Summary

The aim of present work was to evaluate the role of Aeromonas hydrophilia in human entero-colitis and it is incidence.

For this purpose stool specimens were taken from each of 250 patients suffering from watery diarrhoea aging between one month to 60 years & 50 apparently healthy patients with no diarrhoea before sampling for at least 15 days.

Iodine stained film to exclude parasitic diarrhoea and pus cells was performed. Coventional stool method examination was followed including culture for pathogenic organisms identification as Vibrio-cholera, Salmonella spp, Shigella spp, Enteropathogenic Escherichia coli, Yersinia enterocolitica, Candida and less commonly enteropathogenic organisms as Aeromonas hydrophilia and oxidase positive organisms. Positive Aeromonas hydrophilia samples were screened for Rota virus. Detection of pathogenicity for Aeromonas hydrophilia strains was done by haemolysin production, haemagglutination, and enterotoxin production using Adrenal Y1 mouse cell lines. Antibiogram for Aeromonas hydrophilia was done by tube method. Identification of Aeromonas hydrophilia was done by Api20E system, also it

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is used for identification of oxidase positive organisms, and non lactose fermenters.

The present study showed

- High incidence of diarrhoea in infantile group (0 - 2 years) 56.4% (31.2% males and 25.2% females).
- Macroscopic & Microscopic examination of stools showed either mucus in 70%, or pus in 23.2% and niether in 6.8% .
- The incidence of each Giardia lamblia and Entoemoeba histolytica was 2.8%.
- 18 organisms was isolated with 46% of for E.coli, 8% for klebsiella spp, 4% for Proteus mirabilis, non pigmented pseudomonas, Citrobacter spp, 3.2% for Aeromonas hydrophilia & Proteus vulgaris, Candida albican and Anthracoid spp, 2.8% for Morganella morgani, 2% for Proteus retegrii, Pseudomonas aeruginosa, and Achromobacter spp, 1.6% for Shigella boydi, 1.2% for Pastrulla multocida and Enterobacter spp, 0.4% for Shigella flexneri and Staph. aureus. and the incidence of oxidase positive organisms was 15.6% .
- Age group (0 - 2 years) showed highist incidence for isolation and detection of bacteria and parasites (15) out (20).
- No special correlation between organisms isolated and clinical data in all different groups studied.

- The incidence of enterotoxigenic E.coli was 23.3%.

- 8 strains of Aeromonas hydrophilia were isolated 2 of them were associated with Proteus valgaris and E.coli, and all cases were negative for Rota virus studied by latex agglutination test. All the isolates was in summer months.

- Criteria of pathogenicity of Aeromonas hydrophilia was shown as follow:

  I: 75% give positive haemolysin production.

  II: 75% give haemagglutination activity.

  III: 75% give positive results for enterotoxin production.

- Correlation between enterotoxin activity and phenotype markers showed 100% correlation with lysine decarboxylase and 83.3% for both Voges. Proskauer and arabinose fermentation.

- Antibiogram for isolated Aeromonas strains showed that 100% sensitivity for chloramphenicol, Amikacine, Tobramycin, Gentamycin, 75% for tetracycline, 50% for cephalothin, 25% for Eythrocine, 12.5% for Trimethoprim and all strains were resistant to Ampicillin.