

Comment on: Clinical impact of systematic nutritional care in adults submitted to allogeneic hematopoietic stem cell transplantation

Liane Esteves Daudt

Universidade Federal do Rio Grande do Sul -
UFRGS, Porto Alegre, RS, Brazil

Allogeneic hematopoietic stem cell transplantation (alloHSCT) is an established form of treatment for many patients with severe disorders of the hematopoietic system. Although it is still associated with substantial morbidity and mortality, the results of alloHSCT have improved considerably over the last decades due to a better understanding of stem cell biology, the development of molecular techniques that improve donor and patient compatibility and supportive care measures⁽¹⁾. Transplantation is a complex and expensive procedure that should involve an interdisciplinary team with a wide range of professionals cooperating to improve the results.

In this issue, an article entitled “Clinical impact of systematic nutritional care in adults submitted to allogeneic hematopoietic stem cell transplantation” attempts to demonstrate the impact of a systematic clinical protocol of nutrition care on the outcomes of transplanted patients in a single Brazilian institution⁽²⁾. Although the authors compare the intervention with a historical group, the patients are similar in nutritional and clinical profiles and the results point to benefits in reducing the total parenteral nutrition (TPN) period by up to almost a week. The authors conclude that the implementation of a follow up protocol and nutritional therapy in adult patients submitted to alloHSCT decreased the length of parental nutrition and this may have an impact on hospitalization costs and potentially on the occurrence of medical complications.

Patients undergoing alloHSCT are at increased risk for malnutrition during the transplant period. Multiple factors, such as gastrointestinal toxicity related to radiation and chemotherapeutic agents, as well as graft-versus-host disease (GVHD) decrease absorption in addition to increasing metabolic requirements that contribute to the malnourished state. Nutritional requirements are increased due to catabolic stress, which may also be induced by cytoreductive therapy, GVHD, and blood count reconstitution. Nutritional needs in the alloHSCT population increase by as much as 150% of the estimated basal energy expenditure⁽³⁾. Poor nutritional status before hematopoietic stem cell transplantation (HSCT) has been shown to prolong hospital stay and increase patient morbidity and mortality⁽⁴⁾. Moreover, the effects of alloHSCT continue long after transplantation with nearly 50% of patients not returning to their pre-transplant weight one year after the procedure⁽⁵⁾. The use of TPN in alloHSCT has shown reductions in hospital stay by as much as 7 days, and poor oral intake after transplant also predisposes the patient to develop severe acute GVHD⁽⁶⁾.

TPN is utilized as adjunctive therapy during transplant in up to 92% of patients and has demonstrated to improve long-term survival in transplant recipients. Despite published information outlining nutrition support in these patients, there are no clear recommendations on the best time to start TPN nor the best composition of nutritional substrates and supplements^(7,8).

Also, the protocols for nutrition assessment, other nutrition support modalities such as the prophylactic use of low-microbial diets, vitamins and supplements, cultural and regional habits and the use of enteral nutrition vary in the literature and in clinical practice⁽⁹⁾.

In this scenario, systematic nutritional care tailored for regional characteristics might prevent or decrease severity of the most common debilitating complications of alloHSCT and optimize resources. Further studies are welcome to define more evidence-based approaches for nutrition care and to link them with immunology and physiology in alloHSCT science.

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Corresponding author:

Liane Esteves Daudt
Serviço de Hematologia Clínica e TMO
Hospital de Clínicas de Porto Alegre
Ramiro Barcelos 2350 9º Sul
90.035-903 Porto Alegre, RS, Brazil
ldaudt@hcpa.ufrgs.br

www.rbhh.org or www.scielo.br/rbhh

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