ISKS-1

Intestinal Rehabilitation after Massive Bowel Resection in Post-Gastrectomy Patients

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[Background] Surgical complications requiring massive bowel resection after gastrectomy are rare. However, when such an event occurs the patient may develop short bowel syndrome and intestinal failure. We report our experience of intestinal rehabilitation in four post-gastrectomy patients.

[Methods] From January 2010 to June 2014, four cases of short bowel syndrome were identified in post-gastrectomy patients. All patients were managed by a multidisciplinary team specialized in the care of intestinal failure patients. Patients' medical records were retrospectively reviewed.

[Results] All patients' original diagnoses were early gastric cancer. One patient had synchronous esophageal cancer. Types of gastrectomy were total gastrectomy with Roux-en-Y esophagojejunostomy in two cases, laparoscopy-assisted distal gastrectomy with Billroth II gastrojejunostomy in one case, distal esophagectomy, total gastrectomy with Roux-en-Y esophagocolojejunostomy in one case. Patients required extensive bowel resection due to bowel strangulation from internal herniation (3 cases), SMA torsion (1 case). Remnant small bowel length ranged from 10 cm to 80 cm and partial resection of the colon were done in three cases. One patient received serial transverse enteroplasty (STEP) and one patient is receiving continuous enteral feeding via surgical gastrostomy. There were no cases of intestinal failure-associated liver disease. Three patients are receiving home parenteral nutrition in varying degrees. One patient has been weaned off parenteral nutrition.

[Conclusion] Four post-gastrectomy patients with short bowel syndrome were managed. Although various medical and surgical measures were applied, weaning off parenteral nutrition was difficult to achieve in these patients.
**ISKS-3**

Nutritional Assessment of Oncology Patients with the Patient-Generated Subjective Global Assessment

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【Background and Objectives】Malnutrition is a frequent problem in oncology patients and associated with many adverse outcomes. The Patient-Generated Subjective Global Assessment (PG-SGA) is considered to be the most appropriate tool for detecting malnutrition in cancer patients. The present study has been conducted to assess the nutritional status of oncology patients with the Patient-Generated Subjective Global Assessment as a nutritional assessment tool.

【Method】This is a cross sectional and multi-center study. Nutritional status was determined using the Chinese version of the Patient-Generated Subjective Global Assessment for each patient. The investigators were professionally trained before the study. The date including demographic factors, tumor type, BMI, TNM staging, length of stay were collected. All the data were uploaded to the database.

【Results】A total of 3,495 cancer patients admitted in 48 medical centers from October 2012 to December 2014 were included in this study. Based on the results of PG-SGA, the patients were classified into 3 groups: well nourished (group A), mildly to moderately malnourished (group B), and severely malnourished (group C). The number in each group was 2,016 (57.6%), 1,114 (31.9%), and 365 (10.4%), respectively. The prevalence of malnutrition among the patients was 42.3%. The average PG-SGA score was 4.4 (range from 0 to 26).

【Conclusion】The PG-SGA is an easy to use nutrition assessment tool. Malnutrition has a high prevalence in Chinese oncology patients. We suggest nutritional assessment in oncology patients should be made so that appropriate nutritional interventions can be provided.

**ISKS-4**

Clinical Application of PEG/PRGJ Technology in Peking Union Medical College Hospital

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Objective Summarizing the clinical application of percutaneous endoscopic gastrostomy (PEG) / Percutaneous Radiologic Gastrojejunostomy (PRGJ) in Peking Union Medical College Hospital, to discuss the indications and efficacy of clinical application of PEG/PRGJ technology.

Methods Summarizing 104 PEG/PRGJ cases patients in our hospital during 2005-2012. 56 cases in male, 48 cases in female, mean age (68.18 ± 16.42) years. Among them, Nervous system diseases in 61 cases, Digestive system tumor in 26 cases, Non digestive system tumor with digestive tract obstruction / eating difficulties in 10 cases. The other type of disease in 7 patients. Studying four groups about the longest retained time of PEG/PRGJ tube (LTT), The shortest retained time of PEG/PRGJ tube (STT), and The average retained time of PEG/PRGJ tube (ATT) comparing albumin, prealbumin, High sensitivity C-reactive protein (Hs-CPR), the neutrophil-lymphcyte ratio (NLR), hemoglobin and Onodera prognostic nutrition index (OPNI) within 1 weeks before catheter and 4 weeks after catheter, evaluating Clinical efficacy of PEG/PRGJ. Result Nervous system diseases group (N=61), ATT (39.8 ± 23.0) M, LTT 60.0 M, STT 30.0 M. Albumin (P=0.006), Hs-CPR (P=0.037), NLR (P=0.001), OPNI (P=0.007) are significantly different in statistics. Prealbumin (P=0.154), hemoglobin (P=0.257) without significant difference in statistics. The digestive tract tumor group (N=26), ATT (6.5 ± 3.1) M, LTT 30.0 M, STT 0.6 M. Albumin (P=0.000), prealbumin (P=0.015) are significantly different in statistics. Hs-CPR (P=0.081), NLR (P=0.078), hemoglobin (P=0.063), OPNI (P=0.11) without significant difference in statistics. Non digestive tract tumor group (N=10), ATT (184 ± 68) M, LTT 48.0 M, STT 30.0 M. Prealbumin (P=0.017) is significant differences in statistics. Albumin (P=0.303), Hs-CPR (P=0.039), NLR (P=0.051), hemoglobin (P=0.088), OPNI (P=0.062) without significant difference in statistics. Other types of disease group (N=7), ATT (280 ± 113) M, LTT 48.0 M, STT 24.0 M. Albumin (P=0.044), prealbumin (P=0.041), hemoglobin (P=0.022) are significant differences in statistics. Hs-CPR (P=0.106), NLR (P=0.005), OPNI (P=0.057) without significant difference in statistics. The average replacement time of tube is 178 months in all the patients, 18.4 months in patients with nervous system disease. In 104 patients, Buried bumper syndrome in one (0.96%), jejunal nutrition tube dropping into the digestive tract in two (1.9%), and local wound infection in eleven (10.8%). The overall complication rate was 13.4%.Conclusion In short term, for the patients with nervous system diseases, PEG/PRGJ can improve the nutrition index (albumin), reduce inflammation (CRP, NLR), improve the prognosis index (OPNI), and the life quality for the patients with digestive tract tumor and non digestive tract tumor, PEG/PRGJ can improve the nutrition index (prealbumin) and the life quality for the patients with other types of disease, PEG/PRGJ can improve the nutrition index (albumin, pre albumin, hemoglobin) and the life quality. Diseases of the nervous system, advanced tumor causing obstruction of digestive tract or eating difficulties and some special types of diseases in a certain period, such as short bowel syndrome, pancreatic pseudocyst with acute pancreatitis, esophageal cracks aperture hernia with Severe reflux, can all be as its indications.
**ISKS-5**

**Interleukin-8 is a Prognostic Biomarker for Pancreatic Cancer Cachexia**

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**[Purpose]** Cancer cachexia (CC) is characterized by abnormally low body weight contributes to high mortality in patients with pancreatic cancer (PC). Pro-inflammatory cytokines have been correlated with CC; however, specific cytokines as effective biomarkers for CC remain to be identified.

**[Patients and Methods]** The levels of IL-1β, IL-6, IL-8, and TNF-α were determined in serum samples from normal donors and PC patients with/without CC (the resected group, n=92; the locally advanced group, n=55). IL-8 expression was assessed in PC tissue microarrays. Correlation between concentrations of each cytokine from different groups and weight loss was analyzed by Pearson correlation analysis. The relationships among baseline variables, CC, and IL-8 expression with disease progression were examined by univariate and multivariate analysis.

**[Results]** Patients with CC (n=110) had significantly shorter overall survival (OS, P=.000) and disease free survival (DFS, P=.018) in comparison with patients without CC (n=36). A higher frequency for CC was observed in the locally advanced group than the resected group (92.7% v.s. 64.8%; P=.000). Of these mentioned cytokines, only IL-8 was significantly elevated in the locally advanced group compared with the normal and resected groups and positively correlated with CC status. IL-8 levels in both serum and tissue samples were also positively associated with weight loss. Additionally, high IL-8 expression combined with the presence of CC is an independent predictor of OS and DFS.

**[Conclusion]** Increased expression of IL-8 shows significantly higher relevance with CC in PC patients than other cytokines and thus is useful in prediction and definition of CC development.

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**ISKS-6**

**Modified Glasgow Prognostic Score in Patients Received Major Upper GI Operation**

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**[Purpose]** The modified Glasgow prognostic score (mGPS) is an inflammation-based prognostic score. The values for mGPS are c-reactive protein (10mg/L) and albumin (35 g/L). This study was to examine whether this score, measured before and after surgical procedures, could predict surgical complications and hospital days of patient received major upper GI operation.

**[Materials and Methods]** There were 142 patients who underwent major upper GI operation were included for study prospectively. The preoperative and postoperative D1 and D3 mPGS, pre-operative and post-operative nutrition data were recorded for analysis. The severity of postoperative morbidity was classified by Clavien–Dindo classification.

**[Results]** The incidence of ≥grade 2 Clavien–Dindo classification complications was increased in different time mGPS: preoperative mGPS=0 [7%], mGPS=1 [23%], mGPS=2 [25%] P=0.023 (<0.05); POD1 mGPS=0 [6%], mGPS=1 [25%], mGPS=2 [20%] P=0.045 (<0.05); POD3 mGPS=0 [0%], mGPS=1 [3%], mGPS=2 [21%] P=0.009 (<0.05) respectively. For predicting complications, it revealed POD3 mGPS with higher predictive value. For predicting hospital day, POD3 mGPS also showed significant difference (mGPS=0 [13days], mGPS=1 [11.5days], mGPS=2 [18.7days] P=0.001). Bedside, POD3 mGPS in gastric surgery is more predictable then pancreas surgery (P=0.016 vs. P=0.479) for hospital days.

**[Conclusion]** POD3 mGPS is useful in predicting postoperative surgical complications and hospital days in patients undergoing major upper GI surgery.
Gastrointestinal Symptoms Presenting Initially and Following Neuromyelitis Optica Spectrum Disorder, Sjögren’s Syndrome and Malnutrition in a Child: A Case Report

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[Introduction] Neuromyelitis optica (NMO) spectrum disorder and Sjögren’s syndrome (SS) are two autoimmune diseases contributing to damage of multiple systems. The etiology and pathogenesis are unclear, the signs and symptoms of NMO and SS are unspecific and insidious.

[Case presentation] A 14-year-old Chinese patient presented in outpatient surgery department in Peking Union Medical College Hospital. She complained of having nausea and vomiting, severe weight loss, being unable to eat and fatigue within 1 month. Based on images of low tension stomach and dilated duodenum shown by radiography and increased bile acids, she was diagnosed with superior mesenteric artery syndrome in local hospital, and was referred to PUMCH. The patient was provided with intensive nutrition support via three-cavity tube, but presented neurological symptoms, including progressive dizziness, diplopia and blurred vision. She was suspected of suffering Wernicke’s encephalopathy due to thiamin deficiency. Multivitamin and vitamin B1 were provided for 3 days and EN was modified into low carbohydrate formula, but with no clinical improvement. Retching, little gastric drainage and progressive neurological symptoms made physicians consider disease of central nervous system. Based on high signal changes on T1 and T2 in medulla and C3-C5 level shown by MRI, positive AQP4, SSA and SSB antibody, the patient was diagnosed of NMO spectrum disorder and SS. A 5 days course of intravenous methylprednisolone and immunosuppressive drugs was given with nutrition support, following which neurological and gastrointestinal symptoms improved.

[Conclusion] GI symptom is a recognized though controversial and unusual manifestation of NMO spectrum disorder and SS. The possible relationship between nutrient deficiency and NMO spectrum disorder encourage further research for the etiology of the disease. Careful observation and differentiation are key points for diagnosis, hormone and immunosuppressive therapy, and intensive nutrition support are crucial for treating these diseases and improving general status of patient.