AN UNUSUAL CASE OF NEONATAL METABOLIC ALKALOSIS CAUSING SEIZURES

M Ranjan, H Galli. Neonatology, Hull Royal Infirmary, Hull, UK

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Introduction Metabolic alkalosis in neonates is very rare and attributed to gastric fluid losses, diuretics and congenital chloride diarrhoea(CCH). There were four cases reported: due to maternal bulimia and Bartter’s, vomiting and CCH. None of them had seizures.

Case report A new-born was born in good condition by emergency LSCS for IUGR, pre eclampsia and suboptimal CTG. She developed desaturation of 80% at 30 min of age followed by apnoea and seizures. Antenataly, Mother had persistent vomiting for last one month, cocaine and amphetamine abuse and active Hepatitis C infection. The examination revealed irritability and hypertonia. Rest of the history and examination weren’t significant. Mother and the baby showed hypochloremic metabolic alkalosis with deranged renal function and electrolytes except potassium of 3.5 and 2.4 in baby and mother respectively; urine was positive for opiates and cocaine. CFAM showed seizure activities. EEG and MRI head were unremarkable. Infections and metabolic screening remained negative.

She was ventilated and treated with designer electrolytes solution, antibiotics and anticonvulsants. Due to renal impairment acycloriv was not given. Both made uneventful recovery. Because of maternal substance abuse baby was discharged to grandparents with supervised access to parents.

Discussion

- Maternal hypochloremic metabolic alkalosis was likely secondary to prolonged vomiting
- The placental simple diffusion and haemodialysis effects explain the similar levels of electrolytes and renal function in mother and New–born except potassium.
- Initial normal (3.5 mmol/L) and later low (2.4 mmol/L) potassium levels are explainable by unidirectional placental potassium fluxes and intracellular shifting in alkalosis respectively.
- Desaturation and apnoea were due to shift of oxygen dissociation curve to left and hypoventilation by alkalosis.
- Early onset seizures were likely secondary to neuromuscular effect of alkalosis.
- This case illustrates the importance of close follow up of new–borns with maternal deranged electrolytes and renal impairment.

REFERENCES

4. Stocker M. Metabolic alkalosis in a newborn infant. Swiss Society of Neonatology. www.neonet.chwebmaster@neonet.ch
Abstracts

**Better Communication to Enhance Paediatric Trainees Working Lives**

F. Seregni, K. Gallagher, N. Ganjoo, W. Kelsall. Paediatrics, Addenbrooke’s Hospital, Cambridge, UK

**Aim**

During the junior doctors’ contract dispute, paediatric trainees were keen to build networks and strengthen the sense of belonging to a community, which is central in Maslow’s hierarchy of needs. In particular, trainees wanted to find out more information about training opportunities. In view of this, we set out to improve communication within the school of paediatrics.

**Method**

Four key areas of communication were identified and reviewed:

- A trainee working group was set up to update and manage the website
- Creation of a new logo for the regional school
- Development of an official Facebook page by a group of trainees
- Regular dissemination of emails by a new school administrator

**Results**

A total of 440 patients under 1 were discharged following a presentation due to injury during the 6 month period. Of the 440 patients 50 (11.4%) did not have correct proforma completed (table 1).

**Discussion**

From our previous 2014 data there has been an improvement in the use of the injury under 1 proforma; 88.6% compliance versus 70% in 2014. The re-presentation rate increases with age which is expected given increased mobility over 1. The patient who had multiple (4) re-presentations was referred to social work resulting in extra parental support. One patient who had 2 injuries under 1 subsequently presented with a burn age 16 months. There were serious safety concerns with the result being the child was placed in kinship care.

**Improving Parental Communication in a Busy District General Neonatal Unit**

E. Russell-Jones, N. Monks, J. Sanpera-Iglesias, H. Fensom, G. Marais. Neonatal Unit, Croydon University Hospital, Croydon, UK

**Introduction**

Communication is a vital part of Neonatal medicine. Effective communication enables parents to be fully-informed and up-to-date with their baby’s care. A significant proportion of newborns are screened and treated with antibiotics for suspected sepsis if there are positive maternal risk factors and/or baby is born in a poor condition or has abnormal observations such as tachypnoea, tachycardia and temperature instability. Maternal risk factors include Group-B Streptococcal infection, premature rupture of membranes, and maternal pyrexia. The decision to screen and treat frequently occurs on labour ward or theatre, where the mother herself may be unwell, therefore unable to acknowledge and process the verbal communication that takes place.

**Aim**

To improve parental communication by providing written information and evaluate if this would improve understanding, confidence going home, and overall care satisfaction.

**Method**

We surveyed 22 parents of newborns who were screened and treated with antibiotics. We produced a questionnaire to assess the need for written information, current understanding and confidence going home. We identified key information parents wished to know and from this produced a leaflet. The leaflet was trialled then implemented. Effective communication enables parents to be fully-informed and up-to-date with their baby’s care.

**Results**

One year later, the effectiveness of communication within the school of paediatrics was evaluated by means of an online survey conducted over a 2 week period in September and statistical analysis from the school website and the Facebook page. Results 334 people including trainees and consultants joined the Facebook page. This page is regularly updated by trainees. Some particularly relevant posts reached up to 2000 views. School website visits increased by 14.3% from Sept 2016 to August 2017. Visits reached the highest point during the recruitment and application period (October and November). Within the deanery, the school of paediatrics has been identified as having one of the best and most informative website.

57 trainees responded to the survey. Of these 72% (41/57) accessed the Facebook page, 79% (45/57) accessed the school website with 67% (38/57) mainly for information about study days. 77% (44/57) were informed about study days via email. Overall 77% (40/52) of trainees felt communication has improved within the school of paediatrics.

**Conclusion**

The new improved communication strategies increased trainee engagement, in particular with the school website. We strongly believe that effective dissemination of training opportunities and broadcasting of school events helps promote a community spirit for paediatricians within the region. We hope that this will in future reflect onto recruitment and retention of paediatrics doctors in the Deanery.

**Abstract G130(P) Table 1 Total injuries under 1 and further attendances over 12 months of age**

<table>
<thead>
<tr>
<th>Number</th>
<th>% of total</th>
</tr>
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<tbody>
<tr>
<td>1 injury&lt;12 months of age only</td>
<td>390</td>
</tr>
<tr>
<td>2 injuries&lt;12 months of age</td>
<td>48</td>
</tr>
<tr>
<td>3 injuries&lt;12 months of age</td>
<td>2</td>
</tr>
<tr>
<td>0 further injuries over 12 months*</td>
<td>362</td>
</tr>
<tr>
<td>1 further injury over 12 months of age*</td>
<td>72</td>
</tr>
<tr>
<td>2 further injuries over 12 months of age*</td>
<td>4</td>
</tr>
<tr>
<td>3–4 further injuries over 12 months of age*</td>
<td>2</td>
</tr>
</tbody>
</table>

*Patients followed up for 12 months following initial presentation.