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Observation of the Immuno-Pathogenetic State of Measles in Adults

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Abstract: In all adult patients, the data of an epidemiological history and anamnesis of the development of the disease, the clinical course of the disease were analyzed, a clinical and laboratory examination was conducted, which made it possible to identify the clinical features of this disease in adults at the present stage. Under control, in 2020, there were 52 adult patients aged 15 to 51 years treated at the Regional Infectious Diseases Hospital, teenagers 9.6%, persons aged 18 to 29 years accounted for 25%, 30 to 51 years old accounted for 65.4%, dominated by men.

Keywords: measles, rash, enanthema, fever, lymphadenopathy.

Relevance

Recent studies show that measles in all age groups of the population (both vaccinated and unvaccinated) proceeds typically [1-5], and the main reasons for the increase in incidence are the presence of susceptible individuals, late diagnosis of the disease as a result of insufficient alertness of doctors to the possibility measles in adults, the presence of clinical features of the disease in them [3, 4, 8]. Features of measles in adults are currently described by many authors [3, 5, 7, 9]. At the present stage, measles has ceased to be a "children's" infection. Numerous studies have shown that measles in adults has its own characteristics, which are not known to all practitioners. The consequence of this is late isolation and hospitalization of patients, delayed treatment with the subsequent development of severe complications. Measles is an anthroponotic airborne infection with high susceptibility in all age groups of the population and is one of the most dangerous viral infections for adults, the contagiousness index (incidence after contact with the pathogen) is 90–95%. Despite the fact that measles is more often considered a childhood infection [1], the adult population is equally at risk of infection. According to the WHO, the adult population tolerates measles much more severely than children, with a higher incidence of complications and deaths [5]. That is why the ability to suspect and diagnose this disease in a timely manner is necessary not only for pediatricians, but also for adult doctors.

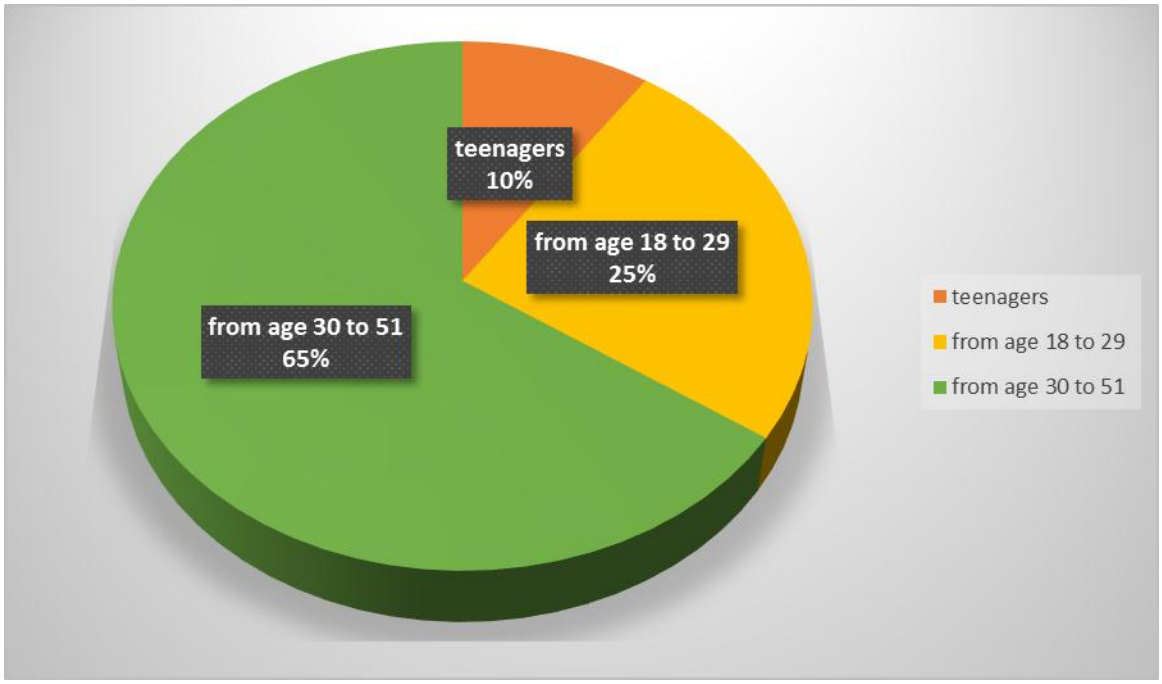
Purpose. To characterize the clinical and epidemiological features of measles in the adult population during the period of rising incidence.

Materials and methods. Under observation were 52 patients aged 15 to 51 years with a diagnosis of Measles, who were admitted to the department of the Bukhara Infectious Diseases Hospital in 2020.

In all patients, the data of the epidemiological anamnesis and the anamnesis of the development of the disease, the clinical course of the disease were analyzed, a clinical and laboratory examination was carried out, which made it possible to identify the clinical features of this disease in adults at the present stage.

Results and discussion. Of the 52 adults who contracted measles, 15% of the patients were not vaccinated against measles, and 85% had no vaccination history (they did not know if they had been vaccinated against measles in childhood). Contact with a patient with measles in hospitalized patients was detected only in 3.4% of cases. Observation showed the age structure of patients:

adolescents 9.6%, persons aged 18 to 29 years 25%, 30 to 51 years old accounted for 65.4%, dominated by men, predominantly aged 18 to 51 years.



The clinical symptoms of measles in adults did not differ from those in children, but the course of the disease was much more severe. Thus, in 81.8% of patients, the course of the disease was regarded as moderate, in 9.0% as severe, and only 9.2% as mild. The severity of the disease was determined by the severity of symptoms of intoxication, temperature reaction and the nature of the rash. In typical cases, the disease developed acutely (81%) or subacutely (19%). The catarrhal period was characterized by the presence of fever and intoxication syndromes, lesions of the upper respiratory tract and conjunctivitis. The average duration was 3-5 days. The intoxication syndrome manifested itself in 100% of cases and was most pronounced in the first two days of this period: patients complained of headache, weakness, malaise, pain in muscles and joints, nausea, loss of appetite. In most patients, the disease began with an increase in body temperature to febrile numbers (38.0-39.0 °C-54.2%, over 39.0 °C-24.4%), which persisted for 5-9 days. In 100% of patients, catarrhal syndrome was observed in the form of moderately pronounced signs of nasopharyngitis, rhinitis (nasal congestion, runny nose, sore throat, dry cough), 19.8% had photophobia, lacrimation, conjunctivitis, and pain, burning in the eyeballs in 51.2% of patients. At this point, you can suspect that you have an acute respiratory disease or acute respiratory viral infection, but the characteristic signs in the form of skin rashes will make it possible to make the correct diagnosis. In 56.7% of cases, a macular enanthema was noted on the mucous membrane of the soft palate. Belsky-Filatov-Koplik spots were found in 31.9–68.1% of cases (at the beginning of the rash period). More often these rashes were found on the mucous membrane of the inner surface of the cheeks, directly opposite the small molars; somewhat less often they can be seen on the mucous membrane of the gums and even less often on the lips. In the first 2 days of the rash, the catarrhal syndrome increased, and the body temperature reached febrile numbers. A rash appeared with a distinct sequence of rashes (face, neck, upper trunk, then the entire surface of the trunk and proximal arms, then lower limbs) with a tendency to merge on the face and trunk. The average duration of the rash was in the range of 4 to 5 days. The maculopapular nature of the rash occurred in (96%) patients, including those with a hemorrhagic component - in (22%). In (4%) patients with mild measles, a small-spotted rash was noted. The reverse development of the rash began on the 4th day after its appearance in the same order, from top to bottom, and ended with pigmentation in (84%) people, peeling - in (16%), more pronounced on the face and palms. Enlarged lymph nodes. predominantly submandibular, parotid group was found in 47.3%. 9.4% had a clinic of enteritis (with a stool frequency of 3-5 times and a duration of 3 days, without mucus admixture) as one of the possible symptoms of measles or against the background of concomitant non-infectious pathology of the intestinal tract, which may affect the incidence of diarrheal syndrome in measles. The average duration of the disease was in

direct proportion to the severity. A smooth course of measles was observed in (51%) patients. In adults, measles is especially severe. Pneumonia and bacterial complications often joined the main disease, which caused a non-smooth course of the disease: bronchitis - y (16%), pneumonia - y (3%), otitis media - y (2%), lacunar tonsillitis - y (3%), meningoencephalitis - in (2%) patients. Exacerbation of concomitant chronic non-communicable diseases (bronchopulmonary system, chronic tonsillitis, coronary heart disease, diabetes mellitus, etc.), diseases were recorded in (23%) patients, the risk of exacerbation of which in acute measles infection was high. Bronchitis and pneumonia in patients treated inpatients were secondary.

Clinical Observations

Patient M., 31 years old. I fell ill on 01/05/2020, acutely. He noted an increase in body temperature - 37.4-37.5 ° C, weakness, malaise, headache, pain in muscles and joints, mucous discharge from the nose, dry cough, lacrimation. Asked for medical help on 01/07/2020. Treatment was carried out at home (basic therapy for ARVI): drinking plenty of water, nemisil, ambroxol, paracetamol, ascorbic acid. In the following days, the persisted fever, the cough intensified, conjunctivitis, lacrimation, and on January 9, 2020, the body temperature increased to 39.5 °C and a rash appeared behind the ears and on the face. The patient was examined by an ambulance doctor and taken to the hospital with a diagnosis of SARS, bronchitis. Epidemiological history: contact with infectious patients denies, there is no information about preventive vaccinations.

On examination in the admissions department on 01/09/2020: a state of moderate severity. Body temperature - 39.6°C. Puffy face, swollen eyelids, conjunctivitis, purulent secret in the corners of the eyes. The mucous membrane of the oral cavity, pharynx, edematous, brightly hyperemic. The gums are hyperemic, loose, bleeding. On the mucous membranes of the cheeks, lips, gray-white grains, irregular in shape, 1-2 mm in size, rising above the surface of the mucosa, surrounded by hyperemia, located at the level of the second molars (Filatov-Koplik spots). On the face there is an abundant, maculopapular rash of a confluent character. Parotid, cervical, occipital lymph nodes up to 0.5 cm in size are palpated. The number of breaths - 19 in 1 min. Breathing is hard, carried out in all fields, wheezing of a wired nature in a small amount. Pulse - 98 in 1 min, satisfactory filling and tension. Heart sounds are muffled, BP-120/80 mm. rt. Art. The presence of characteristic symptoms (conjunctivitis, Filatov-Koplik spots, maculopapular rash) made it possible to diagnose measles. When examining the patient on January 10, 2020, the rash spread to the trunk, there were rashes of a hemorrhagic nature, and on January 11, 2020 it descended to the limbs. The rash took place against the background of fever up to 39°C. The rash persisted until 01/15/2020 and resolved with pigmentation, first on the face, then on the trunk and extremities. Peeling was mild and was noted on the face, hands and feet. Complete blood count dated 01/09/2020: leukocytes - 7.3 × 109 / l, the blood formula is not changed, ESR - 28 mm / h. The platelet count is 302×109/l. Measles was diagnosed on the basis of clinical, epidemiological and laboratory data. The given clinical observation represents a typical adult measles, in which the catarrhal period may be prolonged, lymph nodes may be enlarged, a hemorrhagic rash may develop, and Filatov-Koplik spots may persist in the first 2 days of the rash. Inattentive examination of the pharynx and oral mucosa in patients with exanthema is often the cause of late diagnosis of measles, since the enanthema syndrome characteristic of the catarrhal period of measles remains unnoticed.

Conclusions. Thus, the problem of measles is relevant today, since, in adults, it proceeds typically, with a pronounced cyclicity, the presence of leading symptoms of the disease and is often characterized by a severe course, pronounced signs of a neurotoxic syndrome, involvement of almost all systems in the pathological process, especially the respiratory and nervous systems. The uneven course of the disease is accompanied by the development of complications, in contrast to children, namely: bronchitis, pneumonia, meningoencephalitis, exacerbations of concomitant chronic diseases in persons with a premorbid background, in elderly people. Given the severity of the course of the disease in adults, it is necessary that patients with moderate and severe forms of measles be treated in a hospital.

At the present stage, the age structure of measles is dominated by adults, mostly young people (up to 35 years).

Timely detection and isolation of patients, proper hospitalization according to clinical and epidemiological indications, competent tactics for managing a patient and contact persons will stop the growth of morbidity and transmission of infection, prevent the risk of complications and deaths, and active vaccination of the population with a wide coverage of immunization will lead to complete elimination and elimination measles.

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