

Abstracts

Junior Members Forum & Annual RBHSC Lecture

13th February 2014, Royal Victoria Hospital, Belfast

PRESENTATIONS

TEN YEARS ON – HAS DIABETIC KETOACIDOSIS IN CHILDREN CHANGED?

JS Woodside, ECA Stewart, J Dixon

Aims: To compare and contrast diabetic ketoacidosis (DKA) admissions in children to Antrim Hospital in 2000 with 2010. To determine which parameters have changed over 10 years since paediatric diabetes nurses were introduced (post 2000).

Methods: Retrospective analysis of case notes of all children with Type 1 diabetes under 18 years admitted with DKA from 1st January to 31st December in 2000 and 2010.

Results: Attendance at the paediatric diabetic clinic increased by 54% from 107 patients in 2000 to 165 patients in 2010. The percentage attending this clinic admitted with DKA decreased from 12% in 2000 to 6% in 2010. In 2000 there were 44 episodes DKA in 10 existing patients and 3 newly diagnosed patients compared with 23 episodes in 12 existing patients and 2 newly diagnosed patients in 2010. Recurrent DKA occurred in 5 patients in 2000 and 4 patients in 2010 with a total of 36 and 13 episodes respectively. The average HbA1c in existing patients with DKA was 9.9% in 2000, compared with 12% in 2010 with an average overall HbA1c of 8.8% in 2000 and 8.2% in 2010.

Conclusions: Over 10 years, patient numbers have increased, control overall has improved, incidence of DKA has decreased and there are fewer episodes of recurrent DKA. The patients admitted with DKA remain poorly controlled and highlight need for intensive management. The additional support provided by paediatric diabetes nurses has been highly beneficial in preventing DKA. Future structured education programmes and improved public awareness will hopefully lead to a continued reduction in DKA.

RETROSPECTIVE AUDIT: HAS THE USE OF NASAL CPAP IN TERM INFANTS LEAD TO AN INCREASED INCIDENCE OF PNEUMOTHORACES?

Dr J Courtney, Dr S Callaghan, Dr A Verner

Introduction: Spontaneous pneumothoraces can cause respiratory distress in term neonates; incidence 1-2%. The risk increases with resuscitation, CPAP or mechanical ventilation. In RJMH, term infants with respiratory distress are increasingly managed with CPAP. This audit determined

the incidence rate and trend of pneumothorax over 6 years.

Objective: To examine whether nasal CPAP in term infants with respiratory distress causes increased rates of pneumothoraces.

Method: The 113 admissions to RJMH coded with 'pneumothorax' between 1/1/2006 and 31/8/2012 were included. Exclusion criteria were gestation <37 weeks, congenital and pulmonary abnormalities including congenital diaphragmatic hernia and pulmonary hypoplasia. 36 patients remained.

Results: Delivery; 47% elective caesarean section, 19% emergency c/s and 17% instrumental delivery. 75% no resuscitation at birth, 28% respiratory distress following delivery. 50% birth weight >3.5kg. 25% NCPAP prior to developing a pneumothorax. 50% urgent needle thoracocentesis; 39% chest drain insertion. Incidence of term admissions with respiratory distress who subsequently developed a pneumothorax was unchanged between 50/1000 – 150/1000. From 2006-2011 1-2 patients/year who developed a pneumothorax had received CPAP prior to diagnosis. However, in 2012 80% (4) had received prior CPAP. Incidence of RDS and TTN were unchanged. Outcomes; 78% home, 22% transferred.

Conclusion: The incidence rate of pneumothoraces is unchanged. However, use of CPAP was higher in 2012 and the 2012 incidence of pneumothorax was at the upper end of the range. This may explain the anecdotal evidence forming the hypothesis. Notably 66% delivered via c/s. This may be explained by the increased risk of TTN with c/s.

PAEDIATRIC ATTENDANCE AT DELIVERIES – WHEN AND WHY?

Lyndsey Thompson, ST3 Paediatrics (now ST5)

OBJECTIVES: The primary objective of this study is to determine the indications for paediatric attendance at deliveries, and the resuscitation required at all deliveries currently attended. Following the results of this, an updated guideline for paediatric attendance at deliveries will be devised.

STUDY DESIGN: This was a prospective observational study of 100 births, attended by paediatric trainees, in a tertiary care hospital for a three month period between November 2012 and January 2013. A questionnaire was completed by the trainees for each delivery attended, detailing the indication for paediatric presence and resuscitation required.



RESULTS: Information was collected for 100 births attended by paediatric trainees during this period. There was a range of indications for paediatric presence at delivery, with fetal distress being the most frequent (49%). Overall 75% of these deliveries required no intervention by the trainee. Of note, there was a significant difference in the resuscitation required at deliveries of infants with fetal distress present (34% deliveries requiring some form of medical intervention) and those without fetal distress present (0% requiring medical intervention). By using a guideline for paediatric presence at deliveries, attendance at these deliveries would have been reduced by 29%, with none of those deliveries requiring any form of medical intervention.

CONCLUSION: Many deliveries are currently being attended by paediatric trainees, with no intervention being required in the majority of these deliveries. This results in increased paediatric trainee workload, at the detriment of midwifery resuscitation skills and the natural birth process. Through formulation of an updated guideline regarding indications for paediatric presence at deliveries, this could reduce paediatric attendance at deliveries, without compromising patient safety.

POSTNATAL RADIOLOGICAL INVESTIGATIONS IN A DISTRICT GENERAL HOSPITAL – A QUALITY AND SAFETY STUDY

D Leemon , R Verma, K Courtenay, S Mugilan, M Anandarajan

Background & Aims: Follow up, management and communication of results of postnatal ward radiological investigations can have it's difficulties, particularly in district general hospitals. Approximately 1000-1200 radiological investigations are requested per year in our hospital. We noticed that there was a delay in communication of scan

results and there was also no mechanism of identifying workload and whether normal scan results have been communicated to the parents or the GP of the patient

We implemented the following changes

- Introduction of Postnatal Radiological investigation register
- Neonatal Outreach team reviewed scan results (specific time allocated as part of job)
- All printed normal scan results to named Consultant – and letters sent to GP and parents
- Abnormal scan results shown to SpR / Consultant on same day and results acted upon and included in Patient center and ECR

We then audited the process to see if we had improved our communication of results.

Methods: A retrospective study of all the radiological investigation requests was carried out. It looked at the requesting process, documentation, review and communication of results before and after implementation of process changes.

Results: All the normal scan results were communicated to parents and GP within 4 weeks. All abnormal results acted upon within a day of the result.

Conclusions: The strategies implemented have resulted in effective communication, accountability and delivery of safe and high quality care to babies requiring postnatal radiological investigations. These strategies can be implemented in other DGH's with modifications to suit the individual units risks and priorities.

