

# Mumps

**Mumps** or **parotitis epidemica** is an acute viral disease with swelling of the salivary glands and possible involvement of the CNS, pancreas and testicles. It is caused by an RNA virus belonging to the group of paramyxoviruses, which spreads through the air. It has neurotropic and glandulotropic affinity. It is a highly contagious disease.

## Epidemiology

The virus is transmitted by droplet infection. Infected persons are contagious from 3 days before to a maximum of 9 days after the onset of the disease.<sup>[1]</sup> The virus multiplies in the nasopharynx, from where it spreads to the lymph nodes. Next, viremia develops. Incubation period: 14-21 days.<sup>[2]</sup>

The reported incidence of mumps in the Czech Republic in the years 2005–2014 is approximately 400–5200 cases per year, i.e. an average of 18 patients per 100,000 inhabitants per year. In 2014, the incidence was 6.4/100,000 inhabitants.<sup>[3]</sup>

## Clinical picture

Inapparent course in **30-40%** .

It starts with malaise, subfebrile, a feeling of tension in the area of the parotid (parotid salivary glands), which increase asymmetrically. There is increased pain when opening the mouth, sometimes also in the submandibular and sublingual areas - the (*submandibular*) a sublingual (*salivary*) glands can also be affected. <sup>[1]</sup>

Typical presentation: **fever** and **painful parotid swelling** (in 70% bilateral, in 30% unilateral), protruding earlobes, pain when biting and redness of the salivary gland duct.<sup>[1]</sup> Swelling usually lasts 3–7 days.<sup>[1]</sup>

## Diagnostics

According to clinical symptoms, unclear cases - serology. Detection of specific IgM antibodies. In case of CNS involvement, virus isolation from saliva, blood, urine, cerebrospinal fluid.

Sedimentation normal, blood count more or less the same, mostly more lymphocytes, increase in serum amylase.

Detection of RNA virus by RT-PCR<sup>[1]</sup>.

## Differential diagnosis

It is necessary to distinguish infiltration in malignancies, sarcoidosis.

Purulent parotitis, sialoadenitis, CMV parotitis, coxsackie A parotitis , parotidomegaly of HIV+ children.

Rarely – Pb, Hg poisoning, tumor, Mikulicz syndrome (leukemia), Sjörgren, Charvat's symptom – DM.

## Theraoy

Symptomatic: on the parotid gland - lukewarm compresses, pancreatic diet, rest.

## Complication

Common, the course is mostly favorable.

### Septic meningitis

In children, the most common complications, the course is usually mild. 70% unobserved. In the cerebrospinal fluid, mononuclear pleocytosis (> 1000 atypical elements/mm<sup>3</sup>) – increased protein, white blood cells also quite high (in contrast to other aseptic inflammations of the CNS).

Symptoms: temperature, headache, nausea, vomiting, meningeal symptoms, very rarely permanent deafness.

CNS involvement can occur even before parotid swelling!

### Meningoencephalitis

Symptoms: malaise, vomiting, neurological disorders<sup>[1]</sup>.

### Pancreatitis

Non-specific symptoms: abdominal pain, vomiting and diarrhoea.

### **In adolescents and young men - orchitis a epididymitis.**

In children under 15 years in 20%, 5 days after the acute phase.

Symptoms: pain, swelling and redness of the skin of the scrotum above the enlarged testicle, the temperature rises again. In 13% of cases, it leads to reduced fertility, rarely to sterility.<sup>[1]</sup>

Another complications:

Hearing impairment - unilateral, transient or permanent. Eye complications: optic neuritis, uveokeratitis, dacryoadenitis, central venous thrombosis. Facial nerve paresis, nephritis, [[thyroiditis], myocarditis, arthritis.<sup>[1]</sup>

## **Prognosis**

Mostly good, the consequences can be after meningoencephalitis, orchitis, pancreatitis.

## **Prophylaxis**

Regular vaccination along with measles a rubeolla (MMR vaccine).

## **Odkazy**

### **Externí odkazy**

- Epidemická parotitida – pokračující epidemie na východě ČR, 2007 (<http://www.solen.cz/pdfs/ped/2007/03/05.pdf>)

### **Zdroj**

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2. ROZSYPAL, Hanuš. *Základy infekčního lékařství*. - edition. Charles University in Prague, Karolinum Press, 2015. 572 pp. pp. 179. ISBN 8024629321.
3. STÁTNÍ ZDRAVOTNÍ ÚSTAV,. *Vybrané infekční nemoci v ČR v letech 2005-2014 - relativně : Hlášený výskyt vybraných infekčních nemocí v České republice v Epidatu v letech 2005-2014, na 100 000 obyvatel* [online]. ©2015. [cit. 2015-11-21]. <<http://www.szu.cz/publikace/data/vybrane-infekcni-nemoci-v-cr-v-letech-2003-2012-relativne>>.

### **Použitá literatura**

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