

PTU-067 **AN INCREASED INCIDENCE OF AVOIDABLE METABOLIC COMPLICATIONS OCCUR WITH INADEQUATE CLINICAL MONITORING OF PATIENTS RECEIVING PARENTERAL NUTRITION**

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NE Burch,<sup>1\*</sup> J Stewart,<sup>1</sup> N Smith<sup>2</sup> <sup>1</sup>*Digestive Diseases Department, University Hospitals Leicester NHS Trust, Leicester, UK;* <sup>2</sup>*NCEPOD, London, UK*

**Introduction** In June 2010, the National Confidential Enquiry into Patient Outcome and Death published 'A Mixed Bag: an enquiry into the care of inpatients receiving parenteral nutrition' (PN). This study found that only 19% of inpatients received care with respect to their PN that was considered good by the advisors peer reviewing the study. Additionally 39% of patients suffered metabolic complications, with 49% of these deemed avoidable. Only 32% of patients were deemed to have had adequate monitoring of their PN. This further analysis aimed to identify whether the incidence of metabolic complications correlated with inadequate review.

**Methods** All patients in England and Wales who received PN between 1st January and 31st March 2008 were identified from pharmacy records. Two patients per consultant were identified. A clinical questionnaire was sent to be completed by the consultant for each patient, and then returned with a copy of the case notes. The questionnaires and case notes were then analysed by our Advisor group consisting of consultants, dieticians and pharmacists.

**Results** In total 39% (249/634) of patients suffered metabolic complications, and of these 46% (98/211) were judged to have had inadequate monitoring. Avoidable metabolic complications were deemed to have occurred in 49% (81/164), with 62% (43/69) of these judged to have had inadequate monitoring. The commonest avoidable metabolic complications in both the adequately and inadequately monitored groups were hypophosphataemia, hypomagnesaemia and hyperglycaemia. All complications were almost twice as common in the inadequately monitored group.

**Conclusion** These results show a marked increase in the likelihood of avoidable metabolic complications following PN administration in those not receiving adequate monitoring. In the most severe cases metabolic complications may result in the development of life-threatening cardiac arrhythmias, congestive cardiac failure, or sudden death. It is vital that those involved with inpatient PN management fully comprehend the magnitude of potential metabolic complications, and monitor patients appropriately. Early recognition and management of these complications results in reduced morbidity and mortality.<sup>1</sup> As yet, the role of a specialist nutrition support team (NST) in the prevention of metabolic complications has remained unproven.<sup>2</sup>

**Competing interests** None.

**Keywords** clinical monitoring, metabolic complications, nutrition support team, parenteral nutrition.

#### REFERENCES

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