

Biafene: A Treatment for Radiodermatitis

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Skin reactions over the years have become less severe for many of the patients who undergo radiation therapy. With the development of linear accelerators, which are able to deliver high-energy photons, the majority of the dose spares the skin. However, there are patients who still receive a larger skin dose. Patients who have tumors which are relatively close to the skin and who have radiation delivered to areas of skin folds still experience severe and sometimes painful skin reactions. Examples are treatment of the chest wall, head and neck areas, facial areas, and groin.

There are many skin products that are used to apply to the skin reaction in order to soothe the skin, prevent severe dryness and itching and to promote healing. There has thus far not been any product that has been shown to be superior, when looked at in clinical trials. There are some skin products that have been developed specifically for radiation skin reactions. Some of these are aloe-based, and some are petroleum-based. Skin reactions are often treated with a variety of products, which is often confusing for the patient. It would be advantageous to use a product that would provide the benefits mentioned above, and would be used through all the stages of skin reaction.

Biafene^R is a skin product, a radiodermatitis emulsion, which has shown some benefit when used for radiation dermatitis, and has had over 25 years of experience in treating the skin reactions. The mechanism of action includes the early recruitment of macrophages and the stimulation of granulation tissue. The increased number of macrophages help to remove necrotic tissue, and tissue debris. Macrophages also stimulate fibroblast proliferation, which promotes epithelial cell multiplication and growth. Biafene^R also provides moisture deep into the dermis.

A study was performed to assess the efficacy of Biafene^R cream in preventing grade II acute skin reactions in patients undergoing concomitant

adjuvant chemotherapy and radiation therapy to the breast. Sixty patients participated in the study, 83% of which developed grade II, and 2% developed grade III reactions. No patients required treatment delays. Grade II reactions are moderate to brisk erythema, and patchy moist desquamation -less than 1.5cm., mostly confined to skin folds and creases. Grade III reactions are confluent moist desquamation at least 1.5cm. diameter and not confined to skin folds, with pitting edema. This study did not compare Biafene^R with another product. However, many patients who receive radiation to the breast have grade II reactions without the addition of chemotherapy.

A recent Radiation Therapy Oncology Group (RTOG) study compared the prophylactic use of Biafene^R against institutional preference with adjuvant breast radiotherapy. The initial results suggested no significant difference between the two treatments. However, there was an increased benefit for those patients who used Biafene^R and continued to smoke, and for those patients with larger breasts and larger field sizes.

RTOG 99-13 is a phase II comparison of Biafene^R to institutional preference for radiation induced skin toxicity in patients undergoing radiation therapy for advanced head and neck cancer. Fox Chase Cancer Center is recruiting patients for this study. Skin toxicity is painful, and may affect the patient's compliance with treatment and quality of life. Patients often need systemic pain medication to manage the pain of skin reactions. Head and neck patients get a significant skin response, many with grade II and III reactions. A quality of life assessment is part of this study.

Patients who are candidates for radiation therapy still fear "burns". Often they have acquaintances that have had severe reactions in the past. The ability to reassure patients who will not develop significant skin reactions and to offer proven therapies to those who will, is an important part of nursing care.

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