Abstracts

Results 25 colleagues were trained including 17 junior doctors, 3 consultants and 3 advanced neonatal nurse practitioners (23 feedbacks received).

All of the them feedback that the session fully met their professional needs.

Everybody (23) felt that the integration of theory and practical in this way was excellent.

3 participants did not have any opinion about using the animal model. One person did not like the idea of animal model (religious reasons).

Conclusion A rabbit model for chest drain training was found to be extremely useful to majority of our trainees. This type of training should be arranged once every 6 months with the changing team of junior doctors.

1774 CAUSE OF RESPIRATORY DISTRESS IN NEONATAL INTENSIVE CARE UNIT: A RETROSPECTIVE EVALUATION

doi:10.1136/archdischild-2012-302724.1774

A Annaz, H Altunhan, S Anbay, M Konak, R Üş, Department of Neonatology, Selçuk University, Selçuklu Medical Faculty, Konya; Department of Neonatology, Abant Izzet Baysal University, Medical Faculty, Bolu; Department of Neonatology, Konya University, Meram Medical Faculty, Konya, Turkey

Purpose To determine the demographic characteristics of the newborns with respiratory difficulties, frequency of neonatal disease, analyze of the prognostic factors and effectiveness of treatment who were hospitalized in NICU of our hospital between 2008 and 2009.

Methods In this study, file records of the newborns who were hospitalized in NICU of Selçuk University, Meram Medical School were analyzed retrospectively.

Results Of the 771 newborns, 225 who admitted due to respiratory distress in 2008 and of the 692 newborns, 282 who admitted due to respiratory distress in 2009. Mean birth weight was 1954±972gr in 2008, and 2140±1009gr in 2009. Mean pregnancy weeks were 32±5.0 in 2008 and 33.4±4.9 in 2009. Diagnosis of patients were sepsis (77.8%), respiratory distress syndrome (RDS) (40.4%), pneumothorax (20.9%), patent ductus arteriosus (PDA) (12.4%), meconium aspiration syndrome (MAS) (6.2%), intraventricular hemorrhage (IVH) (5.5%), pneumonia (3.6%), retinopathy of prematurity (ROP) (3.1%), bronchopulmonary dysplasia (BPD) (2.7%) and transient tachypnea of newborn (TTN) (2.2%) in 2008. In 2009. 17.0% PDA, 16.0% pneumothorax, 10.3% pneumonia, 8.2% IVH, 6% TTN, 5.3% BPD, 3.2% MAS and 3.2% ROP. 33.7% of the patients were sepsis (77.8%), respiratory distress syndrome (RDS) (33.4±4.9) time SPO2 exceeding 98% and 7.7% (±8.7) time SPO2 less than 50% in 2008 and 33.4±4.9 in 2009. Diagnosis of patients were sepsis (77.8%), respiratory distress syndrome (RDS) (40.4%), pneumothorax (20.9%), patent ductus arteriosus (PDA) (12.4%), meconium aspiration syndrome (MAS) (6.2%), intraventricular hemorrhage (IVH) (5.5%), pneumonia (3.6%), retinopathy of prematurity (ROP) (3.1%), bronchopulmonary dysplasia (BPD) (2.7%) and transient tachypnea of newborn (TTN) (2.2%) in 2008. In 2009. 17.0% PDA, 16.0% pneumothorax, 10.3% pneumonia, 8.2% IVH, 6% TTN, 5.3% BPD, 3.2% MAS and 3.2% ROP. 33.7% of the patients were sepsis (77.8%), respiratory distress syndrome (RDS) (33.4±4.9) time SPO2 exceeding 98% and 7.7% (±8.7) time SPO2 less than 50% in 2008.

Conclusion The newborns with respiratory distress who admitted due to respiratory distress in 2009. The hospital must be evaluated according to the pregnancy week, way of birth and accompanying problems during first examination, lung functions of the patients were measured by impulse oscillometry. The data were evaluated by SPSS 16 program.

Forty-nine (57%) of 86 patients were non-BPD, 20 were mild BPD, 14 were moderate BPD and 3 were severe BPD.

Weight and height of premature and control groups were similar. There was a statistically significant difference between the two groups in terms of resistance (R5, R10, R20), reactance (X5, X10, X20) and resonant frequency (fres). The airway resistance was significantly higher and reactance was significantly lower in the premature group. However, there was no difference between BPD and non-BPD groups.

In conclusion; although premature babies can catch-up their peers at 3–4 years old in terms of their body percentiles, their lungs still reflect the traces of prematurity.

1775 THE EVALUATION OF LUNG FUNCTION MEASURED BY IMPULSE OSCILLOMETRY METHOD IN VERY LOW BIRTH WEIGHT BORN CHILDREN AT PRESCHOOL AGE

doi:10.1136/archdischild-2012-302724.1775

M Oruç, A Günlenez, EŞ Uyan, AS Gökalp, N Kavas, G Türker, AE Ansoy, Neonatology; Pediatric Pulmonology, Kocaeli University, Kocaeli, Turkey

Chronic lung disease is one of the most important complications of prematurity and results in short and long-term morbidity. Survival of more prematurely born babies leads to an increase in the incidence of bronchopulmonary dysplasia (BPD).

The Aim of this study is to evaluate the lung function of babies who were born under birth weight of 1500 grams using impulse oscillometry in preschool age.

Eighty-six children who were 3–6 years old followed in our neonatology clinic (born under birth weight of 1500 grams) were enrolled in the study as the patient group and 40 term-born healthy children as the control group. The demographic data of the patients, duration of mechanical ventilation and oxygen therapy and presence of BPD were recorded. After routine physical examination, lung functions of the patients were measured by impulse oscillometry. The data were evaluated by SPSS 16 program.

Forty-nine (57%) of 86 patients were non-BPD, 20 were mild BPD, 14 were moderate BPD and 3 were severe BPD.

Weight and height of premature and control groups were similar. There was a statistically significant difference between the two groups in terms of resistance (R5, R10, R20), reactance (X5, X10, X20) and resonant frequency (fres). The airway resistance was significantly higher and reactance was significantly lower in the premature group. However, there was no difference between BPD and non-BPD groups.

In conclusion; although premature babies can catch-up their peers at 3–4 years old in terms of their body percentiles, their lungs still reflect the traces of prematurity.

1776 RESPONSE THRESHOLDS TO PULSE OXIMETRY ALARMS IN THE NICU - AN OBSERVATIONAL STUDY

doi:10.1136/archdischild-2012-302724.1776

K Tan, A Clarke, P Berger, E Skaza, A Ramsden, Monash Newborn, Monash Medical Centre; Ritchie Centre, Monash Institute for Medical Research, Monash University, Melbourne, VIC, Australia

Background and Aims Manual control of oxygen delivery to premature infants is conducted mainly by NICU nurses. This involves FIO2 adjustments in order to keep the S02 within a specific target range (88–92%). Pulse oximeters have alarms set to alert the nurses when S02 values are outside the range (85–95%). Our aims were to study FIO2 alteration in terms of magnitude and time outside target immediately before the FIO2 change.

Methods Infants receiving CPAP or ventilation on the Babylog 8000 ventilator (Dec 2010- Apr 2012) were studied. Signals were acquired from oximeters and ventilator using the PowerLab data acquisition system. The 9-minute epoch prior to each FIO2 change was studied. FIO2 increase (ΔPOS) and FIO2 decrease (ΔNEG) were studied.

Results Recordings were obtained from 7 (5 male) infants with mean (±SD) gestation of 26.9 (±1.9) weeks and birthweight 767 (±200) g. 253 FIO2 adjustments were recorded (130 ΔPOS and 123 ΔNEG) from 105 hours of total recording time. Mean (range) magnitude of ΔPOS and ΔNEG was 4.6% (0.5–19.5) and 4.5% (0.5–57.0), respectively. Proportion time spent with low alarm in the 9 minutes before ΔPOS was 50.8%, with 25.4% (±20.2) of time in 80–85%, 15.8% (±16.7) in 70–80% band and 6.6% (±11.3) less than 70% saturation. 22.5% of time was spent with high alarm (before ΔNEG) with 4.3% (±8.7) time S02 exceeding 98% and 7.7% (±11.4) in 96–98% band.

Conclusion Nurses were more likely to tolerate low oxygen saturations than high saturations in preterm infants. Mild desaturation episodes (between 80–85%) were often managed conservatively.

1777 A MUSICAL MNEMONIC IMPROVES THE CONTROL OF CHEST COMPRESSIONS AND MANUAL VENTILATION DURING SIMULATED NEONATAL CARDIOPULMONARY RESUSCITATION (CPR)

doi:10.1136/archdischild-2012-302724.1777

Monash Newborn, Monash Medical Centre; Ritchie Centre, Monash Institute for Medical Research, Monash University, Melbourne, VIC, Australia

Aim The aim of this study is to assess whether using a musical mnemonic improves the control of chest compressions and manual ventilation in the simulated neonatal cardiopulmonary resuscitation (CPR) scenario prior to neonatal resuscitation (NRP) training.

Method Patients and methods: 145 neonatal nurses at all levels of experience were enrolled. The participants were randomized to a study group or control group. The study group was taught the following musical mnemonic: A Musical Mnemonic Improves the Control of Chest Compressions and Manual Ventilation during Simulated Neonatal Cardiopulmonary Resuscitation (CPR). The control group was taught the traditional CPR method. Participants were then tested in a simulated CPR scenario in which they had to maintain a heart rate of 100 beats per minute and a respiratory rate of 25 breaths per minute for a 10-minute period. The performance of the participants was assessed by two trained CPR instructors.