Background Cytomegalovirus, which belongs to the herpes viruses group, is the most frequent cause of congenital infection. The fetus may be silently infected in utero, as a result of initial infection or reactivation of a chronic infection in the mother. This may lead to different failures of the child’s organs and systems. The presence of antibodies to cytomegalovirus (CMV) in infants, even without clinical signs of infection, often leads to unreasonable medical treatment.

Patients and Methods The parents of the 2-month-old child appealed to the department to verify the correctness of prescribed treatment. A high level of CMV IgG was detected in maternal blood after pregnancy. That’s why congenital CMV infection was suspected in 1-month-old infant. His laboratory tests revealed high level of CMV IgG, but CMV DNA wasn’t found by PCR in blood, urine, saliva. In spite of this, the baby was diagnosed with congenital CMV infection and was treated with anti-human anticytomegalovirus immunoglobulin (2 doses). However, antibodies titer was at the same level on repeat testing. On physical examination in our department: (2 doses). However, antibodies titer was at the same level on repeat testing. On physical examination in our department: the condition of the child was satisfactory, cognitive development was normal.

Results Diagnosis of congenital CMV infection isn’t correct, according to negative CMV DNA PCR in blood, saliva, urine and lack of clinical manifestation (macrocephaly, jaundice, petechial rash, hepatosplenomegaly, hepatitis, pneumonitis, sensorineural hearing loss, etc.). Therefore, further examination and specific immunoglobulin therapy aren’t needed, dynamic observation is recommended. The child’s condition remains satisfactory at the age of 4 months, there aren’t any complaints from his parents.

Conclusion The main diagnostic test of congenital CMV infection is PCR of body fluids, which means that serological research should not be used in routine diagnostics. The detection of CMV IgG in clinically healthy infants isn’t a criterion for this diagnose and does not require specific treatment.

31 DON’T FORGET ABOUT RISK OF PERTUSSIS IN CHILDREN WITH ASTHMA

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Background Pertussis, also known as ‘whooping cough,’ is a highly contagious respiratory disease, caused by Bordetella pertussis.

Nowadays it primarily affects children too young to have completed the full course of vaccinations, children with chronic lung diseases, teenagers and adults whose immunity has faded. Incidence of pertussis among children 7-14 years old in Russia increased twice in 2019, compared with 2018, possibly due to fading immunity among vaccinated children. However, there is still no pertussis booster vaccination for children over 6 years of age in the Russian National Immunization Schedule.

Case Report A 10-year-old boy, appealed to the department with complaints of paroxysmal nonproductive cough, becoming nocturnal for the last 14 days, without fever. The boy was diagnosed with asthma at age of 7 years, for the last 1,5 years he had asthma remission and hadn’t received controller therapy. The boy was vaccinated according to the National Immunization Schedule of the Russian Federation. At the previous pediatrician examination there wasn’t any additional sounds, normal breath during the lungs’ auscultation. However, the doctor decided that it was asthma exacerbation caused by a viral disease. Boy was treated with inhaled salmeterol/fluticasone propionate combination without any significant effect: the cough became worse, hacking, nocturnal with «whooping» sounds.

On physical examination difficulty breathing through the nose was detected.

On auscultation, normal breath without any additional sounds were audible over both lungs. The remainder of the physical examination was unremarkable.

Epidemiological anamnesis: The mother of the child had frequent coughing paroxysms for the last 2 weeks.

Results Pertussis was suspected because of the long-term coughing paroxysms, lack of response to bronchial asthma controller therapy, positive epidemiological anamnesis. Bordetella pertussis DNA was detected by PCR in nasopharynx mucus. Also, positive IgM (12.6 IU/mL) and IgG (60.8 IU/mL) antibodies to B. pertussis were found in the blood serum. The boy was treated with clarithromycin. Since the beginning of treatment there was significant improvement in health: the cough became rare without whooping.

Conclusion Children with bronchial asthma and lack of response to controller therapy ought to be suspected with whooping cough. Particular attention should be given to schoolchildren and adolescents, especially with chronic lung diseases: vaccination against pertussis at the age of 6 and 12-13 years is recommended, possibly due to fading immunity among vaccinated children over 6 years of age.

32 CLINICAL CASE OF HYPOHYDROTIC ECTODERM DYSPLASIA: SPECIFIC SYMPTOMS FROM THE ENT ORGANS


Ectoderm dysplasia is a rare hereditary disease resulting from mutations in genes encoding the development of ectoderm (mainly ectodysplasin-A receptor genes). The most common form is X-linked hypohydrotic ectoderm dysplasia. The prevalence of this form of the disease is estimated from 1.6 to 22 cases per 100,000 newborns. Clinical symptoms are diverse and can be manifested by impaired function of various systems and organs.

Methods Boy X. 1y 6m old, vaccinated only against BCG at birth, saw the ENT doctor with complaints of recurring purulent rhinitis with the formation of crusts in the nasal cavity with a fetid odor. Local therapy (decongestants, elimination therapy) had no effect. Examination by an otorhinolaryngologist revealed chronic atrophic rhinitis. Forming nasal septum perforation and epithelial plugs in the external auditory canals were detected, as well as conical teeth.

Local therapy of rhinitis was prescribed with medications containing D-panthenol (for moisturizing the mucous membrane and prevention nasal septum perforation) and an...
Abstracts

33 DIAGNOSTIC DILEMMA: VACCINATION SITE REACTION OR INJECTION-RELATED CELLULITIS?
10.1136/archdischild-2021-europaediatrics.33

A previously healthy five-year-old boy presented to the paediatric emergency department with marked swelling, redness and warmth in the left arm (Figure 1), that occurred within 48 hours of receiving the fifth booster dose of diphtheria-tetanus-acellular pertussis-inactivated poliovirus vaccine (DTPa-IPV). He was haemodynamically stable, afebrile and had a good overall appearance. His upper limb function was unaffected.

Given the clinical similarities between this large inflammatory injection site reaction (ISR) and an injection-related bacterial cellulitis, we opted, in this case, for prescribing one-week course of antimicrobial therapy with oral flucloxacillin (50mg/kg every 8h). He showed a marked improvement within 3 days and had a complete resolution of all inflammatory signs in the left arm at one-week follow-up (Figure 2).

DTPs-IPV vaccine can cause large local inflammatory reactions (including pain, itching, swelling or redness around the site of injection), especially after the fifth (preschool) dose. Approximately 20% will experience a minor and common ISR and approximately 2% will experience a severe ISR2, (extensive limb swelling from shoulder to elbow). Particularly large reactions can be confused with bacterial cellulitis, which is extremely uncommon, and antibiotics may be unnecessarily prescribed.

The exact pathogenesis to this reactions is uncertain but they seem to result from a cellular immunity to vaccine antigens. In general they begin a few hours following vaccination, peak at 24 to 48 hours and resolve spontaneously within a week without sequelae. Systemic symptoms, including fever, are infrequent.

Symptomatic management is recommended including analgesia and cool compresses.

Antibiotic treatment or the use of anti-inflammatory medication does not reduce the duration and severity of such reactions. Moving the limb is also recommended because will encourage lymphatic drainage and prevent joint stiffness.

This case serves as a reminder that severe ISR, although infrequent, is well-described after DTPa-IPV containing vaccines. So it is important that parents of children who receive this preschool booster dose are informed of this risk and how to manage it. It is also important to explain that a history of a severe ISR is not a contraindication to future vaccines.

In conclusion, if a child presents with an extensive limb swelling after vaccination, the presumptive diagnosis must be of ISR, unless there are systemic signs (fever and toxicity) or the situation gets worse. Careful consideration is necessary to avoid missing a diagnosis of bacterial cellulitis, which although vanishingly rare, requires an appropriate antibiotic treatment at an early stage.

34 OTITIS MEDIA WITH EFFUSION IN EXTREMELY PREMATURE CHILDREN
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Extremely preterm children (born under 28 weeks) have a high risk for hearing loss, one of the reasons for which is otitis media with effusion (OME). The higher prevalence of OME in preterm born children relative to term ones is explained by the morphofunctional immaturity, organs' pathologies, adverse side effects of the treatment received in the NICU. The aim of study was to assess the prevalence of OME, its duration in extremely preterm children and to analyze the risk factors of OME in this population.

109 extremely preterm born children from 6 months to 15 years old were observed prospectively. The mean gestation age was 26.7±1.3 weeks; the mean birth weight was 971±197 g. All children underwent ENT assessment with otomicroscopy and audiological evaluation at least twice during the first year of their life and at least once a year for children older than 12 months. The diagnosis of chronic OME was established with disease duration of more than 8 weeks; the diagnosis of recurrent OME was confirmed in case of the presence at least two recurrences of the disease within 18 months.

64 children (58.7%) were identified with OME, 70.3% of them with bilateral effusion. OME was revealed in 47 children (43.1%) during their first year of life, the disease was more common in the second half-year. Chronic OME was established in 54.7% of all children. In addition to well-known risk factors for OME a high association of OME with perinatal infections and bronchopulmonary dysplasia (BPD) was noted in extremely preterm children. In the first year of life OME was associated with perinatal infections in 63.8% of children, and BPD in 68.1%. Incidence of recurrent OME was significantly higher in children with BPD (p<0.05).

In the study OME was shown to be a common, recurring disorder in extremely preterm children. It can lead to hearing problems causing speech, language, cognitive, and academic delay. One of the causes of OME was infections in the perinatal period. Children with BPD had a higher risk of OME and an increased risk of chronic/recurrent OME. The high incidence of OME in extremely premature children, especially