Norovirus

Norovirus, also known as Norwalk virus or winter vomiting disease, is the most common cause of gastroenteritis (diarrhoea and vomitting) in the UK. Noroviruses infect 600,000 to 1 million people in the UK every year and cause 50 % of all epidemic gastroenteritis worldwide.

Symptoms

Noroviruses cause an infectious disease in all age ranges. Over 50 % of people exposed to the virus will become ill. Symptoms develop 12 – 48 hours after exposure, typically lasting 12 – 60 hours, and include:

- sudden onset of nausea
- projectile vomiting
- watery diarrhoea
- abdominal pain.

People may also experience lethargy, weakness, muscle aches, headaches, low-grade fever and dehydration. Seizures can occur in rare cases. Most people recover in 2 – 3 days and up to 30 % of people infected have no symptoms.

Sources and spread

Infection with the virus occurs through:

- contact with an infected person
- contact with contaminated surfaces or objects
- consumption of contaminated food or water.

Shellfish are a common source of norovirus and infected food handlers can contaminate food while at work.

Norovirus spreads very easily between people, who are contagious from when they feel ill to at least 3 days after symptoms stop. As few as 10 virus particles are sufficient to infect a person. Environmental contamination with the virus is common – especially around toilets – where it can survive for at least 7 days.

Norovirus thrives in semi-closed environments such as hospitals, nursing homes, schools, cruise ships, prisons and military establishments.

Treatment

There is no specific antiviral drug for norovirus infections. General advice is to let the illness run its course and to treat the symptoms.

Infected people are advised to drink plenty of fluids to avoid dehydration. Electrolyte replacement is important in the young, elderly and immunocompromised. Adults can take anti-diarrhoea treatments.

Immunity

There are many differnt strains of norovirus, so immunity is short-lived. Re-infection is likely due to the genetic variability of the virus. Researchers are trying to develop a vaccine, but it is not possible to grow norovirus in the laboratory and there are so many strains that no one vaccine could protect against them all.

Detection

Testing for the virus is unnecessary in most cases as the illness is self-limiting and there are no specific treatments. However, tests are available to detect norovirus in shellfish, faecal and environmental samples.

Faecal testing is helpful in outbreaks to identify the source of infection, particularly if the illness is food-related, so that the appropriate measures can be taken.

Control and prevention

▷ At home

Practising good hygiene is vital for infected people. Thorough hand washing (especially after using the toilet) and disinfecting contaminated surfaces will limit the risk of passing on the virus. Direct contact with others should be avoided for 48 hours and food should not be prepared for 3 days after symptoms have stopped. Linen and clothing contaminated with vomit must be removed and washed. The toilet should always be flushed and cleaned.

Infected people are also advised not to visit the doctor's surgery or present themselves at hospital unnecessarily, to avoid spreading the virus.

▷ In healthcare settings

Closing wards as quickly as possible reduces the impact of an outbreak. Strict hygiene measures should be employed, including the wearing of gloves by cleaners.

microbiology awareness campaign MAC

The Society for General Microbiology (SGM) Microbiology Awareness Campaign (MAC) aims to highlight the important issues relating to microbiology. Through its many members, the SGM can offer impartial and expert information on all microbiological topics. Enquiries are welcome. Contact SGM, Marlborough House, Basingstoke Road, Spencers Wood, Reading RG7 1AG (t 0118 988 1830; f 0118 988 5656; e pa@sgm.ac.uk).

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