

An Epidemiological 5 Years Analyze, Concerning Food Born Infection in Transylvania Region-Romania

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Submitted: 01 Jan 2019; Accepted: 10 Jan 2019; Published: 21 Jan 2019

Abstract

Foodborne diseases are globally important because of their high incidence and the costs that they impose on each society and their people's activities. Symptoms of foodborne illnesses depend on the causes and the incubation period that can range from several hours to 1 week and can be caused by the process from food production to consumption process. We have got data for a complex epidemiological and clinical study, for 5 years 2014-2018 and were able to determine useful facts, several interpretations and conclusions, from our Transylvania region in Romania, for 18,890 cases of this disease.

Introduction

Foodborne diseases are the result of ingestion of food contaminated with microorganisms, which may occur at any stage in the process from food production to consumption. Most illness usually arises from improper handling, preparation, or food storage, problematic which is considered for CDC as common but preventable medical situations today. Each year, an estimated 48 million people in the United States experience get a foodborne illness. The illnesses cause 128, 000 hospitalizations and about 3,000 deaths in the United States annually. Each year, 1 in 6 Americans gets sick by consuming contaminated foods or beverages. More than 250 different foodborne diseases have been described [1]. Most of these diseases are infections, causing a difficult morbidity, by a variety of bacteria, viruses, and parasites that can be existent in many food products [2].

Material and methods

An outbreak of foodborne disease is defined as occurring when two or more people experience similar illness after consuming food from a common source [3]. The detection and investigation is primarily handled by local health jurisdictions and is inconsistent from district to district and not always all are well detected everywhere [4]. Anyone can get a foodborne illness, caused by foods improperly prepared or mishandled at home, in food service establishments or markets. During 2014-2018, we have got data for a complex epidemiological and clinical study for such diseases. All these determined us to present in fact several interpretations and conclusions with, from our Transylvania region in Romania. There were cumulated 18,890 suspect and confirmed Food borne cases during the 5 years of our study (Figure 1).

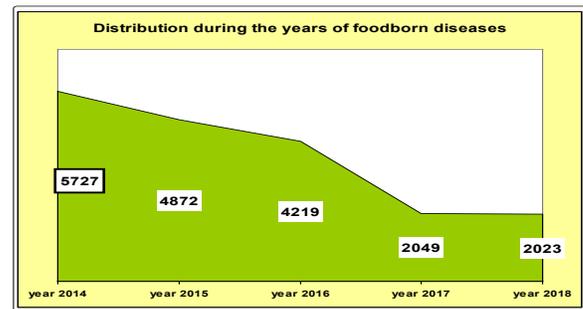


Figure 1: Foodborne cases during 2014-2018

Results and discussions

Majority of our reported cases of foodborne illness occurred as individual or sporadic cases and have appeared in Urban or Rural parts if the region, as well in family or collectivity situations, almost during the summer season, from May to September on each year (Figure 2). It was present an average of 10 % for the year 2014 and an increase of 5% cases, in the summer of the year 2016 and 2017 mostly caused by some improper hygiene handling loco conditions.

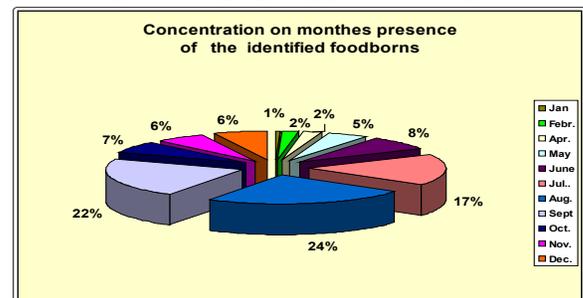


Figure 2: Distribution on months of the cases

Food contamination occurred at any point, during: production, processing, distribution, or preparation. Some foods were contaminated before they reached in the kitchen, even by the food handlers. If contaminated food stayed on store shelves, in restaurant kitchens, or in home pantries, more people became sick. Outbreaks occurred appeared in Urban in 57% cases and in Rural in 43% of cases (Figure 3).

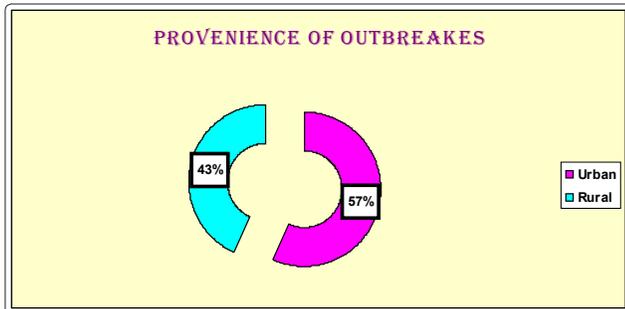


Figure 3: Urban and Rural cases

The microbiological etiology was determined and was suggestive for Salmonella spp. in 67% forms. From it, Salmonella enteritidis was identified in 29% of the cases. It must be mentioned even that 14% of diseases, were determined by Staphylococcus aureus (Figure 4).

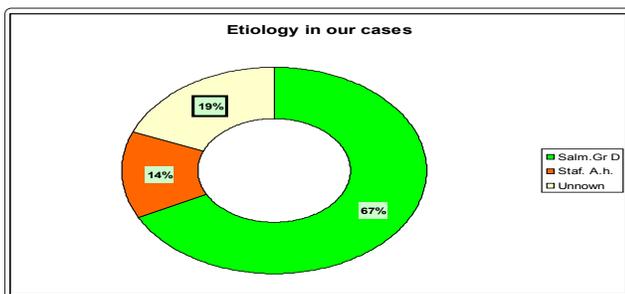


Figure 4: Microbiological etiology of the food borne diseases

It was mentioned most of the illness in usual forms like 70%, or in 22% as middle forms. Only 5% have needed hospitalization and from these, only 3% were considered indeed as real emergency cases (Figure 5).

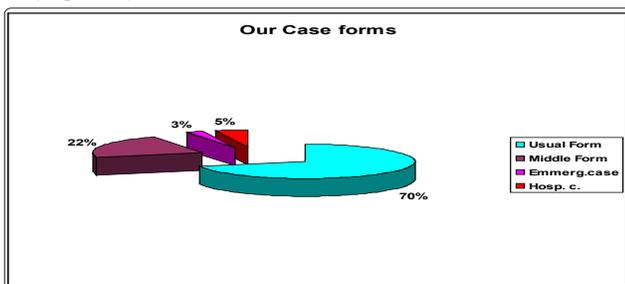


Figure 5: Clinical forms of our medical cases

CDC reports food born infection mosly in: elderly people, children younger than 5 years, people with weakened immune systems, or diabetic persons, people with HIV or the one on receiving chemotherapy or radiation therapy , or even some of the pregnant women. In our cases, we have detect mostly the diseases, in adults with several chronically diseases, in 56%, followed by elderly people in 24%, or young children in 20% of cases (Figure 6).

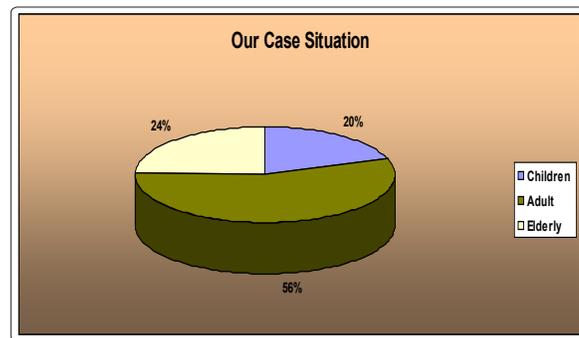


Figure 6: Repartition on age groups OD the diseases

The determinations we did during the times, showed out also, several opportunities to figure out how the diseases could happen in our population. So, we were able to demonstrate that the insecure food preparations and less hygiene uses in the kitchens, where the one to make the outbreaks happen. Most frequent contaminated food products were: egg products in 25%; meat products in 20%; milk products in 18%, unwashed well fruits in 17%, or even some seafood dishes, in 11% of the cases (Figure 7).



Figure 7: Products who caused our foodborn infections

Such pathology must be preventing in population, and that for there are some food safety recommended steps. as: clean, separate, cook, and chill to lower chance of food poisoning and to can protect well us it is necessary to wash correct our your hands , to clean surfaces very often and to not allow cross-contaminate occurring. The way to tell if food is safely cooked is to use even a food thermometer [5]. Also, it is necessary to be attentive to never leave perishable food outside for more than 2 hours and to refrigerate promptly the food prepares for dishes use [6].

Conclusions

Foodborne diseases are globally important because of their high incidence and the costs that they impose on society. That for it is necessary to prevent and control such infection, which means to be put together specialists for: laboratory, epidemiology, environmental health, as several other one, with possible enteric disease expertise, as well for a correct determinations for each outbreaks, as even for the therapy responsibilities.

References

- Centers for Disease Control and Prevention (2010) Surveillance for foodborne disease outbreaks - United States, 2007. Morbidity and Mortality Weekly Report 59: 973-979.
- Scallan E, Griffin PM, Angulo FJ, Tauxe RV, Hoekstra RM (2011) Foodborne illness acquired in the United States

- unspecified agents. *Emerging Infectious Diseases* 17: 16-22.
3. World Health Organization (2008) WHO initiative to estimate the global burden of foodborne diseases. A summary document. http://www.who.int/foodsafety/foodborne_disease/Summary_Doc.pdf?ua=1.
 4. Tirado C, Schmidt K (2001) WHO surveillance programmes for control of foodborne infections and intoxications: preliminary results and trends across greater Europe. *J Infect* 43: 80-84.
 5. D'Souza RM, Becker NG, Hall G, Moodie KB (2004) does ambient temperature affect foodborne disease? *Epidemiology* 15: 86-92.
 6. "Codex Committee on Food Hygiene (CCFH)", European Commission 2015.

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