CLINICAL ASPECTS OF MEASLES IN YOUNG CHILDREN

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Abstract: In measles with complication stenosing laryngotracheitis in young children, a set of symptoms determining the development of acute respiratory failure syndrome was determined. The dependence of the severity of acute laryngeal stenosis on the presence of concomitant premorbid factors was noted, and the use of the inhalation route of GCS administration through a nebulizer allows to relieve symptoms of respiratory failure.

Keywords: measles, stenosing laryngotracheitis, acute respiratory failure, inhalation therapy, glucocorticosteroids

Specific complications of measles occur in 36.4% of cases. Measles is sometimes reffered to as a joint infection (viral-viral, viral-bacterial). [1,2,3] Acute respiratory failure in emergency care is one of the most common serious syndromes that develops in respiratory diseases. [5,6] Diagnosis and treatment of acute respiratory failure is very important in the pre-hospital stage, and in case of respiratory distress, primary emergency medical care is first to address. [10,11] Acute stenotic laryngotracheitis is one of the main causes of the development of acute respiratory failure in children in the pre-hospital stage. In young children, a 1 mm tumor of the laryngeal mucosa was found, with a 75% reduction in its cavity [4]. It is known that acute laryngeal narrowing is mainly manifested in the evening, acutely developing and as the primary sign of acute respiratory diseases. [7,8,9]

Objective: Studying the clinical course of laryngitis complications in measles and its effective treatment methods.

Materials and methods: 71 children with measles from 6 to 12 months of age were hospitalized, including 11 (15,5%) children with laryngitis. The clinical features of stenotic laryngotracheitis with measles complications in children aged 6 months to 1 year among children with acute respiratory failure, the results of the study of the effectiveness of emergency care in the hospital phase in acute respiratory failure were studied in these age groups.

Discussion and conclusions: Among the controls, the majority of boys were 9 (82%) (r <0,001). In our observation, patients with laryngitis symptoms were noted in the early stages of the disease, 7 (63,6%) were with 1-2 days of disease, and 36,4% with the onset of pigmentation of the disease. The clinical signs of the disease were typical of measles, and early laryngitis symptoms were observed as rough, hoarse cough (100%), hoarseness (95%), catarrhal changes (100%) rhinitis, laryngeal hyperemia. Symptoms of acute respiratory failure were observed in 8 (72,7%) patients. It should be noted that in 73% of cases, high body temperature and subfebrile 27% were observed during the examination. Changes in consciousness were observed in 82% of cases, mainly with signs of agitation (57,3%). The main focus was on determining the number of breaths and heart rate, 82% of cases were higher than the tachypnoea norm, inspiratory suffocation was observed in 62% of patients, auxiliary muscle involvement in the act of breathing, intercostal contraction 58,2%, oral cyanosis in 10,9% of patients. The number of heartbeats and respiratory movements are the primary indications. The mean respiration rate in patients was 40,9±0,8 minutes, exceeding the norm by 20%, with a minimum of 22 to 48 beats per minute. Tachypnea was detected in 80% of children complicated by acute stenotic laryngotracheitis, of which 17 (31%) patients exceeded the average norm by 60%. The mean heart rate in control children was 120,4±1,6 beats per minute, exceeding the mean by 10%, with a minimum of 100 beats per minute and a maximum of 150 beats per minute. Tachycardia was observed in 75% of patients, and the heart rate increased from the mean to 35% in 25% of patients and from 5-25% in 50% of patients. The degree of laryngeal stenosis was determined mainly based on clinical signs and the number of breaths, heartbeats. Gastric stenosis grade 0-1 was assessed in 4 patients (36,4%) of moderate severity, with a sharp cough, hoarseness, increased respiratory rate by 20%, and heart rate by 15%. Stenosis of the larynx of grade 1–2 in 3 (27,3%) patients was assessed as moderate, with changes in consciousness (weakness (1/3 of patients) or agitation in most cases), an increase in respiratory

rate by 50%, and an increase in heart rate by 25%. Stenosis of the larynx of 2-3 degrees was detected in 1 patient, the general condition was assessed as severe, there was an increase in fatigue, the number of breaths increased by 60-100%, the number of heartbeats exceeded the norm by 35%. In these patients, strong vocal suffocation, inspiratory suffocation were observed in the presence of respiratory auxiliary muscles (dilation of the nasal wings, intercostal traction).

The development of symptoms of acute respiratory failure in the complication of stenotic laryngotracheitis in measles indicates a premorbid background discomfort in the child. Hereditary predisposition to atopy leads to the development of severe laryngeal stenosis and recurrent edema in cases. In acute stenotic laryngotracheitis, difficulty breathing is a strong psychoemotional factor, leading to stress reactions (increased anxiety, agitation, palpitations, increased vascular peripheral resistance), resulting in increased vascular permeability at the site of inflammation, which in turn increases laryngeal edema. Often, stressors aggravate the course of the disease, especially in children with a history of neurological and cardiac pathology. Uncomfortable premorbid cases were identified in 75% (n=6) of patients with controlled stenotic laryngotracheitis, including. Allergopathology in 38% of patients (21,8% as monofactor); neurological disorders in 21,8% (monofactor in 12,7% of patients), cardiac pathology in 11% of patients (monofactor in 3,6%). When the development of stenosis of the larynx and its severity are combined with several adverse factors, it has been observed that they are associated with allergopathology as well as neurological changes and cardiological concomitant diseases. At the same time, the number of breaths exceeded the average by 40% and the number of heartbeats by 12%. The main goal of treatment of acute respiratory failure syndrome is to reduce the edematous component of laryngeal stenosis based on the clinical course and pathogenesis and to ensure free airway patency. Glucocorticosteroids (GCS) are currently an effective treatment for acute stenotic laryngotracheitis and have been shown in many observations in recent years. In many countries, the use of GCS in acute stenotic laryngotracheitis has been accepted in all weight loss guidelines. GCS is administered mainly dexamethasone, prednisone (parenterally) and inhalation (using a juicer).

Evaluation of the dynamics of the patient's condition and the effectiveness of emergency treatment in different stages of the disease was carried out on the basis of the protocol of transport of children with laryngeal stenosis in the hospital stage. In patients with laryngeal stenosis, GCS was administered by inhalation, with an average dose of 0.5 mg (1 nebul) up to 1 year of age, in all cases delivered in a volume of 2–4 ml with 0.9% sodium chloride solution. In cases of extreme discomfort, resistance to inhalation in the child, prednisone was

administered parenterally at a dose of 1-2 mg/kg. The effectiveness of emergency therapy was evaluated after 15-20 minutes. When signs of laryngeal stenosis persisted, re-inhalation therapy or intramuscular GCS injection was performed. Inhalation therapy was administered to 7 (72,7%) patients, with 1 patient having instructions for primary musculoskeletal GCS delivery. As a result of the treatment, the number of breaths and heart rate was equal to the norm. Symptoms of shortness of breath (62% to 39%) decreased in children and the involvement of accessory muscles in the act of breathing (58,2 to 18%). After primary therapy, 37,5% of laryngeal stenoses were eliminated. Repeated therapy was administered to 3 children and the remaining patients who were inhaled were injected with prednisone. The condition improved in 6 patients after therapy. No side effects were observed with inhaled and parenchymal therapies.

In conclusion, when analyzing the clinical signs of laryngeal stenosis complicated by measles laryngitis is accompanied by the development of acute respiratory failure in children under 1 year of age, laryngeal stenosis often begins acutely in the early stages of the disease. An increase in body temperature was observed in febrile and above. It has been observed that the number of breaths and heart rate and its evaluation control are important in acute respiratory failure developed as a result of laryngeal stenosis. Taxipnoea was observed in 81% of patients, which was significantly different from the norm, with the participation of an auxiliary compensatory mechanism was observed in 58.2% of patients and tachycardia in 71% of patients. The complication was mainly moderate to severe, with clinical signs typical of acute stenotic laryngotracheitis. Aggravating premorbid status was observed in 65,5% of patients with a sharp effect on respiratory and heart rate indicators. The above changes led to the development of various degrees of acute respiratory failure in 95.6% of patients. In the diagnosis of laryngeal stenosis in complicated measles in young children, it is advisable to use clinical signs and respiratory and heart rate control in the assessment of complications of the disease

References:

1. Timchenko V.N. and oth. Actual problems of measles infection. Pediatrics, 2017; volume № 8 P. 120-129
2. Timchenko V.N. and oth. Measles in young children. Children's infections 2015; №2. P.52-58
3. Golovka M.G. and oth. Measles in the practice of the therapist of the polyclinic General Medicine 2014; №4. P. 10-16
4. Loftis L. Acute infectious upper airway obstructions in children. Semin. Pediatr. Infect.Dis.2006:17(1): P. 5-7
5. Xudoydodova S.G., Farmanova M.A. Vnutriutrobne infektsii i ix kliniko-nevrologicheskie proyavleniya u detey rannego vozrasta // Dostijeniya nauki i obrazovaniya. 2020. №5 (59). P. 60-62.
6. Xudoydodova S.G., Arashova G.A., Mirzaeva M.R. Cudorojny sindrom s perinatalnm porajeniem nervnoy sistem u detey rannego vozrasta // Problem biologii i meditsin. 2012. P. 157.
7. Mixelson V.A. Intensive care in pediatrics. M.GEOTAR-MED. 2003: 549
8. Knutson D., Aring A. Viral croup. Am.Fam. Physician.2004: 69: 535-40
9. Savenkova M.S. Modern aspects of etiopathogenesis and management of children with acute stenosing laryngitis. Pediatrics, 2008: 87(1)133-8
10. Zaitseva O.V. Acute Respiratory Infections in Allergic Children Pediatrics 2007: 2: p19-25
10. Everard M. Acute bronchiolitis and croup. Pediatr. Clin North Am. 2009: 56 (1).119-33.