigelloides* was studied by von Graevenitz et al (5) in 1983. Of the 9 solid and 2 liquid media tested, alkaline peptone water and inositol-brilliant green-bile salts agar were found suitable while Millership et al (6) in 1984 found bile salts brilliant green agar satisfactory for the recovery of *P. shigelloides* but not alkaline peptone water. More recently, Nair et al (8) reported the use of bile salts brilliant green broth as an enrichment for the screening of stools.

In the study reported in this journal alkaline peptone water was found to be a useful enrichment medium for *P. shigelloides*. The organism also grew well on blood agar and MacConkey agar though DCA was found to be more sensitive. In the Enteric Bacteriology Laboratory Singapore, blood and MacConkey agar are routinely used for the culture of enteric pathogens in stools. Although *Plesiomonas* is looked for in routine cultures, to our knowledge the organism has not been isolated from intestinal and extraintestinal sites in Singapore.

#### REFERENCES

1. T Arai, N Ikejima, T Itoh, S Sakai, T Shimada, R Sakazaki. A Survey of *Plesiomonas shigelloides* from aquatic environments, domestic animals, pets and humans. J Hyg Camb 1980; 84: 203-11.
2. A Pathak, JR Custer, J Levy. Neonatal septicaemia and meningitis due to *Plesiomonas shigelloides*. Paediatr 1983; 71(3): 389-91.
3. DL Gordon, CR Philpot, C Mcquire. *Plesiomonas shigelloides* septic arthritis complicating rheumatoid arthritis. Aust NZ J Med 1983; 13: 275-6.
4. BEB Classon, DEW Holmlund, C Anders Lindhagen, TW Matzsch. *Plesiomonas shigelloides* in acute cholecystitis: a case report. J Clin Microbiol 1984; 20(5) 985-7.
5. A von Graevenitz, C Bucher. Evaluation of differential and selective media for isolation of *Aeromonas* and *Plesiomonas* spp. from human faeces. J Clin Microbiol 1983; 17(1): 16-21.
6. SE Millership, B Chattopadhyay. Methods for the isolation of *Aeromonas hydrophila* and *Plesiomonas shigelloides* from faeces. J Hyg. Camb 1984; 92: 145-52.
7. E Geizer, K Kopecky, E Aldova, Isolation of *Aeromonas shigelloides* in a child. J Hyg Epidemio Microbiol Immunol 1966; 10: 190-4.
8. P Nair, SE Millership. Isolation of *Plesiomonas shigelloides* from nutrient broth with brilliant green: its use in screening stool samples from an African population. J Clin Pathol 1987; 40: 680-2.