PLASMAPHERESIS AND BLOOD ULTRA-VIOLET RADIATION IN PRE-OPERATIVE PREPARATION FOR CESAREAN SECTION

Repina M.A., Vetrov V.V., Voinov V.A., Lukina E.L.,Krilova T.V.
Academy of Postgraduate Aducation, Maternity Hospital N10, St.Petersburg

Plasmapheresis, being one of the extracorporal therapy methods, was included to comprehensive preparation of 24 pregnant women for cesarean section operation. Therapy tactics was selected due to according pathology and its severity. Instead of plasma being removed the patients were administered crystalloid solutions. Donor blood drugs (plasma, albumin) were not used.

During plasmapheresis operation some ultra-violet radiation of blood was used in volume 1 - 3 ml/kg of body. Plasma been removed was placed in freezing chamber under 20°C within «Hemalcon» containers - 300-500 ml. 2 - 3 days before the operation done blood of 6 pregnant women was processed by plasmapheresis, and during this both auto packed red cells and auto plasma were received in volumes 1050 and 2600 ml respectively. It was shown against the background of plasmapheresis and ultra-violet radiation of blood, that patients' state was improved considerably both subjectively and factually, and biophysical profile of fetus and its cardiogram as well. Transfusion of auto packed red cells and that of auto plasmas were performed both in the end cesarean section operation and within postnatal period. Additional plasmapheresis combined with ultra-violet radiation of blood was performed during 2-4 days with 7 patients from risk group of postnatal infection development (1-2 procedures). There was no hemorrhage during the cesarean section operation, nor donor blood and its components were used. No hemotransfusion complications was detected when returning autohemopreparatives.

Apgar score of all newborn was 7 - 9. All the patients were discharged on 11 - 14 day.

So, the efferent therapy methods including automeans preparation control effectively pregnancy pathology and provide compensation of operational blood losses by autohemoresources and autoplasma without donor supplies.

CLINICAL TRIALS OF HUMAN LUNG SURFACTANT FROM AMNIOTIC FLUIDS IN NEONATAL RESPIRATORY DISTRESS SYNDROME

Rosenberg O.A.*, Antonov A.G.**, Volodin N.N.***, Volchkov V.A.*, Milenin O.B.·, Rumina I. I. ··, Tsybulkili Ed.K···.
CRIRR,*St.-Petersburg; CROGP RAMS**, RASPM***, RAPDE·, MIPeds and Surg··, Moscow; SPPMA···, St.-Petersburg, Russia

Objective: *Estimation of the efficiency, tolerance and safety of «Surfactant-HL» (ST-HL) (CRIRR, St.-Petersburg, Russia])) for treatment of neonatal respiratory distress syndrome (NRDS) was performed in 5 Russian neonatal departments in Moscow and St-Petersburg.*

Methods: *145 ventilated preterm infants (gestational weeks 31.6 + 0.43, birth weight 1696 +_ 65,S g) suffering from RDS were observed: 86 of them were treated with ST-HL (50 mg/kg, one of two administrations), the rest 59 infants formed a control group (K).*

Results: *improvement of lung functions was registered in 67%-82% of patients in different hospitals after ST-HJ treatment. ST-HL reduced period necessary to achieve Fi02=0.4 from 126.8 h (K) down to 80.6 h (P<0,05) and CMV period from 229.8 h (K) down to 165.8 h (P<0,05). Intolerance to the formulation was not observed. Safety of ST-HL was estimated in accordance with the rate of direct complications caused by ST-HL administration (airway obstruction 4,6% and pulmonary hemorrhage 1.2%), as well as the rate of perinatal period complications whose frequency can vary during ST-HL treatment. The following complications were found: pneumothorax and pulmonary interstitial emphysema 10.1%, broncho-pulmonary dysplasia 7.0%. periventricular haemorrhage 14%. intraventricular haemorrhage III-IV 7%, ductus arteriosus persistens 24.4%, sepsis 6.2%, secondary pneumonia 19.8%. These data were similar to the data obtained with oilier natural surfactants [Wauer RR et al., Klin Padiatr 1996, 208:355-65]. The 7th-day mortality was 8.3%, and 28th-day mortality was 15.1 %. NRDS caused death only in 2.3% of patients. Conclusion: ST-HL can be used for NRDS treatment in neonatal intensive care units of 11-111 levels.*