

1 Study on Hospital Surveillance

Section highlights

- A total of 989 diarrhoea/dysenteriae cases were included in the systematic hospital based surveillance. Major enteropathogens detected from these cases were: *V. cholerae* O1 - 7.7%, Enteroaggregative *E. coli* - 6.8%, enterotoxigenic *E. coli* - 4.2%, rotavirus - 3.9%, *G.lambli*a - 3.7%
- *V. cholerae* O1 and O139 strains isolated during this period were resistant to ampicillin, co-trimoxazole, furazolidone and nalidixic acid. But these strains were susceptible to norfloxacin and tetracycline.
- Isolated strains of *Shigella* spp were resistant to co-trimoxazole, tetracycline, nalidixic acid.

Study on Hospital Surveillance

1.1. Hospital based surveillance system for diarrhoeal diseases

Institutional project

This project is the continuous hospital based systematic surveillance (every 5th patient on two randomly selected days per week) of diarrhoeal diseases at Infectious Diseases Hospital, Kolkata. The main objective of this study is to monitor changes in disease patterns including drug sensitivity, to create a database on diarrhoeal diseases, to provide regular report to the Government and other relevant agencies, also to develop an early warning system for forecasting an epidemic and to furnish information to be applied for improvement in patient care and better preventive measure.

During the period from April 1, 2003 to March 31, 2004 a total of 989 diarrhoea/dysentery patients were enrolled in the surveillance system. Month wise collection of samples are shown in Fig. 1.1.1. The isolation of different enteropathogens are depicted in the Table. 1.1.1.

Antimicrobial susceptibility

Vibrio cholerae O1 strains were resistant to ampicillin, co trimoxazole, furazolidone, nalidixic acid and streptomycin. Reduced susceptibility was observed for chloramphenicol, ciprofloxacin and neomycin.



Strains were sensitive to gentamycin, norfloxacin and tetracycline.

Vibrio cholerae O139 strains were resistant to ampicillin, furazolidone and nalidixic acid. Strains were sensitive to chloramphenicol, gentamycin, neomycin, norfloxacin and tetracycline.

Vibrio cholerae non O1 non O139 strains were found resistant to ampicillin and furazolidone. They were sensitive to gentamycin, tetracycline, chloramphenicol, ciprofloxacin and reduced susceptibility was found against neomycin.

Shigella dysenteriae strains were uniformly resistant to ampicillin, co-trimoxazole, tetracycline, nalidixic acid, chloramphenicol and reduced susceptibility to norfloxacin, ciprofloxacin and ofloxacin.

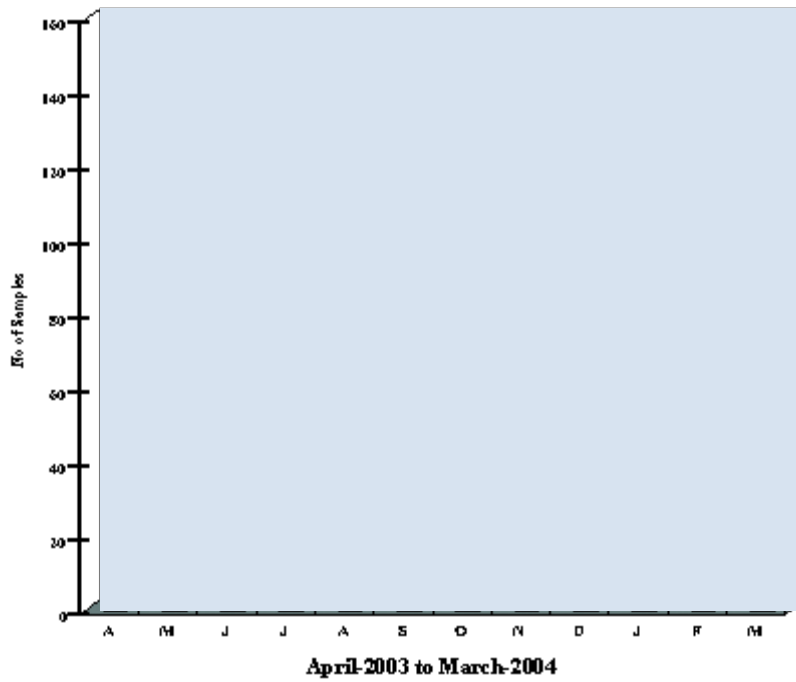
Shigella boydii and *Shigella sonnei* were totally resistant to co-trimoxazole, tetracycline and nalidixic acid.

Table - 1.1.1
Enteropathogens detected

Enteropathogens	Number tested	Number identified	Percentage
Bacteria			
<i>Vibrio</i> spp.	989	123	12.4
<i>Vibrio cholerae</i> O1	989	76	7.7
<i>Vibrio cholerae</i> O139	989	2	0.2
<i>Vibrio cholerae</i> nonO1 nonO139	989	34	3.4
<i>Vibrio parahaemolyticus</i>	989	11	1.1
<i>Shigella</i> spp.	989	9	0.9
Non typhoidal <i>Salmonella</i> spp.	989	1	0.1
Diarrhoeagenic <i>Escherichia coli</i>			
Enterotoxigenic <i>Esch. coli</i>	307	13	4.2
Enteropathogenic <i>Esch. coli</i>	307	4	1.3
Enterogaagregative <i>Esch. coli</i>	307	21	6.8
Virus			
Rotavirus	103	4	3.9
Protozoa and Helminth			
<i>E. histolytica</i>	107	1	0.9
<i>G. lamblia</i>	107	4	3.7
<i>C. parvum</i>	105	1	0.9
<i>Ascaris lumbricoides</i>	107	6	5.6
<i>H. nana</i>	107	0	
<i>T. trichuria</i>	107	4	3.7
<i>T. homonis</i>	107	0	
Hookworm	107	3	2.8
Balantidium Coli	107	1	0.9



Fig. 1.1.1. Number of stool samples of screened in the surveillance programme during April - 2003 to March - 2004



*Zinc supplementation
in the Community*

