

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of **ALLAH**  
the most Beneficent and the most merciful



# COMMUNICABLE DISEASES-2

## MUMPS

# MUMPS

- An acute infectious disease caused by an RNA virus which has a predilection for glandular and nervous tissue
- Clinically the disease is characterized by non-suppurative enlargement and tenderness of one or both the parotid glands

# MUMPS

- Other organs may also be involved
- Constitutional symptoms vary and may be inapparent
- The disease occurs throughout the world
- Although morbidity rate tends to be high, mortality rate is negligible

# MUMPS

- In most parts of the world, the annual incidence of mumps in the absence of immunization is in the range of 100-1000 cases per 100,000 population with epidemic peak every 2-5 years
- Natural infection with this virus is thought to confer life long protection

# MUMPS

## AGENT FACTORS

**AGENT:** The causative agent, Myxovirus parotiditis is a RNA virus . The virus can be grown in chick embryo and tissue culture. There is only one serotype

# MUMPS

## (AGENT FACTORS)

SOURCE OF INFECTION: Both *clinical* and *subclinical cases*, the later being 30-40% of all. The virus can be isolated from saliva. It is also found in the blood, urine, human milk & CSF

# MUMPS

## PERIOD OF COMMUNICABILITY:

Usually 4-6 days before the onset of symptoms and a week or more thereafter. Once the swelling of the glands has subsided, the case may be regarded as no longer infectious

## SECONDARY ATTACK RATE: It is

estimated to be about 86 per cent



# MUMPS

## HOST FACTORS

- a) **AGE AND SEX:** Mumps is the most frequent cause of parotitis in children in the age group 5-9 years. However no age is exempt if there is no previous immunity. The disease tends to be more severe in adults than in children

# MUMPS

## (HOST FACTORS)

- b) IMMUNITY: One attack, clinical or subclinical, is assumed to induce life-long immunity. Most infants below the age of 6 months are immune because of maternal antibodies

# MUMPS

## ENVIRONMENTAL FACTORS

Mumps is largely an endemic disease.

Cases occur throughout the year, but peak incidence is in winter and spring

Epidemics are often associated with overcrowding

# **MUMPS**

## **TRANSMISSION**

The disease is spread mainly by droplet infection & after direct contact with an infected person

## **INCUBATION PERIOD**

Varies from 2-4 weeks, usually 14-18 days

# MUMPS

## CLINICAL FEATURES

- Mumps is a generalized virus infection
- In 30-40% of cases, Mumps infection is clinically non-apparent
- In apparent cases it is characterized by pain & swelling in either one or both the parotid glands, but may also involve submandibular & sublingual glands





# MUMPS

## (CLINICAL FEATURES)

- Often there is complaint of 'earache'
- There may be pain and stiffness on opening the mouth
- Mumps may also affect the testes, pancreas, CNS, ovaries, prostate etc.



# MUMPS

## (CLINICAL FEATURES)

- In severe cases there may be fever, headache and other constitutional symptoms, which may last from 3-5 days
- The swelling subsides slowly over 1-2 weeks

# MUMPS

## COMPLICATIONS

Though frequent, are not serious. These include orchitis, ovaritis, pancreatitis, meningo-encephalitis, thyroiditis, neuritis, hepatitis and myocarditis

Rare complications include nerve deafness, polyarthrititis, encephalitis, facial palsy and hydrocephalus

# MUMPS

## (COMPLICATIONS)

Testicular swelling and tenderness denote *orchitis*, which is the most common extrasalivary gland manifestation of mumps in adults. It is unilateral in 75% of cases. High fever usually accompanies orchitis, which develops typically 7-10 days after the onset of parotitis in 25-40% of adult males. Bilateral orchitis is rare.

# MUMPS

## (COMPLICATIONS)

Upper abdominal pain, nausea and vomiting suggest *pancreatitis* in children. It occurs in about 4% of patients

While some instances of diabetes have occurred in children following mumps, causal relationship is not demonstrated

# MUMPS

## (COMPLICATIONS)

Lower abdominal pain and ovarian enlargement suggest oophoritis, which occurs in 5% of post-pubertal women. It is usually unilateral

# MUMPS

## (COMPLICATIONS)

Mumps infection in the first trimester of pregnancy is associated with 25% incidence of spontaneous abortion, although congenital malformations following mumps infection in pregnancy have not been reported

# MUMPS

## PREVENTION

**Vaccination:** A highly effective live attenuated vaccine is now available for the prevention of mumps. A single dose (0.5 ml) intramuscularly produces detectable antibodies in 95% cases.

# MUMPS

## PREVENTION

(Vaccination) It is recommended for routine immunization for children over 1 year of age, either alone or in combination with other vaccines e.g. in MMR vaccine or as a tetra vaccine with varicella



# MUMPS

## (PREVENTION)

Mumps vaccine should not be administered to pregnant women, patients receiving immuno-suppressive therapy or those, who are severely ill.

Specific Immunoglobulin: It is also available

# CONTROL OF MUMPS

Control of mumps is difficult because the disease is infectious before a diagnosis can be made. The long and variable incubation period and the occurrence of subclinical cases make the control of spread difficult. However the cases should be isolated till the clinical manifestations subside. Disinfection of articles should be done. Contacts should be kept under surveillance

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**Have a break, have a Kit-Kat**