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Editorial

ASTRO Editorial: ONS Guidelines for Cancer Treatment-Related Radiodermatitis

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To the Editor:—The Oncology Nursing Society (ONS) convened a panel (which included 2 representatives from the American Society for Radiation Oncology) to review the literature based on a systematic review of the evidence and generate evidence-based recommendations. The reader is referred to the full-text guideline, "ONS Guidelines for Cancer Treatment-Related Radiodermatitis," for the complete list of recommendations.[1]

After reading the ONS guideline,[1] some physicians might have thoughts like "I recommend calendula to all my patients, why don't they recommend calendula?" or "I don't want my patients applying steroids during treatment" or "I was taught that no patient should use antiperspirants during breast radiation." These thoughts reflect several common biases in skin care during radiation therapy. The purpose of this guideline is to provide evidence-based recommendations that might contradict older teaching but are supported by the literature. The guideline was developed by the ONS after a systematic review of the available literature, using a methodology that attempted to avoid or eliminate biases in the final recommendations. That review found many flaws in the studies performed that limited the strength of the recommendations, and the focus of most of the studies on patients with breast cancer may lead to concerns about extrapolating their findings to other disease sites. The final guideline is, however, largely free from bias and evidence based and also addresses issues of equity, cost, and product availability. Given the quality of available studies, the guideline only provided 1 strong recommendation, whereas 5 recommendations were conditional with low or very low certainty of evidence, and 2 other recommendations could not be made because of knowledge gaps. Readers who are looking for firm guidance in their clinical practice may feel disappointed.

Given the lack of strength of the recommendations, it is clear that additional research needs to be done to provide higher quality data. Some of these limitations, like small sample size, are frequently seen in symptom management trials. There are other methodological challenges that are unique to trials evaluating skin toxicity. One is the scoring system used for radiation dermatitis. Although it is ideal for different clinical trials to use a common scoring system so results can be easily compared, 2 scoring systems that are commonly used are the Radiation Therapy Oncology Group and the National Cancer Institute Common Toxicity Criteria for Adverse Events.[2,3] Both of these systems combined faint erythema and dry desquamation as grade 1 and brisk erythema and moist desquamation as grade 2. Both physician and patient can easily agree that there is a clinical difference between faint erythema and dry desquamation and brisk erythema and moist desquamation. However, the scoring can be subjective and vary among health care providers and patients. Any scoring system that is used to evaluate the efficacy of an intervention should be more granular to detect these clinically important differences. There have been modifications of the Radiation Therapy Oncology Group score that have increased the number of

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categories,[4] but this system has not been widely adopted. Another system, the Radiation-Induced Skin Reaction Assessment,[5] has also been developed and includes symptoms that patients experience, like pain and itching, but again, few studies have used this tool for evaluating an intervention. Another challenge in evaluating radiation dermatitis is the appropriate time to assess skin toxicity. As the use of hypofractionated regimens increases, especially in breast cancer, the peak of the skin reaction is often seen after the treatment course is complete when the patient is not available for daily evaluation, thereby making scoring of skin response more difficult or left to the patient to report. One of the final methodological issues in these trials is the choice of appropriate controls in the randomized trials. A trial of calendula was not included in the analysis because the control was trolamine, which as an intervention itself could have increased skin reaction in patients and therefore was not an appropriate control.[6] An option that some have recommended is to have the patient be their own control by applying the intervention agent to only part of the treatment field and using standard of care in the rest of the treatment field.[7] Although this seems like a logical and simple solution, dose is usually not homogeneous across the skin surface so even this can be challenging. Lastly, much of this research is done in patients with breast cancer because radiation dermatitis is a common side effect for these patients, but it does raise the question of the generalizability of the recommendations to other patients, like those treated for anal or vulvar cancers.

Fortunately, technology has saved the day because high energy linear accelerators have achieved better skin sparing in their dose deposition, treatment planning has become more conformal, and target volumes have become smaller by incorporating image guidance during treatment, all of which decreases dose to skin, reducing skin reaction and treatment morbidity. We should strive to minimize factors related to patient set-up that can increase skin reaction, for example, avoidance of skin folds and prone treatment position for patients with breast cancer with pendulous breasts. Despite these efforts and improvements, radiation dermatitis still occurs and causes patients distress and discomfort, so continued research is needed.

In our clinical practice, we may have management strategies for radiation dermatitis that are not supported by the literature. We must be willing to confront our biases and acknowledge the limitations of our knowledge and understanding when evaluating this research. When we were taught that patients should not use deodorants or antiperspirants and the results of trials show no harm in using them, then we must be willing to change our thinking and our recommendations to our patients. Similarly, when a product we have used and believe in shows no definite benefit, we should present the options for skin care to the patient and admit the gaps in our knowledge. It is important to provide education about expected skin reaction to patients. It is also important to tell patients that we have found no single best method to prevent radiation dermatitis and that topical agents like steroids may help and then allow the patient to make a choice about what to use. However, patients should be reminded that the cost of any product they choose to use should not be excessive. The physician may also express a preference, but it should be clear when that is a preference and not necessarily supported by randomized trials. We also need to be open to evaluate new agents that may be more effective in preventing radiation dermatitis. To advance our knowledge and provide high-quality evidence in the management of radiation dermatitis, well-designed clinical trials that address the inadequacies of previous studies are absolutely needed.

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