Background Viral bronchiolitis is a common lower respiratory infection during infancy. 50% of infants with acute bronchiolitis develop post bronchiolitis wheezing (PBW) that may cause childhood asthma. Vitamin A deficiency impairs epithelial integrity, systemic immunity and increases the severity of childhood respiratory infections such as RSV. In this study the effect of vitamin A in improving PBW has been evaluated.

Methods This was a double blind pilot trial on 84 patients aged 2 to 12 months old who were admitted in Emam Sajad Hospital in Yasuj (Iran) from October 2012 to October 2013. The patients were diagnosed by history, physical examination and chest x-ray by a paediatrician. The 84 individuals were put in case and control groups (42 in each group). The case group received 5000 IU/kg Vitamin A intramuscularly, plus cold and wet oxygen, and beta 2 agonist (ventolin) by nebulizer, and the control group received the same except vitamin A 1.2 and 3 weeks after treatment the patients were examined by the same paediatrician and were compared based on severity of wheezing, and response to the treatment (decrease in wheezing, distress and cough).

Findings The differences of demographic data and severity of wheezing were not significant between the groups before treatment. There were significant differences in response to treatment between two study groups after 1, 2 and 3 weeks following treatment (p = 0.045, p = 0.001 and p = 0.001 respectively). No side effects were seen during and after the course of treatment.

Conclusion Usual treatments together with Vitamin–A have stronger effect on reducing post bronchiolitis wheezing, compared with usual treatments alone.

**PO-1019** CLINICAL CHARACTERISTICS AND RISK FACTORS OF SEVERE RESPIRATORY SYNCYTIAL VIRUS-ASSOCIATED ACUTE LOWER RESPIRATORY TRACT INFECTIONS IN HOSPITALISED INFANTS

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Objective To investigate the clinical characteristics and analyse risk factors for severe respiratory syncytial virus (RSV) infection in hospitalised infants with acute lower respiratory tract infections (ALRIs).

Methods A retrospective review of the medical records of infants with RSV-associated ALRIs between March 1st, 2011 and February 29th, 2012 was done.

Results Among 913 RSV-associated ALRI infants, there were 288 severe infants (31.5%). The severe cases accounted for 4.2% of the hospitalised children and gave a hospital RSV mortality rate of 1.0%. The occurrence of severe RSV infection had a seasonal variation, with a peak in winter (45.6%). The proportions of cases with tachypnea, apnea, cyanosis, and fine rales were significantly higher in the severe ALRIs group (all p < 0.001). The incidences of bronchitis, pneumonia and readmission in the severe group were higher than those in the non-severe infants during the one-year follow-up (all p < 0.001).

Conclusions Severe RSV infection is associated with a high hospitalisation and mortality. Preventative measures should be targeted against high-risk hospitalised infants, especially those who are low-birth-weight, under 3 months of age, and with underlying diseases.

Keywords Cystic fibrosis, nutritional assessment, nutritional status