Emergence of Nalidixic Acid Resistant Virbio cholerae 0-1 in Karachi

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Madam, Cholera is endemic in Karachi and has become a significant cause of gastroenteritis in all the age groups since 1988[1]. Vibrio cholerae are frequently isolated in majority of the laboratories in Karachi. Restoration of water and electrolytes is the mainstay of treatment in cases of cholera. Antibiotics are recommended in severly dehydrated cases to shorten the duration of diarrhoea[2]. Choice for empirical treatment will depend upon the local antibiotic susceptibility pattern of the isolates. Conventional antibiotics available in our country for bacterial diarrhoeas include ampicillin, co-trimoxazole, tetracyc lines and chioramphenicol. Most of the Vibrio cholerae isolates were susceptible to these antibiotics till 1988[3]. The resistance gradually started emerging and now majority of the isolates are resistant to these drugs. But 100% of the isolates have been reported susceptible to the quinolones including nalidxic acid, norfioxacin and ciprofloxacin in studies conducted up till now[1,3]. We have isolated 150 Vibrio cholerae 0-1 isolates during 1996-1999 at the department of pathology PNS SHIFA, Karachi. We found all the isolates susceptible to these quinolones till the end of 1997. Resistance was observed to nalidixic acid since early 1998. Overall in this year we have found 7.15% (05 out of 70) isolates resistant to nalidixic acid. This has increased to 35% (7 out of 20) in 1999. But all the isolates are still susceptible to norfioxacin and ciprofloxacin. This means that nalidixic acid resistant strains do not have cross-resistance to the other quinolones. Workers from abroad already have reported such resistance. In a study conducted in Bombay, 14.7% of the isolates have been reported resistant to this drug in 1990[4]. Nalidixic acid has been found to be an effective and safe antibiotic agent in acute bacterial diarrhoeas. It is well tolerated even in children less than three months[5]. But with the development and rapidly increasing resistance as we have seen in our isolates, it seems to be loosing its utility in cholera cases. Adult cholera cases can be treated with other quinolones available in tablet form, but as this is the only quinolone available in suspension form, treatment of severe cases amongst children will pose difficulties. So we will have to look for alternative drugs, probably the third generation cephalosporins. Both in vitro and in vivo studies are required to prove their efficacy in such cases.

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