Comparison of the early and late caffeine therapy on clinical outcomes in preterm neonates

Introduction: in early 1970`s methylxanthine products were introduced as therapy for apnea of prematurity. This study was designed to evaluate caffeine efficacy in low birth weight neonates who admitted in neonatal care unit in Mashhad.

Method: in a control trial, after ethical approval 40 preterm neonates were selected regard to inclusion criteria. They were divided into two groups; first group received 20 mg/kg caffeine for loading dose within the first three days of life which was continued by 5 mg/kg daily and second group received the same dose after the third day of life. Neonates were followed up for 28 days. Data was analyzed by SPSS version 11/5.

Result: neonates mean weight was 1144/4±229 grams, their mean age was 29/5±2/03 week and mean mechanical ventilation duration was 16/4± 1/1 day. Weight changes was not significant in early and late caffeine administered groups (P>0.05). Bronchopulmonary dysplasia and intracranial hemorrhage did not differ between two groups. Patients' outcome was same in both groups. Apnea incidence was lower in early caffeine administered group (P=0/013).

Conclusion: caffeine administration in the first three days of life can reduce the risk of apnea prematurity in low birth weight neonates.

Key words: neonates, premature neonate, caffeine

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