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Review Article

Human Salmonellosis Acquired through the Food

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Abstract

For confirming suitability of food for human consumption it should be evaluated for microbial contamination. Consumption of infected meat, poultry, fish and other food products could affect human health and lead to spread of pathogens. Salmonella spp. is pathogenic to human when consumed undercooked especially meat. Salmonellosis acquired through the human food infection is a common bacterial disease that affects the intestinal tract. Salmonella bacteria acquired through the human food typically live in animal and human intestines and are shed through stool. Humans become infected most frequently through contaminated drinking water or human food. Some people with salmonellosis acquired through the human food infection have no clinical pictures. Most people develop diarrhea, fever and stomach (abdominal) cramps within eight hours to three days after exposure. Most healthy people recover within a few days to a week without specific treatment. In some cases, diarrhea can cause severe dehydration and requires prompt medical attention. Life-threatening complications also may develop if the acquired through the human food infection spreads beyond the intestines. The risk of getting salmonellosis acquired through the human food infection is higher with travel to undeveloped countries in the world without clean drinking water and proper sewage disposal.

Keywords: Salmonellosis; Human Food; Bacteria; Drinking Water; Sewage

Introduction

Salmonellosis is one of the most prevalent bacterial diseases associated with meat and poultry. It is caused by *Salmonella* bacteria, which are Commonly found in the intestinal tracts of animals. Contamination of meat and poultry products can occur during slaughtering and processing, primarily through fecal contamination. Consuming undercooked or raw contaminated meat and poultry can lead to salmonellosis in humans.

Symptoms of salmonellosis include diarrhea, abdominal cramps, fever, and vomiting. In severe cases, it can result in dehydration and hospitalization. Salmonellosis acquired through the human food contamination, Although fish, poultry and animals do not suffer from these infections, but human food of animal origin appear to act as source of infection for man [1-6]. Contamination of human food is common in the fresh drinking water fish was due to pollution in river and lakes but this occurs to a much lesser extent with the marine fish. About high percentage of human food including river fish, poultry, beef and meat products has *Salmonella* and Shigella spp. to other pathogenic and commensal bacteria in the farm environment [7-11]. *Salmonella* spp. are zoonotic, pathogenic bacterium that pathogens associated with a large spectrum of diseases that range from mild infections to life-threatening gastroenteritis in humans and animals [12-16]. The Salmonellosis caused by *Salmonella* spp. of common human food poisoning causes, and it is associated with consumption of different categories of human food including raw meat, poultry, fish, egg, milk and dairy products, subsequently the organism can cause a multitude of infections due to the expression of various toxins, virulence factors, and cell wall adhesion proteins [17-21]. *Salmonella* spp. is one of the most important pathogens inducing clinical environmental gastroenteritis, this organism is ubiquitous in the farm where healthy animals,

even humans, are the carriers of this pathogen subsequently improper handling procedures, season changing, food animal behavior or weakened host immunity can provide opportunities for human infection of *Salmonella* spp. [22-27]. Gastroenteritis caused by *Salmonella* spp. can range from being a subclinical infection of the gut to a severe systemic disease, whereas human-dependent factors such as immune status and age affect the severity of Salmonellosis. Lipopolysaccharide (LPS), a component of the cell wall of gram-negative bacteria, is considered to be the primary virulence factor in *Salmonella* bacteria, being responsible for most pathophysiological reactions in Salmonellosis [28-33]. Smoked fish has been incriminated as a vector for *Salmonella*. Salmonellosis acquired through the human food infection is usually caused by eating raw or undercooked meat, poultry, and eggs or egg products or by drinking unpasteurized milk [34-40]. The incubation period is the time between exposure and illness, can be six hours to six days. Often, people who have salmonellosis acquired through the human food infection think they have the stomach flu [41-47].

Clinical pictures of Salmonellosis acquired through the human food

Possible clinical pictures of salmonellosis acquired through the food infection include Diarrhea, Abdominal cramps, Fever, Nausea, Vomiting, Chills, Headache and Blood in the stool [46-49]. clinical pictures of salmonellosis acquired through the human food infection generally last a few days to a week. Diarrhea may last up to 10 days, but it may take several months before bowels return to usual stool habits [1-6]. A few varieties of salmonellosis bacteria acquired through the food result in typhoid fever, a sometimes deadly disease that is more common in the developing countries in the world [7-11]. Most people don't need to seek medical attention for salmonellosis acquired through the human food infection because it clears up on its own within a few days [12-14]. However, if the affected person is an infant, young child, older adult or someone with a weakened immune system, call a health care provider if illness Lasts more than a few days, Is associated with high fever or bloody stools, Appears to be causing dehydration, with signs such as such as urinating less than usual, dark-colored urine and having a dry mouth and tongue [15-19].

Causes of Salmonellosis acquired through the human food

Salmonella bacteria acquired through the human food live in the intestines of people, animals and birds. Most people are infected with salmonellosis acquired through the human food by consuming human food or drinking water that has been contaminated by feces [20-24].

Infected human food and drinking water

Commonly infected foods include raw meat, poultry and seafood. Feces may get onto raw meat and poultry during the butchering process. Seafood may be contaminated if harvested from contaminated drinking water [25-29]. Raw or undercooked eggs. While an egg's shell may seem to be a perfect barrier to contamination, some infected chickens produce eggs that contain *Salmonella* acquired through the human food before the shell is even formed. Raw eggs are used in homemade versions of human foods such as mayonnaise and sauce [30-34].

Unpasteurized raw dairy products:

Unpasteurized milk and milk products, sometimes called raw milk, may be contaminated with *Salmonella* acquired through the human food [35-39]. The pasteurization process kills harmful bacteria, including *Salmonella* acquired through the human food [40-42].

Fruits and vegetables

Some fresh produce, particularly imported varieties, may be irrigated in the field or washed during processing with drinking water contaminated with *Salmonella* acquired through the human food. Contamination can also occur in the kitchen, when juices from raw meat and poultry come into contact with uncooked human foods, such as salads [43-47].

Improperly handled human food

Many human foods become contaminated when prepared by people who don't wash their hands thoroughly after using the toilet or changing a diaper or after handling contaminated human food. Infected surfaces. Infection can also occur if people touch something that is contaminated and then put their fingers in their mouths. Infected pets and other animals and pets, especially birds and reptiles, may carry *Salmonella* bacteria acquired through the human food on their feathers, fur or skin or in their feces. Some pet foods may be contaminated with *Salmonella* acquired through the human food and can infect animals [48,49].

Risk factors for Salmonellosis acquired through the human food

Factors that may increase the risk of *Salmonella* acquired through the human food infection include activities that may bring us into closer contact with *Salmonella* bacteria acquired through the human food. Health problems that may weaken the resistance to infection.

Increased exposure to Salmonellosis acquired through the human food

International travel, *Salmonella* acquired through the human food infection, including varieties that cause typhoid fever, is more common in developing countries in the world with poor sanitation. Owning, handling or petting animals. Some animals, particularly birds and reptiles, can carry *Salmonella* bacteria acquired through the human food. *Salmonella* acquired through the human food can also be found in animal pens, tanks, cages and litter boxes [7-12].

Stomach or bowel disorders due to Salmonellosis acquired through the human food

The body has many natural defenses against *Salmonella* acquired through the human food infection. For example, strong stomach acid can kill many types of *Salmonella* bacteria acquired through the human food. But some medical problems or medications can short-circuit these natural defenses. Examples include Antacids. Lowering the stomach's acidity allows more *Salmonella* bacteria acquired through the human food to survive. Inflammatory bowel disease. This disorder damages the lining of the intestines, which makes it easier for *Salmonella* bacteria acquired through the human food to take hold. Recent use of antibiotics. This can reduce the number of "good" bacteria in the intestines, which may impair the ability to fight off a *Salmonella* infection acquired through the human food [16-20].

Human immune problems:

Some medical problems or medications appear to increase the risk of catching *Salmonella* acquired through the human food by weakening the immune system. This interferes with the body's ability to fight infection and disease. Examples include HIV/AIDS. Sickle cell disease. Malaria. Anti-rejection drugs taken after organ transplants, Corticosteroids [1-6]. Prevention *Salmonella* acquired through the human food Inspection, sampling and testing programs for poultry and meat. The purpose is to cut the number of *Salmonella* infections acquired through the human food. We can avoid getting *Salmonella* acquired through the human food and spreading bacteria to others in several ways, including safely preparing human food, hand-washing, avoiding contamination, and not eating raw meat, dairy or egg products. Preventive methods are especially important when preparing human food or providing care for infants, older adults and people with weakened immune systems [41-45].

Wash the hands

Washing the hands thoroughly can help prevent the transfer of *Salmonella* bacteria through the human food to the mouth or to any human food after preparing. Wash the hands with soap and water for 20 seconds after the Use the toilet. Change a diaper. Handle raw meat or poultry. Clean up pet feces. Touch pets or other animals and their habitats, especially reptiles or birds [6-11].

Conclusion

Prevention and control measures involve proper cooking and handling of meat and poultry, strict hygiene practices during processing, and regular monitoring of production facilities for *Salmonella* contamination. To prevent *Salmonella* spp. Cross food contamination by Store raw meat, poultry and seafood away from other human foods in the refrigerator. If possible, have two cutting boards in the kitchen, one for raw meat and the other for fruits and vegetables. Never place cooked human food on an unwashed plate that previously held raw meat. Wash the human food preparation surfaces thoroughly with soap and water. Avoid eating raw food of poultry origin. Homemade cookie dough, ice cream, mayonnaise, hollandaise sauce and eggnog all contain raw eggs. If we must consume raw eggs, make sure they've been pasteurized. Cook and store human food properly. Be sure to cook the human food thoroughly and refrigerate or freeze human food promptly.

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Conflicts of Interest

The authors declare no conflicts of interest.

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