

Salmonellosis

Salmonellosis is an important cause of food poisoning in many countries, is a global distribution disease, and *Salmonella* is known to be the main pathogen.

Clinical symptoms

Clinical symptoms of salmonellosis vary with different serotypes have different performance. Generally performs as acute gastroenteritis. After infection, symptoms such as nausea, vomiting, chills and diarrhea, etc., will be performed in about 6-48 hours, sometimes accompanied by fever, abdominal cramps or other symptoms. Usually, patients will recover within 72 hours. But bacteremia occurs in about 5% of patients with gastroenteritis, especially in infants, elderly or immune-compromised people, who can easily have other serious complications due to bacteremia.

Epidemiology

Salmonellosis is a disease with global distribution. About 60% to 80% of cases belong to sporadic cases, and other cases are outbreaks, small epidemic usually occurs in the general population, while large epidemic common in densely populated place such as children's hospital or institution, restaurants and nursing homes, etc. Most of the reason is that the incidence of food contamination, while some due to carriers contaminating or directly fecal-oral contact among people. The disease is more likely to occur in warmer months (July to October). People who have livestock, pets, the elderly, children, raw-food eaters and immune-compromised are in high-risk of infection.

Disease transmission

Salmonellosis is a zoonosis(disease that can transmit among human and other animals). Almost all animals have isolated *Salmonella* from intestines, including birds, mammals, reptiles, amphibians, and insects.

The main mode of transmission is ingestion of food or water which is contaminated by animal or human feces. Contaminated food such as raw or undercooked eggs / egg products, milk / dairy products, meat / meat products. If food was stored improperly, *Salmonella* can multiply at a high temperature easily, making it easier to spread. Few sporadic cases are due to pet exposure and infection. Farm animals can be transmitted due to consumption of contaminated feed, and spreading pathogens while in the breeding or slaughtering processes. Fecal-oral route of infection between people is also very important, especially when the patient has a diarrhea.

Treatment

Generally, patients with gastroenteritis caused by *Salmonella* don't need antibiotics for treatment, but mainly to supplement the water and electrolytes. However, for newborns, immune-compromised patients and patients with special health conditions, are suggested to be given antibiotics depending on the situation need.

Prevention

According to five food safety tips performed by WHO:

1. Keep food clean.
2. Raw food and cooked food should be separated.
3. Food should be fully cooked (especially eggs and poultry meat).
4. Restore food in proper temperature.
5. Have safe drinking water and food.

General control measures:

1. Wash hand thoroughly before touching food, before and after meals, after touching reptiles or eggshells.
2. If food is not instantly eaten, use plastic wrap to cover and put in the refrigerator, and should be heated before eating again.
3. Salads and cold dishes should be particularly cautious.
4. Food contaminated by flies, expired or rotten, should be discarded.
5. Milk and dairy products should be sterilized before eating.
6. The water containers should be cleaned and disinfected regularly. When traveling or camping, water should be boiled before use.
7. Replace old brick-cement-built water containers with stainless steel products in order to maintain the health and safety of drinking water.
8. Minimize the existence of flies and other vectors, garbage cans should be covered properly and cleaned regularly.
9. If you have vomiting, diarrhea, fever or other symptoms, please seek medical treatment as soon as possible. Besides, avoid food contact, in order to prevent the spread to others.

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