Is food no longer safe? Prevalence of Intestinal Infections

Hafsa Atique, Hareem Arif Khattak
3rd Year MBBS Students, Islamabad Medical and Dental College

Correspondence:
Hafsa Atique
Email: hafsa17@imdcollege.edu.pk

In today's world, intestinal infections have gained much prevalence and severity, primarily due to unhygienic practices and food contamination. The World Health Organization (WHO) estimates that about 2 million children worldwide die each year from diseases that cause diarrhea. Children, the elderly, and people who have weak immune systems are most likely to contract intestinal infections[1].

Every minute, 44 people – more than 23 million per year – fall sick from eating contaminated food, and an estimated 4700 per year lose their lives. Unsafe food is responsible for millions of sick days, and can sometimes lead to lasting or severe illness, hospitalization and even death.

"Every country around the world, from small to big, from rich to poor, has suffered from foodborne illnesses, and Europe is no exception. The scale of the challenge posed by foodborne disease is striking, indicating the importance of preventing and mitigating risks to food safety," says Dr Zsuzsanna Jakab, WHO Regional Director for Europe[2].

The prevalence of pathogenic parasitic infections was reported in various surveys, for the developing countries which ranged from 1% through 14% to 82% with intermediate figures of 35.39%[4] and 8I%, respectively. For developed countries, the reported prevalence was between 7.3% to 23%. Communities, where only 20% population has access to safe water supply and sanitation, the prevalence of parasitic infection is a common problem[3]

According to Journal of Pakistan Medical Association, 53% individuals had parasitic infection either pathogenic or commensals and 47.54% were suffering from pathogenic parasitic infestation. This difference could be due to poor living conditions, use of unsafe water supply, improper disposal of waste and poor sanitary conditions.

In most of the cases reported, almost the same type of organism were found, i.e., E. histolytica 11.6%, Giardia lamblia 12.1%, H. nana 1.3% and thread worms 0.4%.

However, According to WHO, for diarrheal infections, the most common organism is norovirus with an estimated 15 million cases, followed by *Campylobacter* spp., which is responsible for almost 5 million cases.

Another study reported the prevalence of intestinal parasitic infections to be 52.8%. *Giardia lamblia* was the most common parasite followed by *Ascaris lumbricoides*, *Blastocystis hominis and Hymenolepis nana*. About 43% children were infected with single parasite and 10% with multiple parasites. Factors like age, living in rented households and history of excessive crying were significantly associated with intestinal parasitic infections[4].

Modern practices must be targeted towards the eradication of these infections. As Dr Nitzan comments: "From handwashing, cooking and storing food properly, to surveillance and international regulation – every piece of the food safety puzzle affects lives, economies and whole communities[2]."

Another leading cause of intestinal infections is transmission from contaminated animal sources.

"Advanced cases of cystic echinococcosis and alveolar echinococcosis are serious health threats. Treating both these conditions often requires surgery and/or prolonged use of medicines for affected individuals" said Dr Philip Craig, Chair of the Consultation on Cystic and Alveolar Echinococcosis, held at WHO Headquarters in Geneva from 23-24 June 2011.

An Informal Group at WHO on Echinococcosis has recommended field trials of a newly developed vaccine to

control and prevent transmission of echinococcosis from animals to humans. Experts believe that two forms of this parasitic disease affect more than one million people worldwide at any time.

"The Consultation proposes alternative strategies involving the vaccination of sheep in addition to classical interventions" said Dr Lorenzo Savioli, Director of the Department of Control of Neglected Tropical Diseases. *"It is time to initiate definitive field trials as this could provide a much higher chance of success in CE affected countries[5]."*

Conclusion:

Food is a basic necessity of life. Therefore, its contamination leads to drastic consequences. Preventive and therapeutic measures need to be taken at personal and national level to attain desired food hygiene and health standards.

References

1. News room. WHO
2. Copenhagen. media centre euro. WHO.2019
3. Siddiqui MI, Bilqees FM, Iliyas M, Perveen S. Prevalence of parasitic infections in a rural area of Karachi, Pakistan. J Pak Med Assoc. 2002; 52(7): 315-20.
4. Mehraj V, Hatcher J, Akhtar S, Rafique G, Beg MA. Prevalence and factors associated with intestinal parasitic infection among children in an urban slum of Karachi. PloS one. 2008;3(11).
5. Moloo A. news room. WHO.2011