

**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

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<sup>1</sup>A Annagür, <sup>2</sup>H Altunhan, <sup>3</sup>S Arıbaş, <sup>3</sup>M Konak, <sup>3</sup>R Örs. <sup>1</sup>Department of Neonatology, Selçuk University, Selçuklu Medical Faculty, Konya; <sup>2</sup>Department of Neonatology, Abant İzzet Baysal University, Medical Faculty, Bolu; <sup>3</sup>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 32.4±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) (5.3%), pneumonia (3.6%), retinopathy of prematurely (ROP) (3.1%), bronchopulmonary dysplasia (BPD) (2.7%) and transient tachypne of newborn (TTN) (2.2%) in 2008. In 2009, percentage of the diagnosis was 69.5% sepsis, 33.3% RDS, 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 died in 2009 and 43.6% of them in 2008.

**Conclusion** The newborns with respiratory distress who admitted to the hospital must be evaluated according to the pregnancy week, way of birth and accompanying problems during first examination and convenient transportation of the ones who need to be cared in advanced center where an intensive care support can be applied to decrease mortality and morbidity of newborns distress.

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

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<sup>1</sup>M Oruç, <sup>1</sup>A Günlemez, <sup>2</sup>ZS Uyan, <sup>1</sup>AS Gökalp, <sup>1</sup>N Kavas, <sup>1</sup>G Türker, <sup>1</sup>AE Arısoy. <sup>1</sup>Neonatology; <sup>2</sup>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 and 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

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<sup>1</sup>2K Tan, <sup>2</sup>A Clarke, <sup>2</sup>P Berger, <sup>2</sup>E Skuza, <sup>1,2</sup>A Ramsden. <sup>1</sup>Monash Newborn, Monash Medical Centre; <sup>2</sup>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  $F_{I}O_2$  adjustments in order to keep the  $S_pO_2$  within a specific target range (88–92%). Pulse oximeters have alarms set to alert the nurses when  $S_pO_2$  values are outside the range (85–95%). Our aims were to study  $F_{I}O_2$  alteration in terms of magnitude and time outside target immediately before the  $F_{I}O_2$  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  $F_{I}O_2$  change:  $F_{I}O_2$  increase ( $\Delta POS$ ) and  $F_{I}O_2$  decrease ( $\Delta NEG$ ) were studied.

**Results** Recordings were obtained from 7 (5 male) infants with mean ( $\pm$  SD) gestation of 26.9 ( $\pm 1.9$ ) weeks and birthweight 767 ( $\pm 200$ ) g. 253  $F_{I}O_2$  adjustments were recorded (130  $\Delta POS$  and 123  $\Delta NEG$ ) from 105 hours of total recording time. Mean (range) magnitude of  $\Delta POS$  and  $\Delta NEG$  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  $\Delta POS$  was 50.8%, with 28.4% ( $\pm 20.2$ ) of time in 80–85%, 15.8% ( $\pm 16.7$ ) in 70–80% band and 6.6% ( $\pm 11.3$ ) less than 70% saturation. 22.5% of time was spent with high alarm (before  $\Delta NEG$ ) with 4.3% ( $\pm 8.7$ ) time  $S_pO_2$  exceeding 98% and 7.7% ( $\pm 11.4$ ) 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)

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