Pilot Study of “Miracle Fruit” to Improve Food Palatability for Patients Receiving Chemotherapy

Marlene K. Wilken, RN, MN, PhD, and Bernadette A. Satiroff, MSN, APRN, ANPc, CHTP, RN

Taste changes in patients undergoing chemotherapy are common and can be of long duration, are associated with poor nutrition, and can reduce quality of life. A pilot study of the fruit _Synsepalum dulcificum_—known as “miracle fruit”—as a novel supportive intervention was conducted with eight patients with cancer who were being treated with chemotherapy and reporting taste changes. Miraculin, a naturally occurring protein in miracle fruit, has the unusual ability to transduce a sweet signal in an acidic environment, profoundly changing food taste profiles for a short duration, masking unpleasant tastes, and increasing the palatability of certain foods. This pilot study was designed to determine whether consumption of the Miracle Fruit™ supplement would improve chemotherapy-associated taste changes, thereby improving the taste of food and ultimately leading to better nutrition. Four of the participants were given a two-week supply of the supplement and the other four were given a two-week supply of a placebo. After two weeks, the supplement group received a two-week supply of the placebo and the placebo group received a two-week supply of the supplement. Participants recorded food and drink intake in daily food diaries and rated taste changes with each food as better, worse, or no change. All study participants reported positive taste changes with the supplement.

Marlene K. Wilken, RN, MN, PhD, is an associate professor in the School of Nursing at Creighton University in Omaha, NE, and Bernadette A. Satiroff, MSN, APRN, ANPc, CHTP, RN, was, at the time of this writing, an assistant professor in the School of Nursing at Creighton University and an adult nurse practitioner in the Hematology/Oncology department at Creighton University Medical Center. The authors take full responsibility for the content of the article. The authors did not receive honoraria for this work. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the authors, planners, independent peer reviewers, or editorial staff. Mention of specific products and opinions related to those products do not indicate or imply endorsement by the Clinical Journal of Oncology Nursing or the Oncology Nursing Society. Wilken can be reached at mwilken@creighton.edu, with copy to editor at CJONeditor@ons.org. (First submission December 2011. Revision submitted February 2012. Accepted for publication February 22, 2012.)

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