

1. Study on hospital surveillance

1.1 Hospital based surveillance system for diarrhoeal diseases

Institutional project:

This project is the continuous hospital based 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, 2006 to March 31, 2007 a total of 755 stool samples were collected and processed for isolation of enteropathogens. The enteropathogens isolated were *Vibrio cholerae*, *Shigella spp*, non typhoidal *Salmonella spp*, diarrhoegenic *Esch.coli*, rotavirus and enteric parasites.

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 profile:

Vibrio cholerae 01 strains were resistant to ampicillin, co-trimoxazole, furazolidone and nalidixic acid. Reduced susceptibility was observed for chloramphenicol, ciprofloxacin and neomycin. Strains were sensitive to gentamycin, norfloxacin and tetracycline.

Shigella dysenteriae strains were uniformly resistant to ampicillin, cotrimoxazole, tetracycline, nalidixic acid, chloramphenicol and had reduced susceptibility to norfloxacin, ciprofloxacin and ofloxacin. They were found sensitive to azithromycin and ceftriaxone.

Table 1.1.1: Enteropathogens detected in Hospital Based surveillance system during April 2006 to March 2007 at ID Hospital, Kolkata

Enteropathogens	Number tested	Number identified	Percentage
Bacteria			
<i>Vibrio</i> spp.	755	142	18.8
<i>Vibrio cholerae</i> O1	755	82	10.7
<i>Vibrio cholerae</i> O139	755	3	0.4
<i>Vibrio cholerae</i> nonO1 nonO139	755	37	4.9
<i>Vibrio parahaemolyticus</i>	755	20	2.6
Shigella spp.	755	-	-
Non typhoidal <i>Salmonella</i> spp.	755	-	-
Diarrhoeagenic <i>Escherichia coli</i>			
Enterotoxigenic <i>E.coli</i>	127	11	8.7
Enteropathogenic <i>E.coli</i>	127	3	2.4
Enterohaggative <i>E.coli</i>	127	11	8.7
Virus			
Rotavirus	184	3	1.6
Protozoa and Helminth			
<i>E. histolytica</i>	212	27	12.7
<i>G. lamblia</i>	212	22	10.3
<i>C. parvum</i>	246	6	2.4
<i>Ascaris</i>	212	5	2.4
<i>T. trichuria</i>	212	1	0.5
<i>Hookworm</i>	212	2	0.9

Fig. 1.1.1 NUMBER OF STOOL SAMPLES IN THE SURVEILLANCE PROGRAMME DURING APRIL-2006 TO MARCH-2007

