

Case Study: Early Intervention for Sarnat II HIE June 25, 2009 Gazi University, Ankara Turkey

A mother with a non-complicated pregnancy arrived in the hospital. After she began to have regular contractions, external fetal monitoring was started. The fetal heart monitor revealed an increased fetal heart rate with intermittent variable decelerations. An emergent cesarean section was performed. The mother gave birth to a male delivered at 38 3/7 weeks gestational age with a birth weight of 3895 grams.

At birth, the infant was floppy with no respiratory effort and a heart rate of 60 beats per minute, Apgars = 1, 5': 1, 7. Resuscitation was started in the delivery room and the baby was brought to the neonatal intensive care unit in the first 30 minutes of life and mechanical ventilation was started.

Physical and neurological examination revealed Sarnat II HIE. Soon after his admission, aEEG (Olympic CFM™ 6000) monitoring was started.

The aEEG showed moderately abnormal background pattern without seizure activity (Figure 1). At 2 hours of life, selective head cooling with mild systemic hypothermia was performed.

After 48 hours of hypothermia, a gradual improvement of aEEG trace was noted (Figure 2) with complete normalization at 72 hour post-hypothermia (Figure 3). Hypothermia was discontinued and the rewarming process was started. After the rewarming period, the baby was successfully extubated. By monitoring with the Olympic CFM 6000, hypothermia treatment for HIE was started in a timely manner. The baby was discharged at 9 days of life. Outpatient follow-up revealed normal psychomotor outcome. Early monitoring and timely therapy gave the baby a good start in life!



Figure 1



Figure 2



Figure 3

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