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NEUROMUSCULAR PARALYSIS IN DECREASING THE COMPLICATIONS OF MECHANICAL VENTILATION IN PREMATURE NEWBORNS BREATHING IN ASYNCHRONY

M. Vural, Z. Bilgi, B. Ilikkan, Y. Perk
Department of Pediatrics, Cerrahpasa Medical School, Istanbul University, Turkey
vuralm@istanbul.edu.tr

Objectives: To determine the effectiveness of neuromuscular paralysis at decreasing complications in premature newborns breathing in asynchrony during mechanical ventilation. Materials and methods: Seventy-three preterm newborns with a gestational age ≤ 35 weeks, admitted to the NICU of Cerrahpasa Medical School, between Apr 1, 2002 and Dec 31, 2003 were studied. Newborns were evaluated clinically at the 1st and/or 4th hour of the mechanical ventilation and were classified as being in asynchrony or not. Group I (n=40) was consisted of patients who were not breathing against the ventilator. Those who were breathing against ventilator and who were randomly choosed to receive a neuromuscular blocker, (pancuronium) was group IIa (n=15) and those who were breathing against ventilator and who were randomly choosed not to receive a medication was group IIb (n=18). Results: Mean gestational age were found to be 30.8, 32.0, 31.8 and mean birth weight 1560 g; 1780 g and 1800 g for Group I, IIa, IIb, respectively, without any statistically significant difference. No differences were found between groups concerning delivery route (normal or cesarean section), history of early membrane rupture or urinary tract infection in mother, antenatal steroid administration, Apgar scores, intubation time, a/A ratio, MAP, oxygenation index, surfactant administration and durations of mechanical ventilation and hospitalization. The rate of pneumothorax was significantly more important in Group IIa (20%) when compared to group I (2,5%). No other difference was found between three groups concerning intracranial hemorrhage, patent ductus arteriosus, periventricular leukomalacia, chronic lung disease and mortality rates.