THE CASPEN CONNECTION

NEWSLETTER OF THE CHICAGO CHAPTER OF THE AMERICAN SOCIETY OF ENTERAL AND PARENTERAL NUTRITION

A WORD FROM THE PRESIDENT

Happy Fall CASPEN Members!

Thank you for your continued interest and involvement in CASPEN! Our members drive our organization and we are proud to be one of the largest chapters of ASPEN.

If you are interested in becoming more involved, we are always looking for volunteers! A "Call for Nominations" will be sent out near the end of the year. Please feel free to nominate a colleague or yourself. It is an excellent way to network, stay up to date, and contribute to the ever growing field of nutrition support.

Our program committee has some exciting events planned for the fall. With FNCE around the corner, we are looking forward to an additional social event to allow for a more relaxed, comfortable get-together, especially after a long day at a conference. Be looking for more information soon!

It has been a pleasure serving as the CASPEN President for the past year. Looking forward to seeing new faces on the board!

Anne Coltman, MS, RD, LDN, CNSC
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CASPEN MEMBER SPOTLIGHT: DAN FRAZIER

HEY DAN! TELL US ABOUT YOUR EDUCATION AND BACKGROUND!

I grew up in Pittsburgh, PA before completing my BS in Dietetics at the University of Delaware (UD). I stuck with UD for my dietetic internship, pursuing their distance program. Setting up my own rotations was a great format for me because it allowed me the opportunity to have unique rotations in Washington DC. I did my community rotation at the USDA's Center for Nutrition Policy and Promotion and my clinical rotation at a large teaching facility with a Nutrition Support Team – both were really great experiences. I'd recommend a distance based program to anyone who wants to try something different. Post dietetic internship, I stayed and worked at the site where I completed my clinical rotation in DC prior to moving to Chicago. My background is in both adult and pediatric/NICU nutrition support.

WHAT IS YOUR CURRENT ROLE?

I currently work for a teaching facility covering the adult surgical/medical ICU and covering TPN patients. I usually have a nice eclectic mix of adult EN and PN patients with a pediatric PN patient here and there.

HOW DID YOU BECOME INTERESTED IN NUTRITION SUPPORT?

I was fortunate to have some really great mentors in Nutrition Support. When I was a dietetic intern in DC, I had experienced CNSC RDNs training me on critical care nutrition and TPN. One of my mentors was/is involved in leadership roles for ASPEN and AND's DNS practice group so I was able to become involved rather quickly post becoming a RDN.–Beyond direct mentorship, I've gotten to meet so many incredible nutrition support Dietitians over the past 3-4 years who impress and inspire me. This keeps my interest up along with reading new research and JPEN/NCP ☺

WHAT IS THE MEMBER BENEFIT YOU UTILIZE MOST WITH CASPEN AND WHAT DO YOU GAIN FROM CASPEN MEMBERSHIP?

I would say that the collaboration and networking with other nutrition support clinicians is certainly the benefit I most utilize with my CASPEN membership.

WHAT DO YOU LIKE TO DO IN YOUR FREE TIME?

In my free time, I enjoy doing gymnastics (although it isn't as easy as when I was a teen!), taking my puppy Xena to the dog beach, and enjoying all the fun things to do outdoors in the summer/fall in Chicago.

WHAT IS YOUR FAVORITE RESTAURANT IN CHICAGO?

This is a tough question because there is so much wonderful food in this city! For pizza, I love Pequod's. For brunch, I love Mortar and Pestle in Lakeview (the avocado toast is amazing). For vegan food, I love Chicago Diner (also in Lakeview).

DID YOU MISS THE SPRING CASPEN EVENT?

This past April, we were thrilled to welcome Sharon Foley, PhD, RDN to speak on the topic of "Transforming Daily Clinical Data into Improved Patient Outcomes." Briefly, Dr. Foley discussed the differences between outcomes research and "traditional" research, how to get more involved in outcomes research, steps and tools involved in process improvement, and how process improvement might be used in the clinical setting.

But why is process improvement important? During her discussion, Dr. Foley emphasized how process improvement measures and projects can assist health care professionals to provide higher quality, more efficient care to their patients at lower costs. One piece that resonated throughout Dr. Foley's presentation was her appeal for all health care professionals to get involved in process improvement. For all of the RDNs in the audience, Dr. Foley encouraged the use of of the Academy of Nutrition and Dietetics Health Informatics Infrastructure (ANDHII) to apply evidenced based guidelines to practice and measure outcomes. This software platform can integrate with any electronic medical record system to capture outcomes data using the Nutrition Care Process. For more information, please see https://www.andhii.org/info/.

FNCE IS RIGHT AROUND THE CORNER. ARE YOU GOING TO THE CASPEN HAPPY HOUR?

Join your fellow CASPEN members for an evening of networking and relaxing at Motor Row Brewery on Monday, October 23rd from 6-9 pm. If you are spending the day at the conference, Motor Row is conveniently located near McCormick Place. Please see details below.

CASPEN's FNCE Happy Hour
Motor Row Brewery

2337 S. Michigan Avenue
Chicago, IL 60616

Register by October 13th by emailing caspenboard@gmail.com.

CASPEN Members: Free
Non-CASPEN Members: $10 (Due at door)
Students: $10 (Due at door)

Registration includes two drink tickets and appetizers.

MORE INFORMATION REGARDING THE NEXT CASPEN EVENT COMING SOON. LOOK OUT FOR DETAILS IN YOUR MAILBOX AND ON THE CASPEN FACEBOOK PAGE AND KEEP DECEMBER 9TH FREE!

REVIEW OF LITERATURE: NUTRITION SUPPORT FOR CRITICALLY ILL PATIENTS WITH CANCER

Lach K, Peterson SJ. Nutrition support for critically ill patients with cancer. *Nutr Clin Pract*. 2017;32(5):578-586.

INTRODUCTION

In 2016, 1,685,210 people were diagnosed with cancer. In the same year, 595,690 people succumbed to this disease. Oncology patients are a population that is particularly vulnerable to weight loss and fat and muscle wasting, which can lead to poor treatment tolerance and increased morbidity and mortality. Weight loss and decreased appetite occur in as many as 40% of cancer patients prior to diagnosis, and 40-80% experience malnutrition at some point during treatment. Timely, appropriate intervention in patients experiencing malnutrition both prior to and during treatment is imperative, particularly in the critically ill to appropriately identify at-risk, malnourished individuals.

SCREENING + ASSESSMENT

There are six validated tools for screening and assessing nutrition status in critically ill oncology patients. Of the six tools, only NRS-2002 and NUTRIC consider illness severity. A prior study across 3 ICUs in an academic center compared the hospital's current screening tool, SGA, and NUTRIC found no uniformity amongst the ability to identify malnutrition attributed to cancer, indicating that further research is needed to determine screening and assessment methods that can identify cancer-related malnutrition.

Once a patient is identified as malnourished, the current AND and ASPEN consensus recommends assessing for reduced energy intake, weight loss, reduced body fat and/or muscle mass, fluid accumulation, and reduced hand grip strength. Further detail can be obtained from the patient's family or caregivers. Assessment is the initial step in preventing malnutrition from exacerbating critical illness and leading to infection, organ failure, increased mechanical ventilation requirements, longer lengths of stay, morbidity, and mortality.

CANCER-RELATED NUTRITION INTERVENTIONS

CACHEXIA

Cachexia arises in the setting of decreased oral intakes, hypermetabolism, and the acute stress response associated with critical illness. There are three stages of cachexia.

Pre-cachexia: weight loss ≤5% with anorexia and metabolic alteration

Nutrition intervention to prevent further weight loss is appropriate in patients with pre-cachexia. Common interventions include increased calories and protein at meals and snacks, supplement use, or enteral support, when indicated.

Cachexia: weight loss >5%, or BMI<20 and weight loss >2%, or sarcopenia and weight loss >2%

Nutrition intervention in cachexia involves management of gastrointestinal symptoms, pain, and fatigue. A volume-based enteral feeding protocol may be required to ensure sufficient calorie and protein delivery. High-protein supplements, particularly leucine, may aid in muscle protein synthesis.

Refractory cachexia: procatabolic, intractable, <3 months expected survival

Nutrition intervention in refractory cachexia should focus on patient comfort and symptom management. Nutrition support may not be indicated.

SARCOPENIA

Pre-sarcopenia, or low muscle mass, was recently found to be present in 10-70% of cancer patients, and 60-70% of ICU patients. Sarcopenia is of particular concern in the oncology population, as low muscle mass has been associated with physical disability, toxic side effects to cancer treatment, infectious and non-infectious complications, prolonged length of stay, and mortality. Sarcopenic obesity, or low muscle mass obscured by obese body habitus, is difficult to detect and frequently overlooked when assessing malnutrition.

Nutrition intervention in sarcopenia includes a combination of physical exercise and protein supplementation.

GRAFT VERSUS HOST DISEASE (GVHD)

GVHD typically occurs in the skin, liver, and GI tract, and may cause mucositis, diarrhea, nausea, vomiting, abdominal pain, dysphagia, and fatigue. GVHD is characterized by protein-losing enteropathy, malabsorption, electrolyte losses, and pancreatic insufficiency, all of which contribute to increased energy and protein requirements. Research has shown that those with GVHD are 8 times more likely to require ICU admission compared to those without GVHD.

Nutrition intervention in GVHD may involve nutrition support, as these patients are largely unable to meet their needs orally. Research has shown that enteral nutrition (EN) decreased frequency of severe GVHD in comparison to those fed by parenteral nutrition (PN) or only orally. Thus, EN should be considered first. Parenteral nutrition should be considered in GVHD patients with a BMI <18.5, >10% weight loss during treatment, inability to eat orally, or those who fail to meet 60-70% of their needs within 3 days. Patients with GVHD may require 30-50 kcal/kg/day and 1.5-2 grams protein/kg/day.

IMMUNE-MODULATING PEROPERATIVE NUTRITION SUPPORT

Critically-ill oncology patients may undergo surgery as part of their treatment. Current ASPEN guidelines support the use of 7-14 days of preoperative nutrition support in moderately to severely malnourished patients if the initiation of nutrition support would not interfere with operative treatment.

Perioperative nutrition support, if indicated, should involve enteral delivery of an immune-modulating formula containing arginine, nucleic acids, and essential fatty acids for malnourished patients

undergoing surgery on the GI tract, head, or neck. If EN support is contraindicated or unable to meet the patient's needs, PN may be considered. However, a 2011 study by Casaer, et al found increased infectious complications, time spent on mechanical ventilation, organ dysfunction, and ICU and hospital length of stay among moderately and severely malnourished patients who received PN supplementing EN on days of admission 2 through 7 compared to those who received PN supplementing EN on day 8 or after.

FEEDING TUBE PLACEMENT + THROMBOCYTOPENIA

Thrombocytopenia, or a platelet count <150,000/µL is present upon admit in 8-68% of critically ill cancer patients, and is developed in 13-44%. It is particularly common after chemotherapy due to the destruction of bone marrow cells and normal blood-forming cells. Thrombocytopenia is of nutritional concern in patients who require long-term enteral nutrition access, as they are at increased risk of bleeding during surgery. Pate, et al found no difference in complications after surgical feeding tube placement in patients with thrombocytopenia compared to those without, though these findings may be related to a higher frequency of pre-operative blood transfusions in thrombocytopenic patients.

CONCLUSION

Nutrition assessment and screening tools specific to the critically-ill cancer population are lacking. There is little research to support use of any currently-existing tools for identification of cancer-specific nutrition risk. Thus, further research on this topic is imperative.

Once malnutrition or risk of developing malnutrition is identified, interventions should be tailored to address the nutrition-specific complications of cancer and its treatment. As with any critically ill population, the clinician must consider the patient's clinical picture, prognosis, and goals of care when determining the appropriate intervention.

ARTICLE REVIEWED BY:

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Jean is currently a second-year graduate student and dietetic intern at Rush University Medical Center. She graduated from UW-Madison after majoring in Dietetics and Spanish. Her thesis work at Rush looks at the association between severity of illness and malnutrition with outcomes such as mortality and nosocomial infection in patients receiving nutrition support in the pediatric intensive care unit. She is interested in learning more about neurology, burns/wounds/trauma, and critical care. In addition to her internship work and thesis work, Jean enjoys hitting up all of the cultural food fests in Chicago and petting every single dog she runs into!