Highlights from the literature

doi:10.1136/flgastro-2020-101729

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Postsurgical intestinal rehabilitation using semisynthetic glucagon-like peptide-2 analogue (sGLP-2) at a referral center: can patients achieve parenteral nutrition and sGLP-2 independency?[1]

This prospective observational study evaluated the role of teduglutide, a semisynthetic analogue of glucagon-like peptide-2 (sGLP-2), in reducing the need for parenteral nutrition in adults with short bowel syndrome. One hundred eight patients underwent autologous gastrointestinal reconstruction surgery (AGIRS), and 74 (68.5%) achieved intestinal sufficiency (parenteral nutrition (PN) not restarted by 6 months after its suspension) with standard medical therapy.

Patients unable to continue decreasing PN volume for 6 months were evaluated (with colonoscopy and laboratory investigations) to start sGLP-2. Seventeen patients were started on sGLP-2. The most common underlying aetiology (42.8%) was intestinal ischaemia. Some patients could not start treatment due to active malignancies, preneoplasm, inflammatory bowel disease or lack of insurance.

The mean volume of PN at the beginning of sGLP-2 treatment was 12.1±3.9 L/week. Twelve of 17 patients started sGLP-2 between 2014 and 2018, of whom 8 discontinued PN in a mean time of 25.8 weeks. One restarted PN due to renal lithiasis and renal impairment. Seven remained independent of PN at the time of publication. Of these, three patients had postoperative intestinal length (ligament of Treitz to ileocaecal valve or colonic anastomosis) of less than 50 cm and four had postoperative intestinal length of 51–99 cm. All patients who weaned PN had partial or total colon in continuity. Five of 17 patients started sGLP-2 after January 2019, all of whom had significantly reduced their PN volume but none suspended PN at the time of publication. Four of the seven patients who were able to discontinue PN could also discontinue sGLP-2 (mean treatment time 63.5 weeks). Markers of nutrition status remained stable between the start of the study, discontinuation of PN and the end of the study (except one outlier who stabilised at a lower weight).

Adverse events reported included abdominal distension, pain, nausea, constipation, arthralgia, skin rash and renal failure.

In summary the authors report that use of sGLP-2 allowed an increase in PN independency after AGIRS, from 68.5% to 76% in this cohort.

Intravenous supplementation type and volume are associated with 1-year outcome and major complications in patients with chronic intestinal failure[2]

This large international survey aimed to investigate whether the European Society for Clinical Nutrition and Metabolism (ESPEN) clinical classification of chronic intestinal failure based on the type (fluids and electrolytes (FE) or PN) and volume of intravenous support could be used as a marker of severity of intestinal failure (IF).

The study involved retrospective data collection. Fifty-one centres contributed 2194 patients. Patients with active malignancy were excluded. Patients were classified according to their mean daily PN volume (<1 L (384 patients), 1–2 L (944 patients), 2–3 L (482 patients) or >3 L (210 patients)), or FE support only (of any volume, 174 patients).

At 1 year, 79.3% of patients were still on parenteral support, 13.6% were weaned from parenteral support and 7.1% were deceased.

IF complications were recorded in 84.7%. IF-associated liver disease (IFALD) was reported in 97 patients (4.4%) (66 present at study onset, 31 incident cases). Central venous catheter-associated venous thrombosis (CVC-VT) was present in 53 patients (2.9%) (23 at study onset, 30 incident cases). During the 1-year follow-up there were 344 episodes of catheter-related blood stream infection (CRBSI) in 273 patients (14.7%).

The likelihood of weaning from parenteral support was lower for patients on FE support (OR 0.366, 95% CI 0.196 to 0.687, p=0.002), on higher volumes of PN (>3 L OR 0.374, 95% CI 0.199 to 0.702, p=0.002), in older age groups and with longer duration of parenteral support.

Risk of IFALD was highest in those on the greatest PN volumes (>3 L OR 4.828, 95% CI 1.792 to 13.004, p=0.002) and in patients with an acute surgical complication as their underlying disease. There was no association with the number of patients included by a centre.

The odds of CRBSI were higher with increases in volume of PN and were similar between patients on <1 L PN and the FE group. They were lower in older patients and higher in more overweight patients and those with underlying chronic intestinal pseudo-obstruction. They were negatively associated with the number of patients included by a centre.

Odds of CVC-VT were not associated with intravenous support categories but were negatively associated with the number of patients included by individual centres. They were higher in patients with longer duration of parenteral support and in underweight and obese patients.

One-year risk of death was lower in the FE group but this did not reach statistical significance.

These data support the ESPEN categorisation of intravenous support as a potential marker of the severity of IF and risk of complications.

Safety of proton pump inhibitors based on a large, multiyear, randomised trial of patients receiving rivaroxaban or aspirin[3]

This multicentre, double-blind, prospective randomised placebo-controlled trial evaluating patients with atherosclerotic vascular disease randomised participants to rivaroxaban with aspirin, rivaroxaban only or aspirin only, comparing primary cardiovascular outcomes. In addition, those not already taking a proton pump inhibitor (PPI) at baseline (64%) were randomised to pantoprazole 40 mg daily or placebo. Non-cardiovascular events which have been associated with PPI use in observational studies were monitored by participant interviews at 6 monthly intervals.

The PPI part of the trial was for 3 years. A total of 17 598 participants with a mean age of 67.6 years (78% men, 23% current smokers) were randomised with a median follow-up of 3.01 years.

There was no significant difference in the cardiovascular endpoints between the pantoprazole and placebo groups. Enteric

infections occurred significantly more frequently in the pantoprazole group (p=0.04) with a number needed to harm of 301 at 3 years. There was an excess of *Clostridium difficile* infections in the pantoprazole group (5/6947 compared with 2/6868) but this did not reach statistical significance (p=0.28), though numbers were low so this effect may have been under-represented.

There was no statistically significant difference between the groups in the incidence of pneumonia, fracture, new diagnosis of diabetes mellitus, chronic kidney disease, dementia, chronic obstructive lung disease or gastric atrophy.

The authors conclude that PPI therapy is safe for up to a median of 3 years.

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