Public Health England

Protecting and improving the nation's health

Possible listeria contamination of frozen vegetables distributed by Greenyard (2018)

Information for healthcare professionals

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Published July 2018
PHE publications
gateway number: 2018270

PHE supports the UN
Sustainable Development Goals

Possible listeria contamination of frozen vegetables distributed by Greenyard (2018): information for healthcare professionals

On 5 July 2018, Greenyard Frozen UK recalled a number of frozen vegetable products due to the possible presence of *Listeria monocytogenes*. Details of the implicated products and batches are on the Food Standards Agency Website: https://www.food.gov.uk/news-alerts/alert/fsa-prin-35-2018-update-3

Listeria monocytogenes is a rare cause of food poisoning needing a relatively high infectious dose to cause illness. Invasive infection is extremely **rare in healthy individuals** and the majority of fit, healthy individuals will have no symptoms, although some may experience mild self- limiting diarrhoea and abdominal cramps**. No further medical intervention or treatment is required for such cases.**

Symptoms such as fever, severe body ache, headache and febrile gastroenteritis suggest invasive disease. Such cases should be referred to hospital for testing including blood culture, the best available test for detection of invasive listeriosis. Listeria can also be diagnosed from other sterile site specimens such as CSF and joint fluid, by culture or by performing PCR.

Certain factors put individuals at high risk of symptomatic or invasive disease and include:

- pregnancy
- extremes of age (neonates and those over 60 years of age)
- pre-existing medical conditions like cancer, HIV, solid organ or bone marrow transplantation, diabetes, iron overload, alcoholism, liver or kidney disease
- immunosuppressive treatment ie oral steroids, chemotherapy, anti-TNF and immunomodulating drugs (3).

The clinical presentation of listeriosis in such cases can include sepsis, encephalitis, meningitis, which may or may not be preceded by febrile gastroenteritis. Mortality of invasive disease is 20-30%.
The incubation period ranges from 24 hours to 70 days, so while the vast majority of cases are likely to be seen by healthcare professionals in the first week after infection, a few may have a delayed presentation (1, 2).

Individuals (non-pregnant) from high risk groups who have consumed the raw implicated product and are asymptomatic, should be advised about the potentially long incubation period and advised to watch out for and report even mild symptoms (5). There is no reliable screening test or serological test to rule out listeriosis in such individuals.

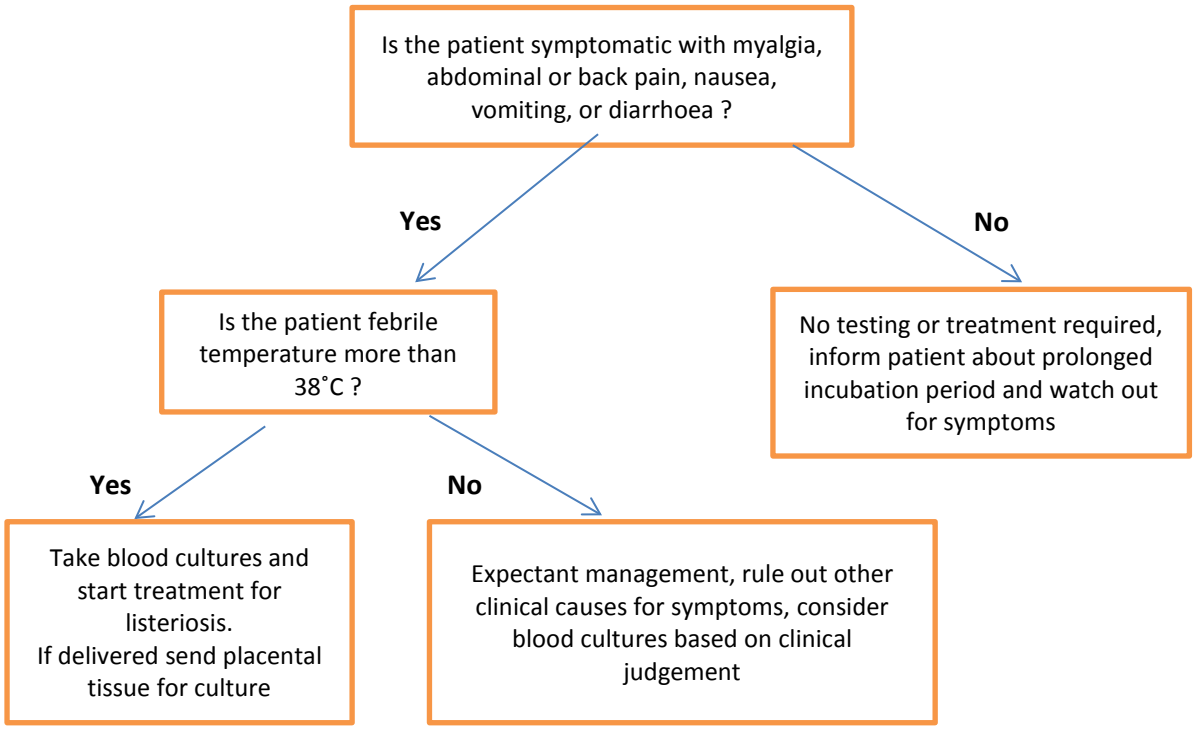
Management of suspected listeriosis in non-pregnant cases:

Symptomatic cases belonging to high risk groups (non-pregnant) should be investigated with blood cultures for invasive disease. Please note Listeria culture from stool samples is not provided by the Reference Laboratory, specimens should not be referred to Colindale.

Management of suspected listeriosis in pregnancy:

The incidence of listeria invasive infection is approximately 13 times higher in pregnant women than in the normal population. Maternal infection may be asymptomatic. When it is symptomatic, infection generally presents as a nonspecific, flu-like illness with fever, myalgia, backache, and headache, often preceded by diarrhoea or other gastrointestinal symptoms (3, 4). Fetal and neonatal infections can be severe, resulting in fetal loss, preterm labour, neonatal sepsis, meningitis and death.
Pregnant women who may have consumed the implicated product may be managed according to the following pathway:

Management of a pregnant case with presumptive exposure to *L.monocytogenes*



Treatment of cases of listeriosis

1. Cases with invasive disease should be treated with intravenous antibiotics as per local hospital antimicrobial policy. Clinicians should liaise with their local Microbiologists for advice on management of patients admitted with suspected invasive disease or those with risk factors for severe disease.

2. The first line antibiotics for invasive listeria infections (pregnant and non-pregnant) include amoxicillin with or without gentamicin depending on the clinical presentation.

3. In non-pregnant cases with penicillin hypersensitivity, cotrimoxazole (trimethroprim/ sulfamethoxazole) is a suitable option (the Minimum Inhibitory Concentration (MIC) of the isolate should be confirmed by reference laboratory)

4. In pregnant cases with penicillin hypersensitivity, antibiotic choices include vancomycin or meropenem (used with caution).

5. Chloramphenicol is not reliable and is associated with treatment failures.

6. Further advice on dosing, duration of treatment is also available from the duty Medical Microbiologists at Colindale at ColindaleMedMicro@phe.gov.uk

References / further information

1. Charlier C, Perrodeau É, Leclercq A, Cazenave B, Pilmis B, Henry B, et al. Clinical features and prognostic factors of listeriosis: the MONALISA national prospective cohort study. *The Lancet Infectious Diseases*.

2. Gerald L Mandell JEB, Raphael Dolin. *Listeria monocytogenes* (in: *Principles and Practice of Infectious Diseases* (7th edition, chapter 207).

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4. Committee opinion No. 614. Management of pregnant women with presumptive exposure to *Listeria monocytogenes*. *Obstet Gynecol* 2014 (124): 1241-4.

5. Elinav H, Hershko-Klement A, Solt I, Glikman D, Nir-Paz R. Pregnancy-associated listeriosis: many beliefs, few facts. *The Lancet Infectious Diseases* **15**(10):1128-30.

6. CDC. https://www.cdc.gov/listeria/index.html

Questions and answers on listeriosis

Healthcare professionals may use the following to answer queries from members of public and patients in relation to Greenyard Frozen UK Ltd recalling various frozen vegetable products in July 2018.

1. Why has this product been recalled?

Consuming food contaminated with Listeria bacteria can cause an infection called listeriosis, although this is rare with around 180 cases occurring each year in England and Wales. In most people, listeriosis comprises mild symptoms but in certain at risk groups infection can be more severe. These food products have therefore been recalled as a precautionary measure to prevent possible illness.

2. What are the symptoms of listeriosis?

The majority of healthy people will be unaffected but some people may develop symptoms of gastroenteritis such as abdominal cramps, diarrhoea and/or mild flu-like symptoms including a high temperature. These symptoms usually pass within three days without the need for treatment.

More rarely and usually in at risk individuals infection may spread to the blood or central nervous system leading to bacteraemia and/or meningitis and more severe symptoms.

3. Who is at risk?

Otherwise healthy individuals may develop symptoms of gastroenteritis but this normally gets better by itself without medical intervention and usually there is no progression to more severe disease.

Certain groups are more vulnerable and include:

- people over 65 years of age
- pregnant women and their unborn babies
- babies less than one month old
- people with a weakened immune system, such as those with HIV/AIDS, cancer, diabetes, kidney or liver disease
- People on immunosuppressant therapies, such as steroids, chemotherapy and other types of immunodulanting agents such as monoclonal antibody or anti TNF therapies

4. What should I do if I have consumed some of the recalled food product?

- Fit and healthy individuals need do nothing further. If you have mild diarrhoeal symptoms these should clear up and normally do not require medical treatment. If you develop a temperature and/or flu- like symptoms you should seek medical advice.
- Persons with a weakened immune system (see at risk groups Q3) who have no symptoms need do nothing further. The incubation period of listeriosis can be up to 70 days. If you develop a symptoms of gastroenteritis and a temperature or flu- like symptoms during this period you should seek medical advice immediately.