Hospital acquired pneumonia (HAP) is the most frequent hospital-acquired infection in critically ill patients. NNIS system reported 64% of ventilator-associated pneumonia (VAP) in critically ill children admitted to PICU. VAP has high mortality rate, prolonged PICU stay, hospital cost and mortality. Since 2003, high rate of VAP has been reported in PICU patients. We aimed to determine the incidence of VAP and its impact on outcomes in PICU patients.

Results 22 admissions resulted in development of 24 episodes of VAP, accounting for a VAP rate of 15.8 per 1000 ventilator days. Mean time to diagnosis for the first VAP episode was 12.40±4.18 days from initiation of mechanical ventilation. 4 patients developed 2nd VAP episode at 21.40±17.91 day of mechanical ventilation. Age, sex, presence of comorbidity and PRISM III score at admission did not differ between patients with VAP and those without VAP. Patients with VAP had significantly longer PICU length of stay (46.04±43.68 days vs. 9.10±9.25, P<0.001), greater needs for mechanical ventilation (42.26±43.56 days vs. 6.90±7.75, P<0.001), and higher hospital costs for PICU bed excluding treatment cost (9207.40±132 ml), and fever duration after chest tube insertion (8±1 vs. 241±107 days, respectively). None of the patients experienced any side effects due to urokinase; all patients discharged in good condition.

Conclusions Early detection and empirical treatment of VAP can improve etiology-directed clinical management of bacterial pneumonia in critically ill children admitted to PICU.

Conflict of Interest None.

Acknowledgement Study was financially supported by local budget.

427 SHORT TERM OUTCOME OF HYALIN MEMBRANE DISEASE IN NEWBORN PERIOD doi:10.1136/archdischild-2012-302724.0427

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Background and Aims Hyaline membrane disease (HMD) is one of the most common causes of death and complications in preterm newborn. The incidence is indirectly related to gestational age and birth weight. The aim of this study was to determine short term outcome of the babies’ with HMD.

Methods During one year study, all preterm newborn admitted to NICU at Emamreza hospital, Mashhad, Iran were elected. Diagnosis was based on clinical symptoms, chest x-ray, blood gas, and duration of disease. The babies with other cause of respiratory failure, congenital anomaly, surgery problem and transient tachypnea of newborn were excluded. In this NICU nursing to patients’ ratio is 1 to 4 and occupied bed ratio is 85%.

Results Twenty five patients out of 90 admissions (27.7%) developed HMD during the observation period, with incidence rate of 15 per 1000 patient days and overall mortality of 56%. Gastro-esophageal reflux disease (GERD), mechanical ventilation (MV), endotracheal re-intubation and sedation were the main recorded risk factors for HAP. Multiplex-PCR showed better sensitivity and positive predictive value than bacterial culture for etiologic diagnosis of HAP.

Conclusions Hospital-acquired pneumonia adversely affects patients outcome in our setting. Moreover, m-PCR permits simultaneous detection of several bacterial pathogens in a single reaction which can optimize the emergency diagnosis of HAP and can improve etiology-directed clinical management of bacterial pneumonia.