

Serum lactate and pyruvate in relation to clinical severity rate in pediatric facial nerve neuropathy

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The assessment of lactate and pyruvate in pediatric facial nerve neuropathy would be advisable as these markers of hypoxia reflect changes in decrease of tissue oxygenation. Trials have demonstrated the prognostic value of lactate and pyruvate levels in many pathological conditions, including cystic fibrosis, acute bleeding and pancreatitis, intestinal obstruction, septic shock. The aim of the study was to find the correlation of lactate and pyruvate in children with facial nerve neuropathy with severity of the dysfunction of the "facial nerve - facial muscles" according to the House-Brackmann scale. The study involved 122 children with acute facial nerve neuropathy. According to the severity of the defeat of the "facial nerve - facial muscles" in 12 children (9.8%) was observed the 3rd degree, 97 children (79.5%) had the 4th degree and 13 children (10.7%) had 5th degree by House-Brackmann scale. We found a direct correlation between the severity of facial palsy and lactate level (Pearson`s coefficient +0.35): the level of lactate in the blood of patients with facial nerve neuropathy at baseline was increased and most pronounced in case of (5th degree by House-Brackmann scale). In all patients with severe facial palsy was observed a significant reduction of pyruvate (Pearson`s coefficient + 0.82). Correlations between biochemical changes and clinical severity rate indicate a significant role of violation of redox processes in the dynamics of the disease and provide a suggestion that correction of redox processes can improve the outcomes of treatment.