MANAGEMENT OF RADIATION DERMATITIS

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**TRIAL SUMMARY: Reducing radiation skin reactions with InterDryAG**

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Patients receiving radiation to the breast can suffer from painful moist desquamation of the axilla and the inframammary fold, making it difficult to wear undergarments and perform daily activities. InterDry AG is a textile dressing with an antimicrobial complex that lifts away excess moisture and reduces friction, itching and burning. Despite having properties that could prove highly beneficial, a literature review provided no evidence on the use of InterDry Ag for radiation skin reactions. This preliminary study was therefore conducted to evaluate the potential ability of InterDry Ag to relieve discomfort from radiation skin reactions of the breast. Twenty eligible participants consented to wear the InterDry AG as advised. Effectiveness was evaluated every 5 days through a skin assessment and a participant questionnaire. A personalized skin care regime was developed during these appointments with feedback from the patient.

An unexpected positive outcome of this study was the emotional support patients received during their skin assessments. Patient engagement provided a sense of empowerment as the patient became a partner in their care. A therapeutic relationship developed between the nurse and the patient through the research process. Patients shared their personal experiences in terms of their diagnosis...
and its unique impact on their lives. A significant decrease in the level of distress with these patients was noted. Patient engagement through research revealed a need for future studies to examine the benefits of increased nursing support while maintaining skin integrity with the use of InterDry Ag.

**COMMENTARY:** Radiation dermatitis is one of the most common side effects of radiation therapy. It can cause pain, discomfort, and difficulties with activities of daily living, and can negatively impact quality of life for patients. Radiation dermatitis can begin as soon as 1 week post initial treatment and can continue to worsen for several weeks following the completion of radiation therapy. If left untreated, it can result in severe complications such as secondary bacterial or fungal infections. In particular, radiation therapy to the breast region can result in complications such as moist desquamation of the axilla and inframammary folds. Recovery can often be challenging due to the anatomic nature of the breast region, with excess skin folds, friction related to joint movements, excess moisture due to sweat glands, and difficulty with securing dressings.

Recognizing the clinical challenges in managing radiation dermatitis to the breast region, this qualitative descriptive design study examined the use of the textile dressing, InterDry Ag, with 20 women receiving radiation to the breast. Previous research on the InterDry Ag dressing is based on broad patient populations and does not look specifically at the radiation therapy population. However it has demonstrated potential benefits when using InterDry Ag dressing, such as: ability to pull excess moisture from the skin fold, antimicrobial protection from the silver component, and the reduction of further skin breakdown and tears through friction, which in turn reduces pain and pruritus.

Although the sample size is small, the qualitative descriptive design of the study provides rich data regarding the women’s perspectives of the benefits and concerns with use of the InterDry Ag dressing. Although there was no control group for comparison, the weekly skin assessments revealed an improvement in itching and burning of the skin, comfort with using the dressing and lower use report of medications such as silver sulfadiazine. The participant responses from the survey and telephone followup reported immediate relief, decreased pain, soothing properties, decreased irritation, and perceptions of feeling uncomfortable without the dressing.

With the current fiscally constrained healthcare environment, it is important to determine cost-benefit and feasibility of new products. Although a formal cost-benefit analysis was not done, the researcher suggests that the initial cost of the dressing is counteracted by the potential cost-saving benefits in the long term due to decreased use of silver sulfadiazine, potential faster healing of radiation dermatitis, fewer complications associated with dermatitis, and positive effects on patient’s quality of life.

An unintended positive consequence of participation in the study was that women received additional nursing support, including a telephone followup call, which is not currently a part of standard care. The women indicated that this additional nursing support created an opportunity for them to ask questions and be treated as partners with the healthcare team in care planning.

**IN BRIEF**

**Already known:**
- Radiation dermatitis is a potentially distressing and uncomfortable side effect of radiation therapy treatment that can result in complications such as moist desquamation of the axilla and inframammary folds.
- InterDry Ag is a textile dressing that has shown benefit in broad patient populations in skin and wound healing.

**What this study shows:**
- Although it involved a small sample size, the results demonstrate positive effects in level of erythema, pain, pruritus and comfort with use of InterDry Ag.
- As an unintended consequence, the additional nursing support empowered patients.

**Next steps:**
- Undertake cost-benefit analysis of InterDry Ag in the radiation therapy population.
- Examine the impact of participation in research on patient engagement.

**References:**