

Introduction to Public Health
Case study
Measuring, Monitoring and control of Mumps

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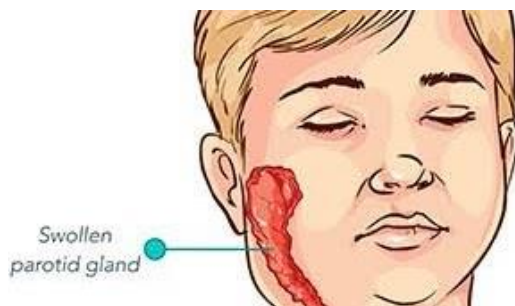
Introduction

Mumps is a contagious viral infection caused by a paramyxovirus, clinically characterized by non-suppurative, painful inflammation of the salivary glands. Usually is located only at the parotid glands. Mumps begins with a fever of 38-39 degrees Celsius, which can persist for several days. Later, the chills, headache, fatigue and muscle pain appear. Their installation is done over time, as follows: after incubation period, which is between 14-24 days, most infected people develop a headache, a bad general condition and low to moderate fever.

During this period, the lymph nodes are sensitive to palpation.

The disease is easily passed from person to person, is airborne, and is as infectious as the flu.

There is no specific treatment, the disease resolves spontaneously after 10 days. The prophylactic administration is the vaccination.



The strategy used by the UK to measure mumps

- Diagnosis
- Collect data of disease
- Morbidity
- Mortality

The diagnosis of mumps is made on the basis of the PCR tests and laboratory immunity tests IGG, IGM.

The United Kingdom suffered a widespread mumps pandemic between 2004 and 2005, with 56.390 notified cases in England. The majority of those confirmed were between the ages of 15 and 24, and the majority of them were ineligible for standard mumps immunisation.

The measuring of mumps in the UK is done by Public Health by collecting data on the incidence of the disease, the number of infections, age, number of patients hospitalized, the mortality rate. The Public Health takes measures to stop the spread of cases through vaccination and quarantine.

Active and early detection of patients in collectives, isolation at home or in infectious disease wards for a period of 9-10 days or until the disappearance of clinical phenomena.

- Mandatory declaration of the case of illness
- Detection and surveillance of contact for 21 days from the last case
- Daily clinical triages, with the detection and isolation of suspect illness
- Quarantine

Applies to England and Wales rate of confirmed cases of mumps

Year	Mumps
2016	573 (537)
2017	1,840 (1,796)
2018	1,088(1,061)
2019	5,718(5,055)

How many people have died from the mumps?

- Mumps has an overall case-fatality rate of 1.6-3.8 individuals per 10,000, with most deaths occurring in those who develop encephalitis. Mumps orchitis usually goes away after two weeks.

The strategy used by UK to monitor the mumps

By monitoring we understand the collection of data, the number of mumps cases diagnosed, the epidemiological statistics, immunization of the population through vaccination programs with the help of Public Health.

In the United Kingdom, between 2004-2006, an outbreak of mumps involved more than 70000 patients.

- The reason of the outbreak is a lack of immunity in those who are too old to have had MMR vaccine and are too young to have established natural immunity.
- A programme to immunise youngsters under the age of 25, particularly those attending university, has been established.
- On November 12, 2004, the University of Bath's internal news reported that 23 students had mumps. A measles vaccination campaign will commence on November 15, 2004.
- In April 2008, the University of Oxford Brookes reported 28 cases of mumps at the health centre.
- April 2009: According to the University of Sheffield, 75 cases have reached

The NHS adheres to a conventional paediatric immunisation schedule, which includes the MMR vaccine. Your child should receive a second booster dose 12 to 13 months following the initial dose, which should be administered around three years and four months of age.

If both doses are administered, the immunisation provides around 88% protection against mumps.

In the United Kingdom, when should you get the MMR vaccine?

The first dose is given at the age of 12 months, and the 2-nd dose is given approximately 3 years and 4 months before the kid starts kindergarten. After receiving both doses, you are immune to mumps for life. The two dosages can be given to adults one month apart with a one-month gap between them.

The strategies used by UK to Control the incidence mumps

My understanding to control the incidence by mumps is :

- Isolation
- Vaccination
- Keep a good immunity
- Good hygiene
- Swab test

The reduction in mumps morbidity occurred after the introduction of the mumps vaccine for routine immunization of children. The epidemic process kept its spring-summer seasonal character only when the outbreaks appeared epidemics.

Against the background of vaccination coverage of children with MMR vaccine at the ages of 12 months, 6-7 years, young adults were involved in the epidemic process.

The doctor will tell us everything about the possible adverse effects of the vaccine and how they can be manage.

To control the spearing the virus is better to stay at home – isolation, avoid contact with other people, in especially with those who have never had the mumps or not were vaccinated, for at least 5 days from to appearance of the first symptoms. Washing hand regularly, cover your mouth with a tissue when you sneeze or cough, in one word keep good hygiene.

Another important thing is testing mumps (swab tests) in schools and especially in kindergartens, to prevent and control the disease.

Conclusion

- The development of the mumps epidemic cannot be prevented by vaccination with a single dose.
- The lack of booster vaccination permutes mumps morbidity from childhood to that of adolescents and adults.
- The absence of the individual vaccination card makes it difficult to establish the differential diagnosis of mumps especially in atypical cases 4.
- Adolescents and adults can have severe forms of mumps with an increased share of orchitis, pancreatitis and CNS damage.

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