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Identification Of Parasitic Infections In Food Handlers And The Imminent Risks Of Transmission To School-Aged Children

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ABSTRACT

Introduction: Most diseases transmitted by food contaminated by protozoa and/or helminths are originated from food improper handling. This fact is related to poor hygiene conditions in the food handling environment or the practices of food handlers.

Objective: The aim of this study was to identify parasitic diseases in food handlers, as well as the risk of transmission to school-aged children.

Methods: This is a literature review accomplished through researchers in Pubmed, Academic OneFile, SciELO and Google Scholar. The review comprised 40 articles published in the period from 2009 to 2019. In order effect the review, were included in this study literature reviews and original articles, identified in the aforementioned databases and which met the inclusion criteria: having their publication in indexed journals, articles with abstracts and full texts available online, articles published in Portuguese, English or Spanish in the last ten years. Studies whose year of publication was less than 2009 were excluded.

Results: Enteroparasitosis are a serious public health problem that affects the world population. This fact is mainly related to the ingestion of contaminated food, having a direct connection with those who handle it.

Conclusion: Therefore, food handlers have an important role in the transmissibility of diseases and food security.

Keywords: Food handlers. Children. Enteroparasitosis.

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INTRODUCTION

Intestinal parasites affect the gastrointestinal tract of humans, causing parasitosis that can trigger malnutrition, diarrhea, anemia, physical and cognitive development delay of children and, depending on the degree of pathogenicity, can cause the death of those who were infected. There is a higher prevalence of people infected with intestinal parasites in underdeveloped and developing countries, being estimated that 3.5 billion of people worldwide are suscetible to this condition [1, 2].

The transmission of these parasitic infections occurs through the ingestion of water and/or food contaminated with cysts and eggs of enteroparasites. Food handling is one of the most common forms of contamination by these pathogens, due to poor hygiene and workplaces with precarious sanitary conditions. In this way, the parasitic or asymptomatic food handler can represent a source of lasting transmission of these parasitosis to other individuals [3, 4].

In front of less awareness of hygiene habits, most likely direct contact of the feet with the soil and with contaminated subungual extracts, children are generally the main target of contamination by parasites. The increase of the number of children in full-time schools has facilitated the transmission of enteroparasites, both owing to the ingestion of contaminated food, to the lack of adequate hygiene of foods and in view of heteroinfection, very common in conglomerate environments [5].

The lack of information about prophylaxy in adults responsible for infants, justifies their own disability to guide their children on how to prevent transmission of parasitosis, and moreover, the abscence of a routine request for stool examination. Thus, the main preventive measure against parasitic infections is health education, combined with prophylactic measures such as stool examination, water treatment, correct disinfection of food, treatment of infected people and environmental sanitation [6, 7].

OBJECTIVE

The aim of this study was to identify parasitic diseases in food handlers, as well as the risk of transmission to school-aged children.

METHODS

It is a literature review accomplished through databases of international literature in health and biomedical sciences: Pubmed, Academic OneFile, Scientific Electronic Library Online (SciELO) and Google Scholar. In these, from the following descriptors: enteroparasitosis, children and food handlers.

The review comprised 40 articles published in the period from 2009 to 2019. In order effect the review, were included in this study literature reviews and original articles, identified in the aforementioned databases and which met the inclusion criteria: having their publication in indexed journals, articles with abstracts and full texts available online, articles published in Portuguese, English or Spanish in the last ten years. Studies whose year of publication was less than 2009 were excluded.

RESULTS

Transmission of intestinal infections in schoolchildren

Parasitic infections can affect any age group, but the child population is the group most affected, mainly due to inadequate hygiene habits. In this age group, intestinal infections are of greater concern, as they can cause diarrhea, anemia and nutrient deficiency, compromising children's physical and cognitive development [8, 9].

Public daycare centers are spaces where a large portion of Brazilian children of pre-school age spend most part of the day. These institutions mainly shelter children from socioeconomically vulnerable families in urban centers. Clusters of environments such as daycare centers and schools represent an imminent risk of transmission of enteroparasites, specially through direct contact and precarious hygiene habits [10, 11].

Several researchers reported in their studies, problems in the qualification of food handlers, in

view of poor professional training due to low education and low wages. There is a predominance of females and low income exercising this function. This fact constitutes a serious social and public health problem, considering that the lack of qualification to act in this segment creates obstacles in the implementation of safe practices of food handling [12, 13, 14].

Correlation between socioeconomic indicators and transmission of enteroparasitosis

Socioeconomic and cultural levels directly influence the care with personal hygiene and treatment of water and food, thus being able to deduce that in less favored classes, these points are not strictly observed, facilitating the occurrence of parasitic infections [15].

High rates of parasitism are related to the scarcity of basic sanitation and precarious living conditions, contributing to the wide dissemination of various parasitic forms, which is also related to inadequate hygiene conditions, combined with the lack of clean water reservoirs, consumption and use of untreated water, being these factors responsible for a high incidence of parasites in several Brazilian regions [16].

Prophylaxy

It is known that environmental conditions are directly related to the emergence of parasites in the population, considering external factors such as the absence of a sewage network, access to quality water, and others. In this sense, epidemiological indicators are useful for monitoring health promotion progress, offering data on geographic area, gender and income group, making it possible to build and conduct public policies that can direct resources and actions to the most susceptible populations [17, 18].

It is also known that school-aged children is the group with the highest prevalence of intestinal infections, therefore, diagnosis through stool examination is essential for better precision in the evaluation of enteroparasites and in the prescription of different therapeutic agents, using the most appropriate. Thus, it is necessary to identify, treat and prevent parasitic infections, in order to avoid probable epidemics and the formation of new endemic areas [19].

Health education is a very useful measure in this context of parasite prevention. It favors learning, and once someone has the knowledge, it helps in the spread decreasing and prevention of diseases by becoming able of guarantee maintenance and promotion of its own health and of people it is close to. In the case of school-age children, it becomes easier to reach the family through the educational actions experienced in the school environment [20].

It is necessary to identify the main points of contamination during food handling, to ensure microbiological safety and quality, where good hygiene and handling practices can collaborate to achieve this point. From this, it is important to guide food handlers about the care in the acquisition, conditioning, handling, conservation and exposure to food consumption, so that these foods are not susceptible to contamination [21].

CONCLUSION

Parasitic infections are a serious public health problem that affects the world population. This fact is mainly related to the ingestion of contaminated food, with direct link to those who handle them. Therefore, food handlers have an important role in the transmissibility of diseases and food security. There is the need to provide training to these professionals and evaluate their work periodically to ensure the hygienic and sanitary quality of food.

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