

4th International Conference on **Pediatrics & Pediatric Emergency Medicine**

March 29-31, 2016 Atlanta, Georgia, USA

High frequency oscillatory ventilation in preterm babies

Khaled El-Atawi¹, Gamal Samy Aly², Hisham Abdel Samei Awad², Ahmed Fathy El-Serafi³, Yasser Ahmed Zeitoun², Mahmoud Elhalik² and Samar El-Maadawi¹

¹Latifa Hospital, UAE

²Ain Shams University, Egypt

³Suez Canal University, Egypt

Introduction: The use of high ventilatory rates during CMV is limited by the minimum amount of time needed for a complete inspiration and expiration. New technologies to further increase the ventilatory rate and reduce the tidal volume led to the development of high frequency ventilation (HFV), which has been studied extensively in premature infants but with conflicting results. The most extensively discussed reasons for conflicting results included the ventilation strategies used for HFV and CMV, the age when HFV was started and the ventilator technology and devices used.

Aim of study: To evaluate the possible effects of rescue high frequency ventilation on different organs function (namely brain) of the premature babies in comparison to the effects of conventional mode of ventilation.

Methods: Eighty-three preterm babies' with initial provisional diagnosis of prematurity and/or respiratory distress that needed respiratory support at birth or soon after admission. They were divided into 2 groups: study group needed HFV and control group with only CMV. Initial and follow up ABG and cranial U/s were done.

Results: No statistically significant difference was detected between both groups regarding clinical data, mode of delivery and medications. Highly significant difference was detected between study groups before shifting to HFV with higher PIP, PEEP and FiO₂ (0.000, 0.004 & 0.000 respectively) and higher mean O₂ Sat (0.000) in study group, while non-significant difference was detected regarding Ti & ventilator duration (p=0.592 & 0.732 respectively). After intervention, statistically significant difference was detected between both groups as lower PCO₂ & higher PO₂ in study group (p=0.01 & 0.01 respectively). Also highly significant difference was detected in study group before and after intervention regarding all BG parameters with lower PCO₂ and higher pH, PO₂ and HCO₃ after intervention (p=0.000).

Conclusion: Rescue HFV improved oxygenation, ventilation, lung recruitment and better oxygenation indices and there was no increased incidence of IVH. In addition, HFV had no deleterious effect on other organs as kidney and liver.

Biography

Khaled El-Atawi has completed his Master and PhD degrees in Pediatrics from Ain Shams University. He also had Master degree in Healthcare Management from Royal College of Surgeon of Ireland. He is the Consultant Neonatologist and Clinical Quality Specialist in Latifa Hospital NICU, which is one of the largest tertiary units in the UAE. He is the Lecturer of Pediatric in DMCG and Pediatric Resident Supervisor in LH and a member of local and international societies and associations. He has published many papers and has been serving as an Editorial Board Member of many journals. His fields of interest are Neonatal Ventilation, Nutrition, Brain injury and protection.

kelatawi@emirates.net.ae

Notes: