Cryotherapy Effect on Oral Mucositis Severity Among Recipients of Bone Marrow Transplantation: A Literature Review

Abdel-Qader Mahmoud Tayyem, RN, MSN

Oral health is an important component of individual health, and any alteration will reflect directly on quality of life (Eilers & Milloin, 2011). Therefore, different oral care protocols and strategies were established for patients with cancer to prevent and minimize oral mucositis. Oral cryotherapy is one of the recent modalities used to prevent and manage oral mucositis. The purpose of this review is to clarify the cryotherapy effect on oral mucositis severity among patients receiving myeloablative conditioning followed by BMT. A literature search was performed using six different electronic databases: CINAHL®, MEDLINE®, Nursing Ovid, PubMed, Springer, and Science Direct. Six articles were deemed relevant and included in this review. Oral mucositis increases mortality rate, length of hospital stay, opioid use, and the need for parenteral nutrition usage. It also decreases patient’s quality of life and his or her desire to complete treatment. However, oral cryotherapy significantly minimizes the incidence and severity of oral mucositis and decreases secondary oral mucositis complications. Using oral cryotherapy concurrently with a regular oral care protocol can improve its efficacy for preventing and managing oral mucositis. Additional studies should be conducted to create standard oral cryotherapy protocols.

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Key words: cryotherapy; oral cryotherapy; myeloablative; bone marrow transplantation; hematopoietic stem cell transplantation; oral mucositis; prevention

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Oral mucositis is a distressing toxic effect of cancer therapy and one of the major side effects of the myeloablative conditioning used to prepare patients for bone marrow transplantation (BMT). Oral cryotherapy is one of the recent modalities used to prevent and manage oral mucositis. The purpose of this review is to clarify the cryotherapy effect on oral mucositis severity among patients receiving myeloablative conditioning followed by BMT. A literature search was performed using six different electronic databases: CINAHL®, MEDLINE®, Nursing Ovid, PubMed, Springer, and Science Direct. Six articles were deemed relevant and included in this review. Oral mucositis increases mortality rate, length of hospital stay, opioid use, and the need for parenteral nutrition usage. It also decreases patient’s quality of life and his or her desire to complete treatment. However, oral cryotherapy significantly minimizes the incidence and severity of oral mucositis and decreases secondary oral mucositis complications. Using oral cryotherapy concurrently with a regular oral care protocol can improve its efficacy for preventing and managing oral mucositis. Additional studies should be conducted to create standard oral cryotherapy protocols.

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