

Infectious Diarrhea, as a Valid Medical and Public Health Problematic

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1. Abstract

Acute diarrhea of infectious etiology, referred to gastroenteritis and is associated with clinical signs and symptoms including: nausea, vomiting, abdominal pain and cramps, bloating, flatulence, fever, passage of bloody stools, tenesmus, and fecal urgency disorders. Diarrheal illness is a problem worldwide, with substantial regional variation in the prevalence of specific pathogens. In fact, Infectious diarrheal diseases, are the second leading cause of morbidity and mortality worldwide and can cause real public health problems. Such diarrhea was studied as a medical disorder, in a 3 years period, 2017-2020, in Transylvania region from Romania. It was found 3577 number of cases, almost during July to August. The case incidence for the disease arrived at 65%, in the entire summer season. The data were transmitted by 12 district Sanitary Polices, to the Public Health Center. This all were mostly diagnosed by the territorial family doctors and more than 50% , have need some days of hospitalization, because of several disease disorders. For this disorders it was used a specific adequate fluid and electrolyte replacement as key of the treatment, to managing diarrheal illnesses. Even so, 3 children under 5 years age died, because of severe complications. Organic failed was estimate to be the cause of their deaths. Clinical and epidemiological evaluation defined the severity and type of this illnesses. The detected infectious etiology for the Acute diarrhea, where determined in authorized Microbiology laboratories, and there were identified: Shigella spp, Salmonella spp, Campylobacter spp, Yersinia spp, Rotavirus, Giardia. Most number of cases appeared in children in 63%, followed by elderly or adult people in 17% each, all data as quantified number of determined infectious diarrheas. Acute diarrheal illness had to be considered a major public health issue, against which control efforts

are needed. Public health surveillance of infectious acute diarrhea, includes obligatory strategies of infection control.

2. Introduction

According to the World Health Organization (WHO) and UNICEF data, there are about 2 billion cases of diarrheal disease worldwide on every year, and 1.9 million children younger than 5 years of age, mostly in developing countries, perish from diarrhea each year. In industrialized countries, relatively few patients die from diarrhea, but the disease continues to be an important cause of morbidity associated with substantial health care costs. However, the morbidity from diarrheal diseases has remained relatively constant during the past 2 decades [4].

Because of all this worldwide data, it was studied in the Epidemiology Department, of the Public Health Institute Department, during the last 3 years period, 2017–2020, the morbidity caused by infectious diarrhea, appeared in Transylvania region from Romania. Despite the economic and societal burdens of diarrheal illnesses, there are still few clinical guidelines which exist, for the diagnosis and treatment of persons with such suspected or relevant infectious diarrheas. That for, considerable clinical practice have been observed for to be able to demonstrate a clear need for a clinical diagnostic improved guideline.

3. Material and Method

It was used an analytical descriptive epidemiological study, to analyze 3577 cases of infectious diarrhea in the population from Transylvania region in Romania. With it was figured out all representative aspects of the pathology at: children, adults and elderly people. Data recruitment were ordered by the existing pathology in Ro National Public Health Guidelines. The data were transmitted

by the territory sanitary police units, during 5 months, from May to November in all the study years, 2017-2020 and were sent to the Epidemiology Department at the Public Health Center, where it was done an detailed epidemiologic analyze and data interpretations.

4. Results and Comments

A total of 3577 number of Infectious diarrhea, where analyzed and this are relevant data presented in (Figure 1).

Most of this disease were present in the first year of the study, in 37%. In the second year this were followed by 35.5 % and at least in 29.5% in the third study year. In all 3 years, most of this pathology appeared in the summer season, almost during July and August. In the studied territory and it was not a significant estimate remarked difference. The case incidence was 65%, for this summer seasonal morbidity. In rest infectious diarrheal did not represent a specific morbidity in entire Transylvania region.

More significant to be figured out is even, that infectious diarrhea exist at each age decade. More significant appeared in children, with 63%, as (Figure 2) present data.

The disease was present at children at 0-14 age. In adults infectious diarrhea was remarked in 17%, as well in elderly people this pathology was represented in same number also, by 17%. From all Infectious diarrhea cases, 27% of children and adults have need short hospitalization because of dehydration. For this disorders it was used a specific adequate fluid and electrolyte replacement, as key of the treatment and for managing diarrheal illness. It must be mentioned that 3 children under 5 years age died, even after this specific therapy, because of severe organic complications and so organic failed was estimate to be the cause of their deaths. There is also a growing awareness of the potentially huge impact, in the developing world, of long-term disability caused by repeated ear-

ly childhood enteric infections. Worldwide, there are 3.1 million deaths due to diarrhea per year (18400 per day), mostly at young children in developing areas [1]. Annual deaths due to diarrhea globally occur mainly in young children, and the number of deaths is 1000-fold higher than in the United States, where most of those who die of diarrheal illness, are elderly people [2].

Clinical and epidemiological evaluation must define the severity and type of this illness. For clinicians, early diagnosis of an acute episode of diarrhea, can lead to interventions that alleviate symptoms and prevent secondary possible other disease transmissions. For public health practitioners, prompt notification of pathogen-specific diagnoses and bacterial isolates through public health surveillance, can low the rates of transmission and lead to timely detection and control of any disease outbreaks. Because both clinicians and public health practitioners share overlapping responsibilities for such diagnosis, management, and prevention of infectious diarrheal diseases, must contain specific recommendations and specific guidelines for both groups of specialists [5].

Diarrheal illness is a problem worldwide, with substantial regional variation in the prevalence of specific pathogens. Diagnostic testing of stool specimens is indicated for each Patient. This had to be ordinate up to an existing national guideline for to identify all microbiological specimens. That for, it was significant to be figured out, the etiological aspects concerning all detected cases of the announced infectious diarrhea. Data were received from several territory laboratories, where it was realized a pertinent investigation. All this data were identified, in order to present the microbiological aspects. With, it was possible to make an overview, concerning the heterogenic microorganisms, who made the appearance of the infectious diarrhea diseases present in the Transylvania population study. The incidence of this aspects, is presented in (Figure 3) and show out all detected germs.

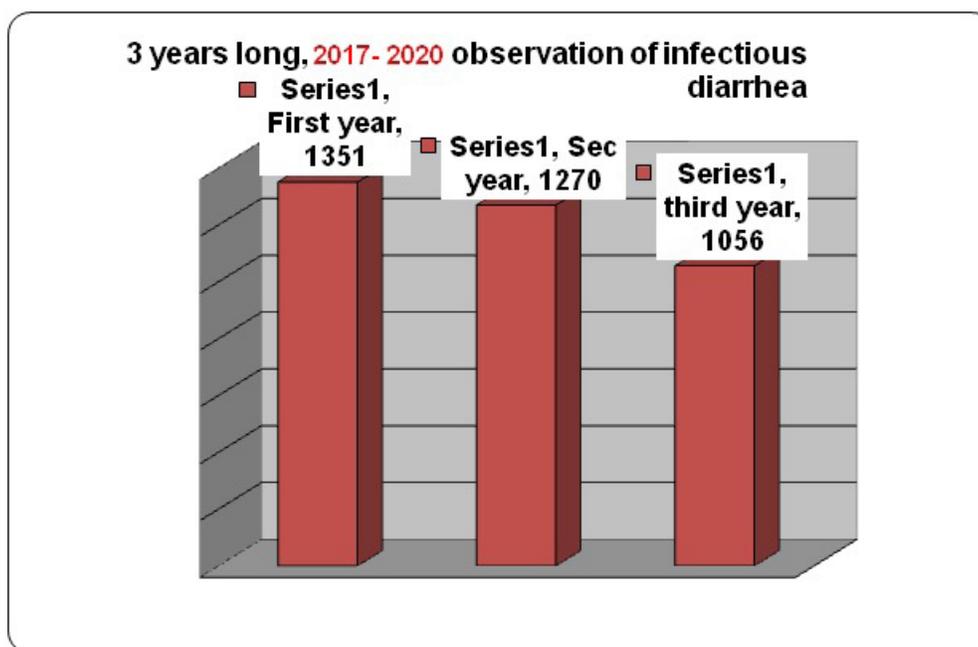


Figure 1: Infectious diarrhea during 2017-2020



Figure 2: Distribution of the disease

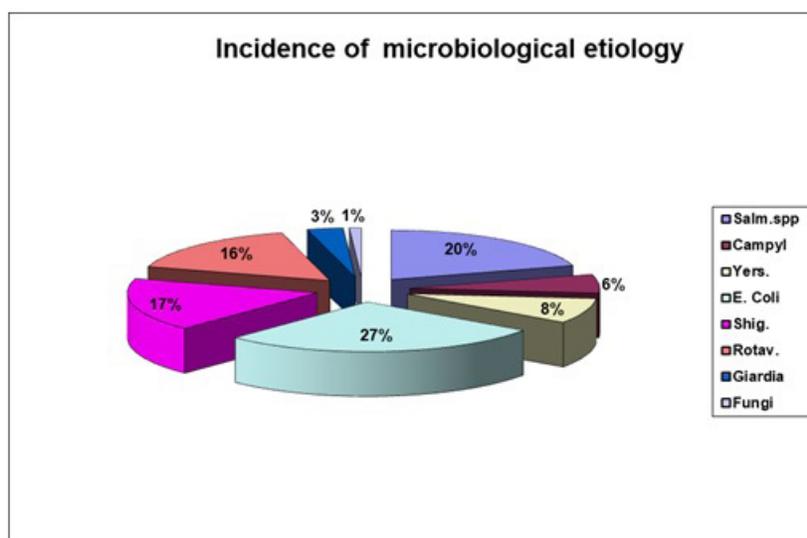


Figure 3: Overview of the detected etiological aspects

Most of species belonged to the Enterobacteriaceae Family, represented by E coli in 27%, Salmonella spp. in 20%; Shigella spp. in 17%. Important is to be figured out here even, that the death of the 3 children under 5 age was caused by invasive E. coli, present in their stool samples. Natural, it is also important to be remarked the presence of Yersinia spp in 8% and of Campylobacter spp in 6% in other patients samples. The presence of this different bacterial mentioned species, were identified: E. Coli in children faces and all other were present in adults, or in the elderly people samples. The observation of this study, must mention even the presence, in 17% of Rotavirus, which mostly were present in the infectious diarrhea of children etiological. 3% of children have had even Giardia and 1% of elderly people have had Fungi in their preserved tools. Many of these organisms are easily transmitted through in-

fectured food or water, or from person to person, as the epidemiological study figured out these in the Transylvania territory.

There are various interpretations of what is considered medically indicated for evaluating persons with infectious diarrhea. Stool cultures are often viewed as important tests, with a high result significance [3]. With the rapid globalization and industrialization of our food supply more recognized pathogens can be figured out. More with a multiplicity of recognized pathogens new diagnostic tool samples can appear and change the aspects. The challenges of determining optimal, cost-effective means for appropriate diagnosis, clinical management, and public health control of diarrheal illnesses can became more great in knowledge [6]. This will continue to evolve as improved understanding of pathogenesis and development and use of inexpensive, rapid tests who will improve

diagnosis and management of infectious diarrheal illness as one of the most common clinical syndromes in our society. The lack of a specific diagnosis can hinder appropriate management and treatment of many such infections. Observation of patients is a recommendation, intended to provide clinicians and public health practitioners with a consensus-based document next. That will aid in the management of acute diarrhea, by addressing correct, which patients to be tested what tests to order, what medical treatments to be used, and what steps to take to ensure, that appropriate public health actions are always implemented, well and correct.

5. Conclusions

No specific differences could be offered for data, in the 3 years study and infectious diarrhea appeared during the summer months, almost from July to August.

The incidence of infectious diarrhea was significant at Children, at 0-14 age group, but it is significant that each patient should be observed about potential epidemiological risk factors, for any diarrheal diseases, or for possible spread infection in the territory.

Bacterial, viral, and parasitic pathogens, had to be identified, for evaluating each persons with enteric infections.

For to reduce the morbidity and possible mortality associated with infectious diarrhea, it is needed a serious clinical and public health study, that require specific control measures in clinics and health care activity group, for to identify optimal diagnostic, treatment, and prevention methods.

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