



Abstract 1711 Figure 1 Comparison of MMP-2, MMP-9, and TIMP-1 levels

In contrast, there was no significant relationship between MMP-9 levels or the MMP-9/TIMP-1 ratio between preterm and term infants (univariate analysis). The area under the ROC curve for MMP-2 was 0.70 (95% CI 0.51–0.89,  $p=0.04$ ). The area under the curve for TIMP-1 was 0.78 (95% CI 0.61–0.94,  $p=0.007$ ). MMP-9, MMP-2, and TIMP-1 levels did not correlate with gestational age, gender, severity of wheezing.

**Conclusion** Elevated serum MMP-2 and TIMP-1 levels appear to increase the risk for wheezing. Further studies will be required to determine whether therapeutic inhibitors will prevent recurrent lung morbidities in preterm infants.

#### 1712 SERUM ELECTROLYTES VARIATIONS IN TREATED PATIENTS WITH MODERATE ASTHMA EXACERBATION

doi:10.1136/archdischild-2012-302724.1712

ML Neamtu, AC Brumar. *Pediatric Clinic Hospital, Lucian Blaga University of Sibiu, Sibiu, Romania*

**Background** Salbutamol induces stimulation of  $\beta_2$ -receptors resulting in hypokalemia. Corticosteroids also induce plasma electrolytes variations.

#### Aims

1. To identify blood electrolytes changes following low dose inhaled short-acting  $\beta_2$ -agonists;
2. To evaluate if concomitant inhaled corticosteroids treatment can amplify serum electrolytes changes.

**Methods** We analyzed all children admitted for moderate asthma exacerbation during 6 months period. Inclusion criteria: children between 5–18 years of age; PEF >50–75% of predicted value; serum electrolytes normal ranges. Exclusion criteria: previously treated patients with Salbutamol; Salbutamol hypersensitivity; asthma exacerbation severity levels. The patients were divided into 2 groups: 1<sup>st</sup> group comprised those treated with  $\beta_2$ -agonists and 2<sup>nd</sup> group is represented by paediatric patients concomitantly treated with  $\beta_2$ -agonists and corticosteroids. Both groups were homogenous regarding age and sex ratio. During hospitalization,

patients received standard low dose of Salbutamol by metered dose inhaler (MDI) and inhaled Fluticasonum propionate using spacer device with mouthpiece. Included patients were assessed for electrolytes serum levels before treatment and 72 hours after therapy. Data was analyzed statistically using independent sample T test, skewness, kurtosis.

**Results** Among 269 admitted patients, 175 children fulfilled inclusion criteria. Both groups structure: 92 children in 1<sup>st</sup> group, 83 in 2<sup>nd</sup> group. Authors found for both groups a significant decreasing of serum kalium after  $\beta_2$ -agonists treatment ( $p$  value=0,010). The study didn't confirm a significant variation of serum electrolytes in 2<sup>nd</sup> group as compare to 1<sup>st</sup> group.

**Conclusions** Study confirmed significant hypokalemia after 72 hours inhaled treatment with  $\beta_2$ -agonists; corticosteroids didn't modify kalium level in association with  $\beta_2$ -agonists.

#### 1713 REDUCING ASTHMA CLINIC ATTENDANCE USING POSTAL SURVEY WITH MOBILE TEXTING FEEDBACK

doi:10.1136/archdischild-2012-302724.1713

<sup>1</sup>LM Perrem, <sup>2</sup>P Manning, <sup>1</sup>MB O'Neill. <sup>1</sup>Mayo General Hospital, Castlebar; <sup>2</sup>Mullingar Regional Hospital, Mullingar, Ireland

**Background and Aim** Attempting to reduce unnecessary attendances of well patients at outpatient clinics is prudent. This study evaluated the Asthma Control Test (ACT) and Respiratory Proforma, with feedback through mobile texts, in children with Asthma, to determine attendance at clinic or not.

**Methods** Patients between 4 and 11 years with a diagnosis of asthma were eligible for inclusion. The parent was surveyed, by ppost, 2 weeks prior to the clinic date and asked to complete the Asthma Control Test (ACT) and a Respiratory Proforma which assessed UACS symptoms, medication usage inclusive of intensification episodes and medical concerns. Mobile telephone numbers were requested. Parents mailed their responses in a supplied stamped envelope supplied. Respondents were divided into 2 categories a) ACT score greater than 19 and a non concerning Respiratory Proforma, who were texted not to attend the clinic but supplied with another outpatient appointment and b) the remainder were texted to attend the clinic.

**Results** Over 6 clinics the parents of 77 eligible children were surveyed. Fifty eight (75%) replied of whom 38 (66%) were well and did not attend the clinic but rebooked. Of 20 who attended, 6 had new symptoms of UACS and 3 had pneumonia. Of 19 who did not reply 7 came to clinic with completed questionnaires, 5 had good control. Ten did not attend the clinic or complete the questionnaire.

**Conclusion** Asthma care through postal survey with mobile text feedback is an option in the outpatient setting.

#### 1714 ABILITY OF SELF-INFLATING BAGS (SIB) TO DELIVER SUSTAINED INFLATIONS

doi:10.1136/archdischild-2012-302724.1714

<sup>1</sup>M Thio, <sup>1,2</sup>JA Dawson, <sup>3</sup>TJ Moss, <sup>3</sup>SB Hooper, <sup>1,2</sup>PG Davis. <sup>1</sup>Newborn Services, The Royal Women's Hospital; <sup>2</sup>Murdoch Children's Research Institute; <sup>3</sup>The Ritchie Centre, MIMR, Monash University, Melbourne, VIC, Australia

**Background and Aims** In neonatal resuscitation, the use of a sustained inflation (SI) after birth may facilitate lung recruitment. We aimed to assess the ability of several SIB to deliver a SI.

**Method** In a newborn preterm lamb, we compared 4 different SIB devices fitted with a PEEP valve against a T-piece, using a flow of 8 Lpm. Four operators aimed to give 3 targeted SI of 20 cmH<sub>2</sub>O (displayed on a manometer) for 30 seconds. The study was repeated with the PEEP valve removed and again with no flow.