



RAMA
UNIVERSITY

www.ramauniversity.ac.in

FACULTY OF NURSING



RAMA
UNIVERSITY

EPIDEMIOLOGY OF MUMPS

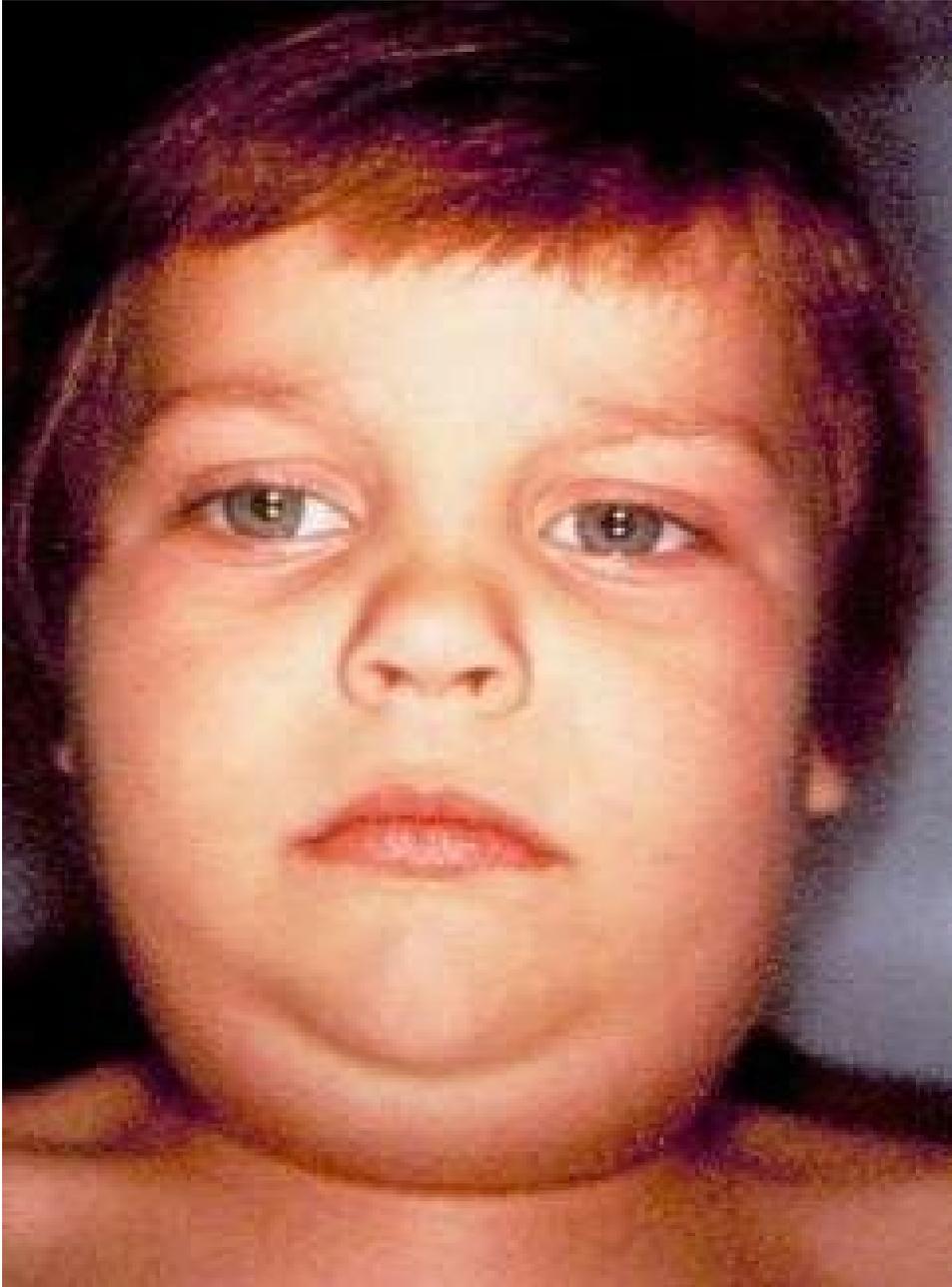
Mrs. Namita Batra Guin

Associate Professor

MUMPS

- An acute infectious disease caused by a RNA virus classified as genus *Rubulavirus* of the family *paramyxoviridae*.
- This organism has a predilection for glandular and nervous tissue.

- Clinically the disease is recognized by non-suppurative enlargement and tenderness of one or both the parotid glands.
- Other organs may be involved.



- Constitutional symptoms vary, or may be in apparent.
- The disease occurs throughout the world.

AGENT

- The causative agent, Myxovirus parotiditis is a RNA virus of the myxovirus family.
- The virus can be grown readily in chick embryo or tissue culture. There is only one serotype.

SOURCE OF INFECTION

- Both clinical and subclinical cases.
- The virus can be isolated from saliva or from swabs taken from the surface of Stenson's duct.

- Virus has also been found in the blood, urine, human milk and cerebro spinal fluid (in one case)

COMMUNICABILITY

- Usually 4-6 days before and at the onset of parotitis.
- Once the swelling has subsided, the case may be regarded as no longer infectious.

HOST FACTORS

- AGE AND GENDER : Mumps is frequently seen among children of the age group 5-9 yrs.
- However no age is exempt if there is no previous immunity. The disease tends to be more severe in adults than in children.

IMMUNITY

- One attack, clinical or subclinical infection confers a life long immunity.
- Most infants below the age of 6 months are immune because of maternal antibodies.

ENVIRONMENTAL FACTORS

- Mumps is largely an endemic disease.
- Cases are reported throughout the year, the peak incidence is in winter and spring.
- Epidemics are associated with over crowding.

MODE OF TRANSMISSION

- The disease is spread mainly by droplet infection and after direct contact with an infected person.

INCUBATION PERIOD

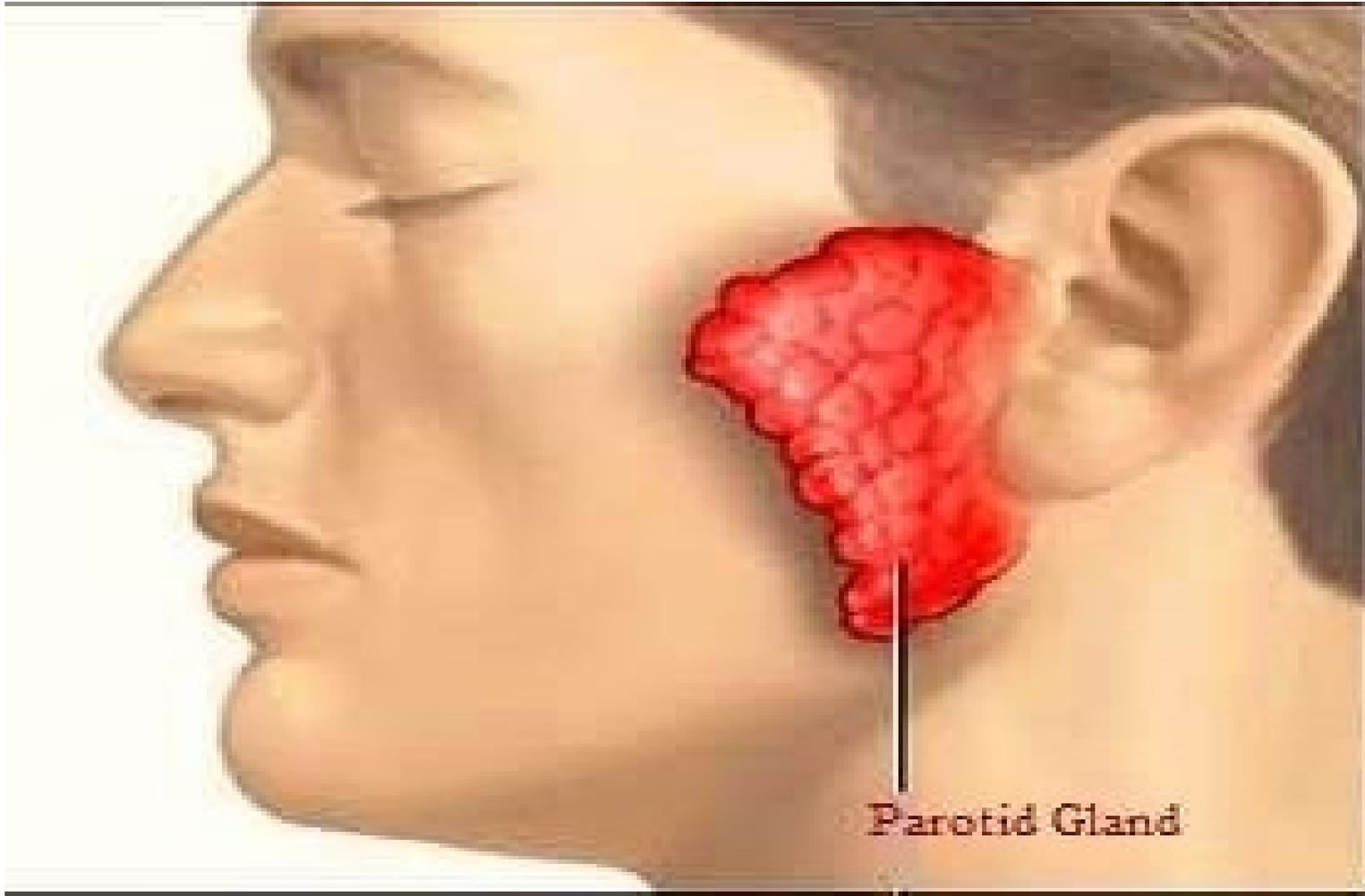
- Varies from 2 to 3 weeks,
usually 18 days.

CLINICAL FEATURES

- Mumps is a generalized virus infection.
- In 30 to 40 % cases infection is clinically non apparent.

- In clinically apparent cases, it is characterized by pain and swelling either in one or both the parotid glands but also may involve sublingual and submandibular glands.

PAROTID GLAND



- The case (child) complains of “ear ache ”on the affected side prior to the onset of swelling.
- This is accompanied by pain and stiffness on opening the mouth before the swelling of the gland is evident.

- **The swelling subsides slowly over 1-2 weeks.**

COMPLICATIONS

- **Complications are not serious.**
- **They are orchitis, ovaritis, pancreatitis, meningo-encephalitis, thyroiditis, neuritis, hepatitis and myocarditis.**

PREVENTION

- **Highly effective live attenuated vaccine is now available.**
- **A single dose of (0.5ml) intramuscularly produces detectable antibodies in 95% of vaccinees.**
- **MMR vaccine is administered as a trivalent vaccine for children (on completing 9 month)**

CONTROL

- **The control of mumps is difficult because the disease is infectious before a diagnosis can be made.**
- **However cases should be isolated till the manifestations subside.**

Methods of Control

Methods of Control

- Outbreak control included isolation of the patient with symptoms, seclusion of patients potentially incubating mumps virus, and immunization of susceptible patients and health care workers.
- Symptoms may be relieved by the application of intermittent ice or heat to the affected neck/testicular area and by acetaminophen/paracetamol (Tylenol) for pain relief.



- **Measures should be taken to disinfect the articles used by the patient.**
- **Contacts should be kept under surveillance.**