Abstract Preview - Step 3/4

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Topic: **Nursing:**
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Title: DIARRHOEA, ENTERAL NUTRITION AND INTESTINAL FLORA RELATIONSHIPS IN CRITICALLY ILL PATIENTS: A PROSPECTIVE CORRELATION COHORT STUDY

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Text: **INTRODUCTION.** Diarrhoea occurs in 46-60% of critically ill (CI) patients. The causes of diarrhoea in CI are debatable. Potential causes include antibiotics (AB) and other medications, enteral tube feeds (ETF), hypoalbuminaemia and changes in intestinal flora (IF). Little research has examined IF, ETF and diarrhoea relationships in CI patients.
OBJECTIVES. To examine relationships between IF, ETF and diarrhoea in CI adult patients.
METHODS. A single centre repeated measures, correlation cohort study of 101 patients was conducted in a 22 bed adult ICU of a tertiary hospital. Diarrhoea and ETF risk factors were examined. Patients were included if they were 1) ETF; 2) emergency admission and not admitted to another hospital/ward; 3) ≥18 years; 4) ICU length of stay >24 hrs. Patients were excluded if they 1) suffered burns, severe peri-anal trauma; 2) elective post operative patients. Diarrhoea was defined as a loose/liquid stool ±stool weight >200g/day using the Bristol Stool Chart. IF were collected from rectal swabs at ICU admission, discharge and diarrhoea.
RESULTS. Diarrhoea was experienced by 53% (n=53) of patients, reported on 143 (16%) of 925 patient admission days and observed 326 times. The mean APACHE II score was 28 and mean ICU LOS was 9 days. The average delay from ICU admission to initial bowel activity was 90 hrs. Patients received aperients (n=81, sd=0.4; 80%), prokinetics (n=78, sd=0.42; 77%), AB (n=87, sd=0.35; 86%) and sedation (n=98, sd=0.17, 97%). Hypoalbuminaemia (< 30g/L) (n=96, 95%) and hyperglycaemia (n=92, 91%) were highly prevalent. Diarrhoea duration was associated with 1) delay to bowel activity (β -0.01, p=0.02); 2) duration of AB (β -0.106, p< 0.001), aperients (β 0.062, p< 0.001), opioids (β 0.219, p< 0.001), hyperglycaemia (β 0.177, p=0.004), hypoalbuminaemia (β 0.265, p< 0.001), elevated white blood cells (WBC) (β 0.223, p< 0.001); 3) ICU LOS (β 0.126, p< 0.001); 4) diarrhoea incidence (β 0.369, p< 0.001). Diarrhoea incidence was associated with 1) delay to bowel activity (β -0.023, p=0.035); 2) duration of AB (β -0.224, p< 0.001), ETF (β 0.527, p< 0.001), aperients (β 0.137, p=0.002), opioids (β 0.534, p< 0.001), hyperglycaemia (β 0.511, p< 0.001), hypoalbuminaemia (β 0.654, p< 0.001), elevated WBC (β 0.588, p< 0.001); 3) ICU LOS (β 0.336, p< 0.001). IF changes were not associated with increased diarrhoea duration (β -0.018, p=0.962) or incidence (β 0.357, p=0.545). Diarrhoea duration was not associated with IF changes in faecal test one (FT) (X^2_4 4.813, p=0.307) or FT two (X^2_3 2.546, p=0.467). Diarrhoea incidence was not associated with IF changes in FT one (X^2_4 3.703, p=0.448) or FT two (X^2_3 3.482, p=0.323).
CONCLUSIONS. No significant relationships between diarrhoeal duration, incidence, IF and ETF were observed. Strategies to reduce ETF diarrhoea in CI patients must be explored and addressed to optimise recovery from a CI experience.
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