

Tetracycline-resistant *Vibrio Cholerae* El Tor

Sir,

Antibiotic treatment does not play a major role in the management of patients with cholera where fluids and electrolytes replacement have been the mainstay of treatment. Nevertheless, antibiotics do lessen the duration of the diarrhoea and shorten the period of excretion of the pathogen. In Malaysia, tetracycline is the drug of choice for cholera infection. It is also given to contacts of confirmed cases as a prophylactic measure.

The University Hospital, Kuala Lumpur, recently isolated a tetracycline resistant strain of *Vibrio cholerae* from a patient who was admitted with a 1 day history of numerous bouts of diarrhoea, vomiting, marked dehydration and shock. The strain isolated was resistant to 25 µg tetracycline by the disc diffusion method. The patient had an uneventful recovery despite being treated with tetracycline and was discharged well, with negative stool cultures for *Vibrio cholerae*. This was the first tetracycline-resistant strain of *Vibrio cholerae* isolated in the University Hospital. Published reports of similar isolate in Malaysia are lacking, although we believe that this may not be its first occurrence in the country. We hope this communication will prompt others to share with us their experiences with such strains.

Multiple antibiotic resistance amongst *Vibrio cholerae* is an expanding problem worldwide. The emergence of resistance in this organism is not only due to misuse of antibiotics but also to the presence of resistance plasmids¹. The strain isolated in our laboratory was resistant only to tetracycline but sensitive to chloramphenicol, ampicillin, norfloxacin and cotrimoxazole (Table I). In some outbreaks, tetracycline resistant *Vibrio cholerae* were shown to become rapidly resistant to other antibiotics such as chloramphenicol and ampicillin².

Antibiotic	MIC (µg/ml)
Tetracycline	32.0
Ampicillin	4.0
Cotrimoxazole	1.0
Chloramphenicol	1.0
Norfloxacin	0.001

The clinical significance of tetracycline resistant *Vibrio cholerae* is not fully understood. Some patients are able to clear their bowels of the tetracycline-resistant strains of organism despite being treated with tetracycline, as was seen in our patient. In others, treatment with tetracycline does not stop the excretion of the organism or, when used prophylactically, fails to protect patients from the disease¹. It is therefore unlikely that the failure of treatment of the infection is due to tetracycline resistance alone. However, it is important to determine the antibiotic susceptibility of any new isolate of *Vibrio cholerae* so that we can be aware of their antibiotic susceptibilities. Any patient diagnosed with cholera who fails to respond to tetracycline treatment and continues

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excreting the organism should have the minimum inhibition concentration to tetracycline determined. The use of tetracycline prophylactically should also be properly controlled to discourage the emergence of resistant strains. Effective alternative treatment for tetracycline resistant *Vibrio cholerae* includes erythromycin, combination of trimethoprim and sulphamethoxazole, furazolidone and norfloxacin³.

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