

Mumps

Topics A-Z

Reviewed on 30 April 2003

Introduction

Mumps is an acute viral illness transmitted by direct contact with saliva or droplets from the saliva of an infected person. Humans are the only known host of the mumps virus. Mumps is a notifiable disease, which means that a doctor who sees a patient whom they suspect has mumps is required by law to report it.

The illness

Symptoms begin with a headache and fever for a day or two before the disease is characterised by swelling of the parotid glands which may be unilateral (one side) or bilateral (both sides). However, at least 30% of cases in children have no symptoms. Complications of symptomatic mumps include swelling of the ovaries (oophoritis), swelling of the testes (orchitis), aseptic meningitis and deafness. Cases may have no salivary gland involvement but develop symptoms elsewhere (orchitis, meningitis). Despite common belief there is no firm evidence that orchitis causes sterility. Other symptoms may include pancreatitis, neuritis, arthritis, mastitis, nephritis, thyroiditis and pericarditis. Mumps was the commonest cause of viral meningitis in children prior to 1988, when vaccine was introduced.

The incubation period is 14-21 days and mumps is transmissible from several days before the parotid swelling to several days after it appears. Contagiousness is similar to that of influenza and rubella but not as infectious as chickenpox or measles. Exposed individuals should be considered infectious from 12 to 25 days after exposure.

Epidemiology

Mumps incidence peaks in winter and spring but has been reported throughout the year. Mumps was the cause of about 1200 hospital admissions each year in England and Wales before the introduction of MMR in 1988. Mumps was made a notifiable disease in the UK in October 1988. Notified cases of mumps remained fairly stable from 1995 to 1999, with fewer than 2000 notifications recorded annually, rising from 1691 in 1999 to 2162 in 2000. A resurgence of mumps occurred in 1999 and 2000 with outbreaks predominantly affecting secondary school children in the north of England. Most cases either never received a mumps-containing vaccine, as they were too old, or received only one dose of MMR. As with measles, confirmation of diagnosis can be confirmed by oral fluid testing. Of nearly 60% that were tested, 16% were confirmed mumps, however the proportion confirmed each year has risen from 7% in 1998 to 23% in 1999 and 38% in 2000.

Treatment

There is no specific treatment for mumps. Treatment should be based on alleviating symptoms.

Prevention

Mumps vaccine is one of the components of MMR vaccine. The introduction of MMR vaccine in 1988 effectively halted the three yearly cycles of mumps epidemics. There are two licensed MMR vaccines: Priorix (SKB) and MMR II (Aventis Pasteur). Both contain the Jeryl-Lynn strain of mumps.

The more reactive Urabe strain was used in the UK from 1988 until it was withdrawn in 1992 due to an unacceptable risk of aseptic meningitis, although this was considerably lower than with natural mumps infection. There is no single antigen mumps vaccine licensed in the UK, and single mumps vaccine has never been used as part of the national immunisation schedule.

Recommended immunisation schedule

MMR is given in the national immunisation programme at 12-15 months and at 4 years of age. There is no upper age limit and where required, two doses can be given separated by a three monthly interval.

Frequently asked questions

Q: What is the reason for giving mumps vaccine?

A: Although rarely fatal, complications of mumps can include:

- Aseptic meningitis 15% (usually without further complications)
- Orchitis (usually unilateral) in up to 20% of post-pubertal males. Sterility seldom occurs.
- Oophritis in 5 percent of post-pubertal females. Sterility seldom occurs.
- Profound deafness occurring in one ear 1:15,000 cases.
- Encephalitis between 1:400 to 1:6000 cases, case fatality rate for mumps encephalitis is 1.4%.
- Pancreatitis, neuritis, arthritis, mastitis, nephritis, thyroiditis and pericarditis may also occur.
- Although no evidence of foetal abnormalities, mumps in the first trimester of pregnancy may increase the rate of spontaneous abortion.
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Q: How effective is the mumps component of the vaccine?

A: 90-95% of people will be immune to mumps after the first dose.

Q: Where can I get more information about mumps?

A: Try these websites:

- [Immunisation Information England](#)
- [Department of Health](#)