



ABSTRACT

Chyme reinfusion therapy using new technology

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High output double enterostomies (DES) and disease-related malnutrition (DRM) are features of intestinal failure (IF) that require parenteral nutrition (PN) until surgical re-establishment of intestinal continuity. PN risks include gut and hepatobiliary dysfunction and Intestinal failure associated liver disease (IFALD), defined as hepatobiliary dysfunction with elevated liver function tests (LFT). Chyme reinfusion therapy (CRT) is a distal feeding technique recommended for restoration of digestive function. International CRT studies in 370+ patients with DES or enteroatmospheric fistula (EAF) demonstrate enhanced intestinal absorption and decreased fluid losses. Improved nutritional status, early weaning from PN, with improved LFT, reduced postoperative complications and length of stay (LOS) result in appreciable cost savings. In our Australian/New Zealand experiences with CRT using the closed Insides System™, nutritional status was monitored by a dietitian in the nutrition support team (NST) and in 80% patients PN was stopped or adjusted according to oral intakes when energy targets were achieved. Likewise, opiates and Loperamide, that retard gastric emptying and prolong transit time, were monitored by pharmacy and the medications and PN reduced as CRT progressed. Patients experienced rapid GI recovery (85%), decreased net stoma losses with at least one bowel movement (79%). Normalisation of electrolytes and LFT with weight gains of 2-6 kg (60%) and stoma reversal for 14/19 (74%) facilitated accelerated hospital discharge for home management supported by stoma nurses and NST.

Based on these clinical experiences CRT has the potential to improve nutrition status and normalise LFT with reduced use of drugs and PN, fewer infections, and reduced LOS. If these data with savings, compared to current standards of care, estimated at IDR1000m per patient, are verified in larger studies, CRT could make a significant contribution to the efficacy and cost effectiveness of nutrition support for intestinal failure.

Keywords: chyme reinfusion, intestinal failure

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