ETIOLOGICAL STRUCTURE OF INTESTINAL INFECTIONS IN THE "PROF. DR. STOYAN KIRKOVICH "AD (UNIVERSITY) – STARA ZAGORA HOSPITAL IN 2013

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ABSTRACT
Isolates from fecal samples of patients with diarrhea syndrome from “Prof. Dr. Stoyan Kirkovich” AD (University) - Strara Zagora Hospital were included in our study for 2013. We examined 2292 fecal samples and identified 93 strains. The most common strains were from genus Shigella and genus Salmonella, followed by diarrhea-causing E. coli, Y. enterocolitica and P. aeruginosa. Each of the isolates had been tested to antimicrobials.

Key words: Shigella spp., Salmonella spp., E. coli, Y. enterocolitica, P. aeruginosa

INTRODUCTION
Infectious diseases with leading diarrhea syndrome are global health problem.

Many microorganisms can cause infections of the gastrointestinal tract- food-born and toxicoinfections that proceed clinically as gastroenteritis and enterocolitis- Salmonella spp., Shigella spp., E.coli, S.aureus, B.cereus, C.botulinum, and less Y. enterocolitica, C. difficile, Campylobacter spp., V.parahaemolyticus, A.hydrophila, P.shigeloides, etc. (1).

The development and the severity of disease depends on the causative agents, as well as susceptibility of the host, personal and communal hygiene, age, state of the immunity etc. The occurrence of the disease depends on the infectious dose (2).

Aim
The aim of this study is to determinate the etiological structure and the antibiotic susceptibility of bacterial intestinal infections in “Prof. Dr. Stoyan Kirkovich” AD (University) - Strara Zagora Hospital in 2013.

MATERIALS AND METHODS
During the analyzed period we have studied 2292 fecal samples of patients admitted in Clinic of Infectious diseases, Neonatology Clinic, Gastroenterology, Dermatology Clinic. There were 93 isolates identified. We used conventional methods for the diagnostics- cultural methods biochemical methods and serotyping. The cultivation was done on Blood agar, Mac Conkey agar, Deoxycholatecitrate agar, Eosinmethyleneblue agar (Levine), Selenite Broth. Were used also manual and semi-automated and systems (Crystal GN, mini API-ID 32 E, rapid ID 32E). The antibiotic susceptibility was determined on Muller-Hinton agar by DDM (Disk Diffusion Method) and DDMS (Double Disk Method of Synergism) (3, 4).

RESULTS AND DISCUSSION
Etiological structure of clinically important pathogens with diarrhea syndrome is presented in Figure 1.
The specimen distribution of isolated *Shigella* strains is presented in **Figure 2**. The distribution of genus *Shigella* is as follows: (*S. flexneri* - 46 isolates (81%), *S. dysenteriae*1- 6 isolates (10%), *S. sonnei* - 4 isolates (7%), *S. dysenteriae* 4- 1 isolate (2%).

The predominant *Salmonella* serovars are presented in **Figure 3**. Among the genus *Salmonella* the prevalence serotype is *S. Typhimurium* - 14 isolates (56%), followed by *S. Enteritidis* - 8 isolates (32%), *S.4, 5, 12:i - 2* isolates (8%), *S. Indiana* - 1 isolate (4%).
Among diarrhea-causing E. coli (5 isolates) the distribution is as follows: ETEC O 6 K- 2 isolates, ETEC O 78 K 80- 1 isolate, EHEC- O 157 H 7- 1 isolate.

We identified two cases with diarrhea syndrome, caused by Y. enterocolitica, without epidemiological connection between them. P. aeruginosa were identified in four cases with diarrhea.

The case of one-year child (K. S. D.) was of a particular interest. The child was admitted in CIB II (Clinic of Infectious diseases) for Rotavirus enterocolitis. After ten days of hospitalization at the clinic we isolated S. flexneri from fecal samples. The child had treated etiologically and then discharged from the clinic. When the control cultures were made additionally S Typhimurium was isolated. Both strains S.flexneri and S. Typhimurium with their antimicrobial susceptibility patterns were previously isolated from two more children. Perhaps, it is a case of nosocomial infection with S. Typhimurium and S.flexneri. The strains were sent and confirmed by the Reference Laboratory of NCIPD (National Center of Infectious and Parasitic Diseases).

The analyses of antimicrobial resistance of the isolated strains showed single cases of ESBLs positive Enterobacteriaceae: S. sonnei- 1 isolate, Salmonella 4, 5, 12:i - 1 isolate, EPEC O 86 K 61- 1 isolate.

CONCLUSION
During the studied period the leading causative agents of bacterial intestinal infections (enterocolitis and gastroenteritis), incl. nosocomial infection are: S. flexneri and S. Typhimurium. Strains were isolated all year long and the peak is June-October.

REFERENCES
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