

A NEW METHOD OF TREATING BRAIN INJURED CHILDREN IN A BAROCHAMBER

Kazantseva N.V Moscow, Russia.

Background: Our studies have shown that the use of lower surplus pressure, values compared with traditional HBO is accomplished by an increased in the clinical effects. We have worked out new therapeutic regimens of using surplus pressure – hyperbaric treatments (HBT) in 1993 and minimized hyperbaric treatment (MHT) in 1996 leading to a stable therapeutic effect in the treatment of stroke.

Purpose: of the paper is a comparative analysis of the clinical efficacy of these two methods used in the treatment of brain-injured children.

Material and Methods: We observed 80 children under the age of 14: 47 of them had hypertensive headache. 25 – epilepsy. 8 children – cerebral palsy. Forty-seven children received a short course of HBT(1-4 sessions at 1.2 ATA, for 20 min.). In 1996-2001 54 children received MHT: 5-10 sessions at 1.05-1.1 ATA, for 20 min. with 30 percent of O². 40 of them received Q10 (10-30) mg and picnogenol (15-30 mg). 21 children received HBT and later they were administered MHT. The complex investigations included: neurological examination, EEG, reovasography, ECG, capnography.

Results: Our studies have shown that MHT is accompanied by more pronounced therapeutic effect than HBT. It has been shown that only in the narrow range of surplus pressure values (not exceeding 1.1 ATA) one can observe a decrease in the intrapulmonary shunt, as well as an increased co₂ expiration and O₂ consumption. The use of antioxidants noticeably increased the efficacy of MHT and the duration of the after effect period.

Conclusion: MHT is a new method for normalizing oxygen debt in tissues and for restoring oxygen delivery accompanied by a predictable therapeutic effect in children with neurological disorders.