

days to 3 years.(Most children (84%) were less than one).

Specimens collection:

Stool specimens were collected in sterile wide mouth containers.

Methodology:

All isolates were diagnosed according to well known microbiological methods⁽¹³⁾. For optimal isolation, three different media and an enrichment medium were used. The samples were inoculated directly on MacConkey agar, xylose – lysine deoxycholate agar and *Salmonella-Shigella* agar. Enrichment was done in Na – Tetra thionat broth and incubated at 37C overnight. Biochemical identification of *shigella* spp. has been performed according to standard methods⁽¹⁴⁾. Confirmation of diagnosis was through slide agglutination test using commercially available antisera (Wellcome Diagnosis, UK)⁽¹⁴⁾.

Antimicrobial susceptibility tests:

Shigella isolates were examined for their susceptibilities to ampicillin , chloramphenicol, ceftriaxone, ciprofloxacin, gentamicin, kanamycin, nalidixic acid, norfloxacin and co - trimoxazole by the standard disc - diffusion method⁽¹⁵⁾.

Results

Table (1) shows that *shigella flexneri* type 2 was the predominate serotype out of 9 isolates. Of children with diarrhoea , *shigellae* were isolated equally from both sexes (5 from 80 males and 4 from 70 females) . A total of 6 *shigella flexneri* and 3 *shigella sonnei* were isolated. Of the 6 strains

of *shigella flexneri* 4 were *shigella flexneri* type 2 , 1 of *shigella flexneri* type 1 and 1 of *shigella flexneri* type 3. Out of 9 *shigella* strains , 5 (56%) were isolated in summer , 1 (11%) in autumn , 2 (22%) in winter , 1 (11%) in spring. Three *shigella* strains were isolated from 50 children with diarrhoea aged 6 months to one year , 6 strains out of 24 patients aged more than one year and none were isolated from 76 children less than 6 months old . All patients with *shigella* isolates (100%) were on artificial feeding, 7 (78%) were using untreated water for drinking, 1 (11%) took Bactrim 2 days prior to stool collection and none travelled abroad in the last 30 days before stool collection . Blood and mucus were seen in the stool of 5 (56%) patients with diarrhoea . Clinical examination showed 6 (67%) with fever and 3 (33%) with vomiting , 1 (11%) was diagnosed to have septicemia and 1(11%) had generalized convulsion. Clinical finding are shown in Table - 1 . The drug susceptibility patterns of 9 isolates of *shigella* strains were determined . Resistant strains to ampicillin was found to be 78% , 67% to chloramphenicol , 67% to kanamycin , 56% to streptomycin and 89% to trimethoprim-sulphamethoxazole . All isolates were sensitive to ceftriaxone, ciprofloxacin, nalidixic acid, norfloxacin and gentamicin as compared to Table-2. Drug resistance to 3 or more drugs was shown by 56% of strains.