

**CBP010** Biochemical markers of neurological consequence at cardiac surgery

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**Aim:** Biochemical markers of neurological consequence.

**Trial parameters:**

- Assessment of Neurological Status
- Neuropsychological Assessment
- Biochemical Analysis of Serum (Lactate, Pyruvate, Glutamate, PO<sub>2</sub>, Glucose)
- Analysis of S100-Protein and Neuron specific Enolase
- Central hemodynamics
- Acid-Bases Balance
- Haematology, blood chemistry, blood gases and urine analysis.

**Results:** We observed 13 patients with Tetralogy of Fallot before, during and after cardiac surgery with extracorporeal blood circulation (ECC) Neurological status: mild neurological deficit like muscle hypotonia, hyporeflexia and mild developmental delay. Neuropsychological tests: mild delay or normal development of motor, sensitive, speech and social activities. Perhaps it was connecting with severe somatic conditions and pedagogical neglecting or hyper care from parents. Analysis of special biochemical compounds: before operation – lactate acidosis. In some of them we observed pyruvate acidosis and decreased level of glutamate during surgery. Parameters have proved that all of the patients were suffered from hypoxia. Analysis of special biochemical markers: serotonin was normal, increased level of NSE and S100 protein. We have very high level of S100 protein and NSE at all of the patients. It can be indirect attribute of destroy of nervous cells during operation.