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PWE-108 PARENTERAL NUTRITION ASSOCIATED CATHETER-RELATED BLOODSTREAM INFECTIONS: DOES DELAYED REPORTING BLOOD CULTURES IMPACT ON CLINICAL MANAGEMENT?

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Aim This project aimed to evaluate the time taken for formal reporting of blood culture results, the associated impact of this on prescribing appropriate antibiotic therapy and defining the period of starvation whilst PN is withheld for patients with catheter related bloodstream infections (CRBSI)

Method Clinical data were retrospectively collected from electronic and paper records for patients with Type 1 intestinal failure diagnosed with CRBSI outside of an intestinal failure unit at a single centre from April 1 st 2016 to March 31 st 2017. Data were collected on clinical presentation, co-morbidities, time for blood cultures to be reported and the impact this had on antibiotic and parental nutrition prescribing.

Results 44 patients with CRBSI were evaluated. Male: Female ratio was 29:15 with a median age of 61 years. The median Charlson co-morbidity index for this cohort was 3. The indications for PN are shown in figure 1.

Abstract PWE-108 Figure 1 Indications for Parental Nutrition

The median Modified Early Warning Score (MEWS) at presentation with each infection episode was 4. All patients had central line cultures taken of which 64% (28/44) were positive. 73% (32/44) of patients also had peripheral blood cultures taken and 47% (15/32) were positive. The most frequent organism cultured was streptococci. The median duration for blood cultures to be initially reported was 24 hours and a total duration of 72 hours for antibiotic sensitivities to be reported. Blood culture results led to changes in clinical management in 66% (29/44) of cases-PN being restarted or antibiotics changed.

The median time for the correct organism-specific antibiotic to be prescribed from initial suspected infection episode was 48 hours. PN was withheld for a median of 72 hours in patients who were subsequently found to have negative blood cultures.

During the time period, 300 patients with type 1 intestinal failure received parenteral nutrition via a central venous catheter. 14 episodes of line infection were recorded in 3854 catheter days giving an infection rate of 3.6/1000 catheter days. 68% (30/44) of patients had a diagnosis of infection other than CRBSI-67% (20/30) of these patients did not meet sepsis parameters and therefore PN could have been continued.

Discussion These data show that where patients receiving PN present with a suspected CRBSI there is a considerable delay before they receive organism-specific antibiotic therapy, or are able to restart PN where this has been withheld. We also found that a significant proportion of patients did not have CRBSI and in many of these cases PN was unnecessarily withheld.

The CRBSI rate in this group are similar to other reported studies.

Further work is needed to examine the impact of diagnostic delays on clinical and nutritional outcomes as well as exploring the potential role of new technologies such as point of care testing on diagnostic and treatment times for CRBSI

Conflicts of interest

None declared

PWE-109 TOPICAL MAGNESIUM THERAPY TREATS HYPOMAGNEAEMIA IN SOME ILEOSTOMY PATIENTS

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Introduction Patients with a high output ileostomy often have hypomagnesaemia. Oral magnesium therapy may be unsuccessful. Topical magnesium therapy may offer a novel mode of replacement. This phase II clinical study using BetterYou magnesium oil spray primarily aimed to determine if the spray will maintain or increase serum magnesium in these patients.

Methods Outpatients with an ileostomy formed more than 6 months prior to inclusion and having chronic hypomagnesaemia (serum magnesium level less than <0.66 mmol/L) at enrolment and either:

(a) a further outpatient serum magnesium (Mg^{+2}) level <0.66 mmol/L in the last 3 months, or

(b) needing regular intravenous magnesium infusions at least once every 6 weeks for more than 18 weeks, were recruited.

Exclusion criteria included severe hypomagnesaemia (<0.25 mmol/L), diuretic use, and medication alterations (including supplements and magnesium infusions) within 4 weeks of enrolment.

Recruits applied 10 sprays twice daily for 6 weeks, delivering a topical elemental magnesium dose of 150 mg/day. Serum and whole cell Mg^{+2} levels were measured at enrolment, and at weeks 1, 3 and 6. Vitamin D levels were measured at enrolment; 24 hour urinary magnesium levels were measured at enrolment and week 6.

Treatment response is defined as a serum Mg^{+2} level rise >0.10 mmol/L at week 6, or the avoidance of a planned magnesium infusion during the trial without a fall in serum Mg^{+2} . Patients with serum Mg^{+2} <0.25 mmol/L or requiring additional magnesium supplementation during the study were withdrawn.

Results 7 patients entered the study. 6 patients completed it; 1 was withdrawn at week 4 due to hospitalisation for Crohn's