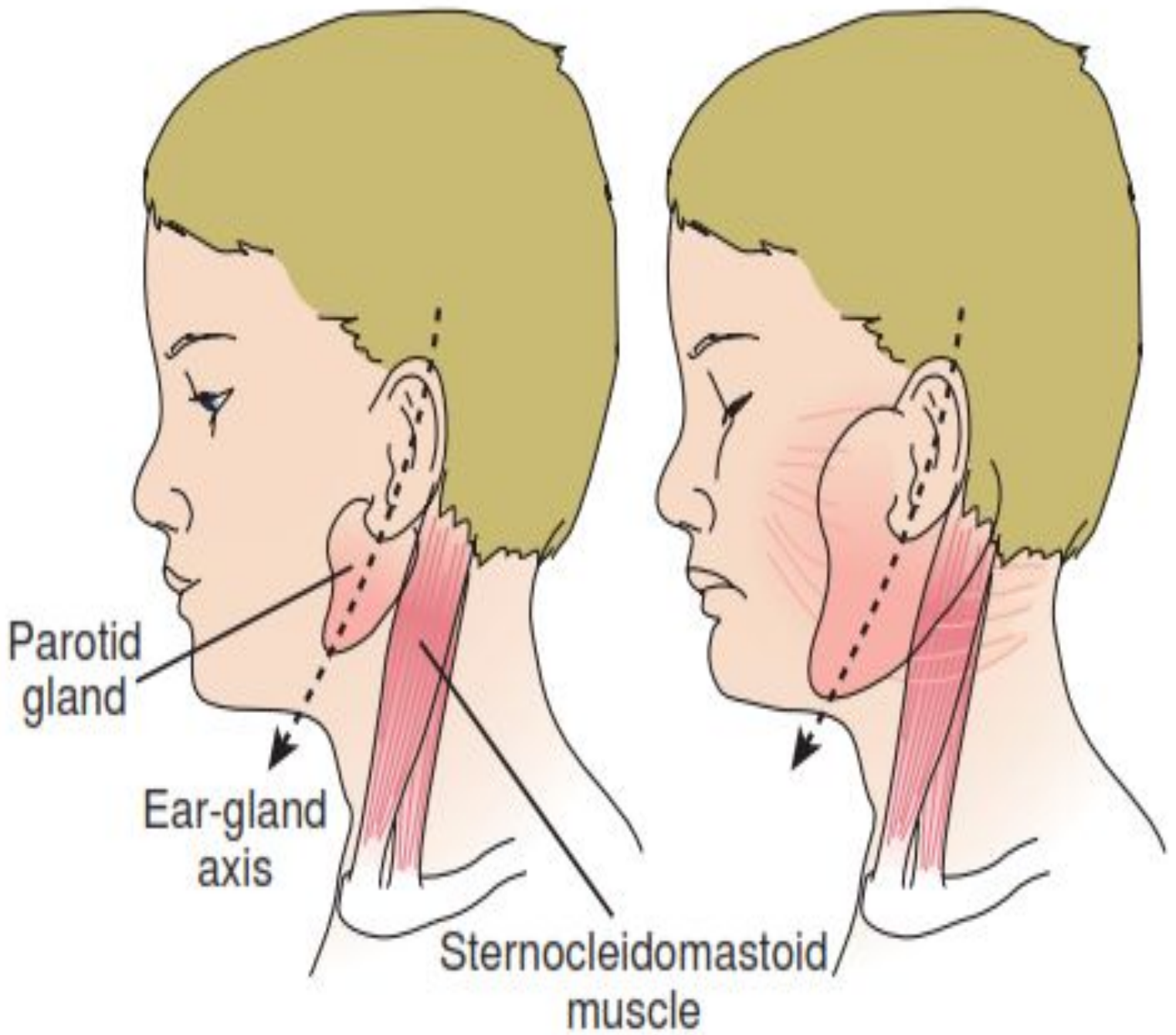


Mumps

etiology & definition

Mumps virus is in the family Paramyxoviridae and the genus *Rubulavirus*. It is a single -stranded pleomorphic RNA virus. Mumps is an acute self-limited infection, unusual in developed countries because of widespread .use of vaccination

It is characterized by fever, bilateral or unilateral parotid swelling and tenderness, and the frequent occurrence of .meningoencephalitis and orchitis




mumps occurred primarily in young children between the ages of 5 _ 9 yr and in epidemics about every 4 yr.

Mumps infection occurred more often in the winter and spring .months

Following the recommendation for routine use of mumps vaccine in 1977, the incidence of mumps fell dramatically in young children and shifted instead to older children, .adolescents, and young adults

Outbreaks continued to occur *even in highly vaccinated* populations as a result of vaccine failure and also because of .undervaccination of susceptible persons



Mumps is spread from person to person by respiratory ● droplets. Virus appears in the saliva from up to 7 days before to as long as 7 days after onset of parotid swelling. The period of maximum infectiousness is 1-2 days before to 5 days after onset of parotid swelling.

The U.S. Centers for Disease Control and Prevention, recommend an isolation period of 5 days after onset of parotitis for patients with mumps in both .community and healthcare settings

PATHOLOGY AND PATHOGENESIS

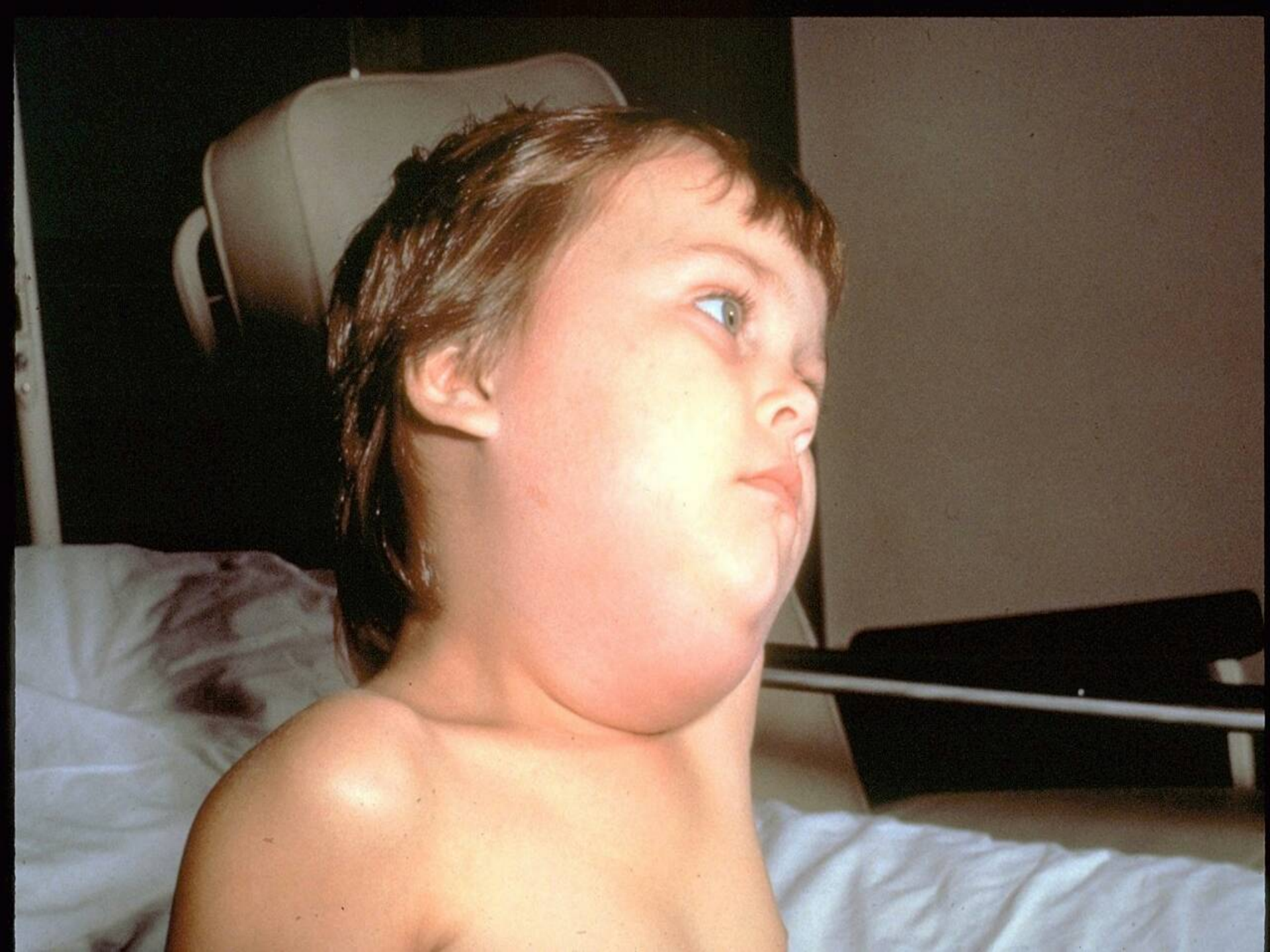
Mumps virus targets the salivary glands, central nervous system (CNS), pancreas, testes, and, to a lesser extent, thyroid, ovaries, heart, kidneys, liver, and joint synovia. Following infection, initial viral replication occurs in the epithelium of the upper respiratory tract. Infection spreads to the adjacent lymph nodes by the lymphatic drainage, and viremia ensues, spreading the virus to targeted tissues. Mumps virus causes necrosis of infected cells and is associated with a lymphocytic inflammatory infiltrate. Salivary gland ducts are lined with necrotic epithelium, and the interstitium is infiltrated with lymphocytes. Swelling of tissue within the testes may result in focal ischemic infarcts.

CLINICAL MANIFESTATIONS

The incubation period for mumps ranges from 12 to 25 days, but is usually 16 to 18 days. Mumps virus infection may result in clinical presentation ranging from asymptomatic or nonspecific symptoms to typical illness associated with parotitis with or without complications involving several body systems. The typical case presents with a prodrome lasting 1–2 days consisting of fever, headache, vomiting, and achiness. Parotitis then appears and may be unilateral initially but becomes bilateral in about 70% of cases

The parotid gland is tender, and parotitis may be preceded or accompanied by ear pain on the ipsilateral side. Ingestion of acidic foods or liquids may enhance pain in the parotid area. As swelling progresses, the angle of the jaw is obscured and the ear lobe may be lifted upward and outward. The parotid swelling peaks in approximately 3 days then gradually subsides over 7 days. Fever resolves in 3 to 5 days along with the other systemic symptoms. A morbilliform rash is rarely seen. Submandibular salivary glands may also be involved or


.may be enlarged without parotid swelling





DIAGNOSIS

The diagnosis could be made based on history of exposure to mumps infection and development of typical clinical findings. Confirmation of the presence of parotiditis could be made with demonstration of an elevated amylase level, Leukopenia with a relative lymphocytosis. in patients with parotiditis of >2 days of unknown cause, a specific diagnosis of mumps should be confirmed or ruled out by virologic or serologic means. This may be accomplished by isolation of the virus in cell culture, detection of viral antigen by direct immunofluorescence, polymerase chain reaction



A significant increase in serum mumps immunoglobulin G (IgG) antibody between acute and convalescent serum specimens by complement fixation, neutralization hemagglutination, or enzyme immunoassay (EIA) tests establish the diagnosis. However, IgG antibody tests may cross react with antibodies to parainfluenza virus. More commonly, an EIA for mumps IgM antibody is used to identify recent .infection

DIFFERENTIAL DIAGNOSIS

Infectious

parainfluenza 1 and 3 -1

influenza A -2

cytomegalovirus -3

Epstein-Barr virus -4

enteroviruses -5

Purulent parotitis by -6

.Staphylococcus aureus

Noninfectious

obstruction of the Stensen -1
duct

Sjögren syndrome -2

systemic lupus -3

erythematosis

.tumor -4

COMPLICATIONS

Common

meningitis, with or without-1
encephalitis
gonadal involvement -2

Uncommon

conjunctivitis -1
optic neuritis -2
pneumonia -3
nephritis -4
pancreatitis -5
thrombocytopenia -6

TREATMENT & PROGNOSIS

No specific antiviral therapy is available for mumps. Management should be aimed at reducing the pain associated with meningitis or orchitis and maintenance of adequate hydration. Antipyretics may be given for fever. The outcome of mumps is nearly always excellent, even with complications.

PREVENTION

Immunization with the live mumps vaccine is the primary . mode of prevention