P 47

AN AUDIT OF THE ADHERENCE TO GENTAMICIN DOSING GUIDELINES IN A TEACHING HOSPITAL NEONATAL UNIT, INCLUDING THE USE OF ONE-TO-ONE INTERVIEWS TO IDENTIFY BARRIERS TO COMPLIANCE

Gurpreet Sondh, Kieran Hand, Amanda Bevan. *University Hospital Southampton NHS Foundation Trust*

10.1136/archdischild-2015-308634.55

Aim To audit adherence to Trust guidance for prescribing, administering and monitoring of gentamicin on the neonatal unit (NNU).

Method Concurrent sampling was used to audit all neonates initiated on gentamicin during the data collection period; 1st Nov 2013 to 31st Jan 2014. A data collection tool was developed and piloted over a one-week period (7–11th Oct 2013) on a total of four neonates; it was successful, with some adjustments required. Data were collected from the following sources: medical notes, drug charts and the Trust's computerised clinical information systems (eQuest). In order to capture data regarding the timing of blood collection for gentamicin serum levels, assistance from the clinical chemistry department was sought. A short questionnaire was developed and administered in one-to-one interviews to obtain the views of NNU staff about the impact of the gentamicin guidance on clinical practice on the ward. Results were analysed using Microsoft Excel.

Results It was found that 23/25 neonates received the correct initial dose for their weight and the correct dosage interval for their gestation. A first serum trough level time was documented for 17/23 neonates, with 4/17 taken outside the correct time window. A first serum peak level time was documented for 16/23 of patients, with 6/16 taken outside the correct time window. When looking at first serum levels, 18/21 neonates had a trough level and 13/21 had a peak level within the desired therapeutic range. All elements of the National Patient Safety Agency (NPSA) care bundle[1] were adhered to for 16/22 neonates on the first dose. Of the 20 nurses interviewed, 8/20 reported not having read the Trust gentamicin guidance and 9/20 reported not having received training on how to implement this guidance, yet 19/20 nurses reported being confident to administer and monitor gentamicin therapy.

Conclusion Documentation was found to be a particular problem, which made interpretation of serum levels difficult and potentially dangerous. This was attributed to lack of awareness of nursing staff as to the importance of documentation or to pressures on the ward such as staff shortages. Co-operation from the clinical medicine department was successful; handwritten times were transferred from blood forms to eQuest (the Trust's computerised results system) in all but 2/46 first serum level requests. Introduction of a barcode scanner system to allow the time of blood collection to be electronically uploaded onto eQuest could automate this process. Overall, NNU nurses'

support use of the NPSA gentamicin guidance and have reported a decrease in the error rate since its introduction. The questionnaire, however, identified barriers to compliance with the guidance suggesting that although there is benefit to patient care, maximal positive outcomes are not being achieved.

REFERENCE

1 National Patient Safety Agency. Patient Safety Alert: Safer use of intravenous gentamicin for neonates, London 2010.