

Preface



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Guest Editor

Nutrition is a significant part of gastroenterology. Nutrient assimilation involves all aspects of the gastrointestinal tract. Salivary glands are involved in digestion. The esophagus acts as a food conduit. The stomach serves as a temporary food storage depot from which numerous physiologic responses are elicited. The pancreas secretes enzymes that are required for nutrient digestion. The gallbladder secretes bile that is required for fat digestion. Nutrient, electrolyte, and fluid absorption occurs in the small and large bowel, and the liver is primary organ for nutrient metabolism. In essence, the primary function of the gastrointestinal tract and biliary system is that related to nutrient intake, absorption, and metabolism; sufficient for survival. It is incumbent on the gastroenterologist to understand the role of the gastrointestinal tract in nutrient assimilation and to understand when and how to intervene when it is compromised, to prevent the development of systemic nutrient disorders.

In this issue of *Gastroenterology Clinics of North America*, devoted to nutrition, Dr. DeLegee describes the nutrition assessment. At a minimum, a brief nutritional assessment should be performed on every patient seen by a gastroenterologist. Patients with moderate to severe malnutrition are at increased risk for inpatient and periprocedural morbidity and mortality. A brief nutritional assessment and nutritional risk calculation may be performed by history and physical examination with review of clinical laboratory tests during an office visit or even while waiting for the nurse to hook up the endoscope for a variceal bleeder, and the nutritional risk can be determined. One must first determine which patients are particularly at risk before determination of whether, what type, what amount, and by what route (the four Ws) nutritional intervention is required.

All medical therapy is provided following a cost-benefit analysis that weighs in favor of therapy. Nutritional support is no exception, and may be associated with numerous complications. To achieve maximal efficacy and minimal risk/cost, patients must be monitored appropriately. Drs. Ukleja and Romano discuss the various mechanical, metabolic, gastrointestinal, and hepatobiliary complications of parenteral nutrition, and suggest methods for their mitigation. One must avoid rapid repletion of undernourished patients to avoid development of potentially life-threatening refeeding syndrome.

Drs. Park and Floch define prebiotics, probiotics, and dietary fiber, and then discuss contemporary data on their use as disease-modifying agents in colonic neoplasia, diverticular disease, irritable bowel syndrome, inflammatory bowel disease, diarrhea, constipation, and hepatic encephalopathy. Dr. McClave addresses the development of a systemic inflammatory response during acute pancreatitis and its modification using parenteral or enteral nutritional support.

Dr. Gonsalves discusses a more recently recognized disorder, eosinophilic esophagitis, which may be associated with environmental toxins, including food or allergies. A disease found not only in the pediatric population, but also in adults, it is increasingly recognized in the community. The pathophysiology underlying eosinophilic esophagitis, its endoscopic and histologic findings, and currently recommended therapy are discussed by Dr. Gonsalves. Just as the prevalence of what may be a food-mediated disorder seems to be increasing in prevalence, celiac sprue is also much more prevalent in the community than once suspected. Drs. Barton, Kelly, and Murray review recent advances in the understanding of this disorder, its presentation, its pathophysiology, and its sequelae.

Patients with short-bowel syndrome undergo intestinal “adaptation” postenterectomy, during which segmental nutrient absorption improves, presumably related to a hormonally mediated increase in mucosal absorptive surface. Dr. Jeppesen discusses this process and the currently available data on the use of exogenous growth factor therapy with growth hormone and glucagon-like peptide II. Many of these patients are destined for long-term home parenteral nutrition. Drs. DiBase and Scolapio discuss the appropriate indications for this therapy, and the indications for home enteral nutritional therapy. Patients who receive the latter are often overlooked and are not seen by the gastroenterologist once the feeding tube has been placed until tube-related complications develop. Drs. DiBase and Scolapio discuss the proper assessment of the patient and their environment necessary to avoid many complications. Optimal feeding routes are discussed, along with the indications for each route. Complications, outcomes, and cost are also discussed.

For patients who have failed home parenteral nutrition and appropriate medical management including intestinal rehabilitation, and are on their way to development of potentially life-threatening complications, such as loss of vascular access or irreversible liver disease, intestinal transplantation is an increasingly viable option. Dr. Fryer discusses the appropriate indications for this surgery and the pretransplant evaluation. Postoperative management and surveillance

and treatment of graft rejection and infection, the complications of greatest concern, are discussed.

The gastroenterologist must be cognizant of nongastrointestinal manifestations of gastrointestinal disease. Patients with gastrointestinal disease, such as inflammatory bowel disease, celiac sprue, and other malabsorptive disorders including short-bowel syndrome, may develop metabolic bone disease. Drs. Williams and Seidner discuss the recognition of metabolic bone disease and risk factors of which gastroenterologists should be aware.

The largest nutritional problem facing America is the obesity epidemic. Although many of the reviews in this issue focus largely on the patient with a nutritional deficit, an overabundance of nutrition, specifically energy, may also result in both direct and indirect morbidity. It must be recognized, however, that even the obese individual may develop malnutrition. Dr. Kushner describes the nutritional assessment of the overweight patient and the initial medical management, which should include lifestyle modifications, dietary therapy, physical activity, and behavioral modification. Pharmacotherapy may be an important adjunctive therapy in some individuals. Surgery is generally reserved for individuals with severe obesity or moderate obesity who have developed obesity-related complications.

It is hoped that this edition of *Gastroenterology Clinics of North America* stimulates the reader to incorporate nutritional diagnosis and intervention into their everyday clinical practice and to seek out additional education to provide appropriate services for their patients from a nutritional perspective.

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