is a rare X-linked recessive disease. The MPS II is a hereditary metabolic disorder caused by accumulation of glycosaminoglycans (GAG) in organs and tissues due to mutations in the genes, which encode intralysosomal hydrolysis of macromolecules. Hunter syndrome is a progressive, multisystem disease. At the same time a child may have mental retardation and speech development delay, skeletal bone deformities, loss of vision, hearing loss.

Patients and Methods The study included 17 boys aged from 2 to 12 years old with genetically confirmed Hunter syndrome. All patients underwent examination by otolaryngologist, also tympanometry, diagnostic nasopharyngolaryngoscopy, registration of otoacoustic emission, audiometry, cardiorespiratory monitoring were performed.

Results The accumulation of GAG leads to a gradual narrowing of the nasopharynx and larynx lumen, a thickening of the tongue and vocal folds, laryngeal cartilages deformation, an enlarged of pharyngeal, palatine and lingual tonsils.

11 children (64.7%) had chronic inflammation of the nasal mucosa and pharyngeal tonsil with frequent exacerbations. Pharyngeal tonsil hypertrophy was detected in 10 patients (58.8%).

14 children (82%) had a wide, thickened tongue. Hypertrophy of the tonsils was diagnosed in 8 children (47%).

The voice had changed (hoarseness) in 16 children (94%). Deformation of the epiglottis was detected in 4 people (23.5%), tracheomalacia – in 1 child (5.8%).

Among the complications acute sinusitis and exudative otitis media were detectable in 52.9% of patients. 10 children (58.8%) had obstructive sleep apnea (OSA) syndrome, two of them (11.7%) had a severe degree of the disease, which was an indication for adenotonsillectomy. Hearing loss was found in 10 boys (58.8%).

In most patients (82%) a combined pathology of the ear, throat and nose was detected, 2 children (11.7%) had only adenoid hypertrophy, and only 1 child

(5.8%) did not have any pathology of ENT organs.

Conclusion Functional disorders and diseases of the ear, throat and nose are found in most children with Hunter syndrome, which could be one of its early manifestations. An ENT specialist may suspect MPS type II according to the presence of an ENT pathology that is difficult to treat in a standard manner, combined with the pathology of other organs and systems.

Early diagnosis and the possibility of enzyme replacement therapy can control the disease progression and avoid early disability.

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HYPOKETOTIC HYPOGLYCEMIA AND HYPERAMMONEMIA AS PRESENTING FEATURES OF EARLY ONSET MULTIPLE ACYL-COA DEHYDROGENASE DEFICIENCY

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Introduction Multiple acyl-coenzyme A dehydrogenase deficiency (MADD) or glutaric aciduria type II is a rare, autosomal recessive disorder of fatty acid and amino acid oxidation. Disease is caused by pathogenic mutations in ETFA or ETFB

genes, which encode two subunits of electron transfer flavoprotein (ETF), or ETFDH gene, encoding for ETF-dehydrogenase. Phenotype is heterogenous, from severe neonatal acute metabolic decompensation, with or without congenital anomalies, to milder, late onset forms. Diagnosis is made by acylcarnitine and urinary organic acid analysis, and gene testing. Treatment is based on restricted fat and protein intake, high carbohydrate diet, with carnitine, riboflavin and CoQ10 supplementation.

Case Report Patient is a second child of unrelated parents. Family history unremarkable. Pregnancy was complicated by oligohydramnios. Delivery was on term, uneventful, BW 3740 g, BL 53 cm, AS 10,10. Tremor occurred as manifestation of hypoglycemia (BG 1.8 mmol/L), corrected with 10% oral glucose, on the first day of life. The newborn was euglycemic until 20 hours of life when irritability and somnolence were noticed in hypoglycemia (capillary glucose 2.3 mmol/L, venous glucose was immeasurably low). Glucose infusion was started but patient deteriorated to bradypnea and bradycardia.

Cardiopulmonary reanimation lasted 40 minutes. Upon admission in NICU, patient was cardio-respiratory stable, but unconscious, hypertonic and soon developed seizures. Laboratory findings revealed metabolic acidosis (pH 7.3, BE -15.6), hyperlactatemia (14 mmol/L), hyperammonemia (230 µmol/L), increased aminotransferases and CK, normal blood glucose and positive urinary ketones. Brain MRI revealed cortical cytotoxic edema, restricted diffusion in corticospinal tracts and pons, and temporal atrophy. Ammonia normalized following high caloric intake, nitrogen scavengers, L-arginine, L-carnitine and vitamin B12. Urgent metabolic work-up revealed typical plasma acylcarnitine and urine organic acid profile for MADD. We started low protein and fat, high carbohydrate diet, continued with L-carnitine and added CoQ and riboflavin in therapy. Ultrasound showed mild hypertrophic cardiomyopathy and no malformations of other organs. Gene analysis revealed homozygous mutation c.1250C>A (p. Thr266Met) of the ETFA gene. In further course patient was stable, but with severe developmental delay, epilepsy and impaired vision.

Conclusion Beta oxidation defects, even with positive ketones, should be in differential diagnosis of neonatal hyperammonemia, as treatment is different than for other diseases. Lipid infusions, used to provide adequate caloric supply in other disorders, are contraindicated. Urgent metabolic work-up is mandatory for early diagnosis and optimal patient management. Clinical course with early acute cardio-respiratory failure, hypoglycemia and moderate hyperammonemia may be indicative for beta-oxidation defects.

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ALG6-CDG- CONGENITAL DISORDER OF GLYCOSYLATION WITH RECOGNIZABLE PHENOTYPE

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Congenital disorders of glycosylation (CDG) is a large group of genetic metabolic diseases that usually affects many different organ systems. Glycosylation is a complex process