

**1<sup>st</sup> autologous cord blood transplantation in Poland (cord blood collected, prepared and stored at PBKM).**

Patient [boy] was born by caesarean section in March 2007.

The diagnosis of congenital sepsis and congenital intestinal obstruction was established during delivery. After delivery – the enterocutaneous fistula was formed. This operation was complicated by skin necrosis due to NaHCO<sub>3</sub> extravasation. The scar on the left upper limb after skin graft was next several times by the surgical intervention removed. While the succeeding operation it came to cardiac and respiratory arrest with central nervous system damage.

Because of new medical situation the physicians and the scientists took a decision to use to the treatment in this child stem cells from his umbilical cord blood. The decision was supported by Bioethical Committee.

We report probably the first time a rare case of experimental therapy in Europe - central nervous system injury - by autologous cells line from cord blood with properties of neural cells.

Polish Stem Cells Bank (PBKM) transmitted the boy's autologous cord blood to appropriate laboratory. In this laboratory, after cord blood stem cells split, differentiation and then expansion, the first one third of autologous neural progenitors population was send to the pediatric neurological clinic. The first transplantation at 29 July, the second at 26 August and the last third transplantation in September 2008 was performed. The patient received the cells line directly into central nervous system [ cerebral ventricle ]. The post – transplant period was by epilepsy complicated.