Listeria monocytogenes infection in Hedgehogs

Agent

Listeria monocytogenes is a bacterium that is widely distributed in the environment, particularly in soil and decomposing plant material.

Signs of disease

Listeriosis, the disease caused by this bacterium, is most often reported in ruminant livestock (e.g. sheep or cattle), but is also known to affect people and occasionally wildlife. The signs of disease vary but can include generalised illness as a result of septicaemia, neurological signs if the central nervous system is affected, and abortion in pregnant animals. Listeria monocytogenes can also be carried in the gastrointestinal tract of individuals without apparent disease.

Disease surveillance has detected a small number of cases of L. monocytogenes infection in British hedgehogs, although it was not possible to determine whether these hedgehogs were suffering from listeriosis or simply carrying the bacterium without clinical disease. Infection has been confirmed in both male and female hedgehogs of a range of age groups. All cases confirmed in hedgehogs to date have been of individual animals, with no evidence of disease outbreaks involving multiple hedgehogs being caused by this bacterium. Further surveillance is needed to understand how this infection affects the health of hedgehogs in Great Britain.

Disease transmission

In people

Listeria monocytogenes infection in people is usually contracted through ingestion of contaminated food and rarely via contact with infected animals or their faeces. The bacterium can grow in temperatures that occur in domestic refrigerators (i.e. below 5°C), but is killed by thorough cooking of food and pasteurization.

In hedgehogs

A recent study conducted molecular characterisation of the L. monocytogenes isolates cultured from British hedgehogs and found several different types to be present. Each of the bacterial strains identified in the study were distinct, which means that there was no evidence of an epidemiological link between the affected hedgehogs. Whilst the isolates were of types also known to cause illness in humans, none of the hedgehog strains were genetically identical to those identified in human cases from England and Wales by Public Health England. These findings suggest that hedgehogs
are contracting sporadic infection from the environment, perhaps through eating soil-dwelling invertebrates such as earthworms.

**Distribution**

*Listeria monocytogenes* is a ubiquitous bacterium with a widespread distribution in Great Britain. A recent study detected *L. monocytogenes* infection in five of 266 hedgehogs examined post mortem in Great Britain over a four-year period – this corresponds to 2% of the animals examined, indicating the infection to be relatively uncommon. However, further monitoring is required to compare how frequently hedgehogs are infected with *L. monocytogenes* in comparison to other British wildlife species.

**Risk to human health**

In people, listeriosis is a rare but potentially life-threatening disease that typically affects pregnant women, neonates, and other immunocompromised individuals. Healthy adults are likely to experience only mild infection, causing flu-like symptoms or gastroenteritis.

The disease is usually contracted through ingestion of contaminated food and rarely via contact with infected animals or their faeces.

Immunocompromised people and pregnant women should always take particular care when in contact with hedgehogs, as with all wild animals. The risk to immunocompetent people of contracting listeriosis from hedgehogs is considered very low to negligible.

**Risk to domestic animal health**

A range of domestic animals are susceptible to listeriosis, although the infection and disease are rare. As with people, the disease is mainly contracted through ingestion of contaminated food, e.g. silage. Ruminant livestock are the species most frequently known to be affected.

**Diagnosis**

Diagnosing *L. monocytogenes* infection, and the disease listeriosis, in hedgehogs requires specialist laboratory testing (e.g. microbiological culture and histological examination).

If you wish to report finding a dead hedgehog, or signs of illness in a hedgehog, please visit [www.gardenwildlifehealth.org](http://www.gardenwildlifehealth.org). Alternatively, if you have further queries or have no internet access, please call the Garden Wildlife Health vets on **0207 449 6685**.
Control

Whilst antibiotic medicines are available to treat domestic animals, effective and targeted dosing of free-living hedgehogs is not possible.

Suitable commercial products, such as disinfectants, should be used to clean and disinfect equipment and contaminated surfaces. When disinfectants are used, please follow the manufacturer’s instructions.

While reporting sick animals to Garden Wildlife Health helps us to build up a picture of hedgehog health across Great Britain, we cannot advise on the treatment of sick animals. If you find a sick hedgehog, therefore, you should contact your nearest veterinary surgery or wildlife rehabilitation centre for further advice and use sensible hygiene precautions when handling the animal (see Prevention below).

Prevention

Hedgehogs in the wild

Although little can be done to prevent the infection of hedgehogs with \textit{L. monocytogenes} in the wild, the disinfection of any bowls or plates used to feed wild hedgehogs should be routinely carried out as follows:

- Clean surfaces, bowls or plates using a suitable disinfectant (for example, a weak solution of domestic bleach (5% sodium hypochlorite) or other product following the manufacturer’s instructions). Always rinse thoroughly and air-dry before re-use.
- Brushes and cleaning equipment should not be used for other purposes and should not be brought into the house, but be kept and used outside and away from food preparation areas.
- Wear rubber gloves and thoroughly wash hands and forearms afterwards with soap and water, especially before eating or drinking.

If you need to handle a hedgehog please use thick gardening or rubber gloves and wash your hands thoroughly with warm water and soap afterwards.

Further information

More advice on hedgehogs in your garden can be found on the Garden Wildlife Health website

For information on \textit{Listeria} infection in people, see Public Health England Listeria: guidance, data and analysis

Scientific publications


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