Scalp Cooling

Implementation of a program at a multisite organization

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BACKGROUND: Chemotherapy-induced alopecia is a well-known side effect of some types of cancer treatments. With U.S. Food and Drug Administration clearance of two scalp cooling machines, patients with cancer now have the opportunity to minimize this hair loss. However, multiple barriers can exist for organizations when establishing a scalp cooling program.

OBJECTIVES: This article describes the experience of a large multisite organization that implemented a machine-based scalp cooling program.

METHODS: Nursing staff led an interprofessional team that addressed components of the program. As a result, eight sites within the authors' organization simultaneously began offering scalp cooling via machine using a single unified process. This approach was then successfully replicated one year later to prepare six additional sites to launch scalp cooling for other solid tumor types beyond breast cancer.

FINDINGS: Using a structured, collaborative, and interprofessional approach to the implementation of a scalp cooling program at the authors' institution allowed for standardization of care across sites. This approach can be replicated at other healthcare institutions.

SCALP COOLING TO LIMIT CHEMOTHERAPY-INDUCED ALOPECIA is a recent addition to supportive care interventions in the United States and has mostly involved patient-managed use of cold caps (frozen caps that are worn during chemotherapy) or clinical trials of scalp cooling machines (machines attached to a cap in which coolant is circulated to maintain a cold temperature). For some time, the only option available to patients was the use of cold caps. However, following U.S. Food and Drug Administration ([FDA], 2015, 2017a) clearance of two machines—the DigniCap system in 2015 and the Paxman system in 2017—it is likely that more facilities will begin to offer this option. FDA (2017b) clearance for scalp cooling extends to patients receiving breast cancer treatment and those being treated for solid tumor malignancies. More than 3,000 scalp cooling machines are now in use in more than 50 countries worldwide (Digni-Cap, n.d.; Paxman, n.d.).

Infusion centers providing chemotherapy treatment may not have established scalp cooling programs. Barriers to implementation include clinician practice patterns, patient education, reimbursement, and scheduling constraints. Best practices to guide organizations in implementing scalp cooling may still be in development. The purpose of this article is to discuss the process and strategies used during a two-year journey to launch a multisite machine-based scalp cooling program at Memorial Sloan Kettering Cancer Center, a National Cancer Institute–designated cancer center in New York, New York.

Overview

Many oncology clinicians are unfamiliar with efficacy, safety, and tolerability data on scalp cooling because of myths related to scalp cooling within the profession, as well as the recency of the body of research and FDA clearance in the United States (Rugo, Klein, et al., 2017). The incorporation of scalp cooling into patient care should be based on the evidence that underpins this supportive care intervention.

Efficacy

Efficacy data on scalp cooling were first summarized in a systematic review by Grevelman and Breed (2005). Since then, four additional systematic reviews have been published, reviewing data from 1973–2015 that concern scalp cooling efficacy, safety, and tolerability (Kadakia, Rozell, Butala, & Loprinzi, 2014; Ross & Fischer-Cartlidge, 2017; Rugo & Melisko, 2011; Shin, Jo, Kim, Kwon, & Myung, 2015). These reviews report rates of successful hair preservation efforts, which range from 10%–100%, with most at about 50%. Successful hair preservation is defined in various ways, but it typically constitutes either