

RADIATION INDUCED SKIN REACTIONS

Is Strata XRT gel more effective in the prevention and management of Radiation induced skin reactions (RISR) than standard care?

Caroline Ford, Clinical Nurse Specialist
Mid North Coast Cancer Institute (MNCCI) & Mid North Coast LHD, Coffs Harbour NSW



OBJECTIVE

Acute radiation-induced skin reactions (RISR) are an inevitable consequence of Radiation Therapy (RT) for many cancer patients. RISR are a source of significant pain and psychological distress. The compromised skin integrity associated with RISR increases the risk of infection, resulting in potential treatment breaks which can compromise patient outcomes. The objective of the product trial was to assess whether Strata XRT gel, was more effective than Sorbolene in delaying and managing RISR. Strata XRT gel is a silicone based gel showing evidence in the reduction of the onset, severity, and duration of RISR. A product trial was undertaken at MNCCI under instruction of the product committee for the MNCLHD.

BACKGROUND

Radiotherapy damages basal cells, and RISR occur when the basal layer is unable to produce enough new cells to compensate for the loss of damaged cells at the skin's surface. MNCCI uses the CTCAE grading scale for assessment of RISR.

CTCAE grading V3.0 - Acute Skin Radiotherapy Toxicity Scores (EVIQ, October 2016).

Grade	Description
0	None
1	Faint erythema or dry desquamation
2	Moderate to brisk erythema, patchy moist desquamation; mostly confined to skin folds and creases; moderate oedema
3	Moist desquamation other than skin folds and creases, bleeding induced by minor trauma or abrasion
4	Skin necrosis or full thickness dermis ulceration; spontaneous bleeding from involved site

There are no nationally recognised guidelines for the management of RISR. MNCCI follows EVIQ procedures to use a moisturiser recommended by the treating team in the way of Sorbolene cream applied daily to the treatment field. Once the RISR progresses to grade 2, moist wound healing principles are initiated daily by RT nurses, commonly with after hours support from community nurses for up to three weeks post completion of RT.

CANDIDATE GROUPS

- High risk of RISR
- In consultation with key Stakeholders
- 43 in total over 4 months
 - Breast
 - Chest wall
 - Head & neck
 - Perianal
 - Miscellaneous - dose and field dependent

RESULTS

- Comparison to similar cohort of patients using standard care from MOSAIQ eMR
- Delay in onset of RISR average 7-10 days
- No significant improvement in perianal group but only 3 patients assessed
- Moist wound healing principles for Grade 2+ RISR for comfort needed
- If RISR grade >1-2 results showed a faster time to return to 0
- Cost analysis showed a saving for the MNCCI budget in the areas of nursing hours performing wound care and supply of materials to patients
- Reduction in the number of community nurse referrals both during and post radiotherapy

PRODUCT TRIAL PROCESS

- Key Stakeholders consulted
 - Multidisciplinary
 - Radiation Therapy nurses
 - Radiation Oncologists
 - Radiation Therapists
- Product committee requirements
- Education from Stratpharma representative
- Procedure documents
- Flowchart of process
- Patient information brochure provided at planning phase
- Data collection tool created
 - MRN/AUPI
 - Treatment field
 - Patient consent
 - Radiation dose
 - Duration
 - CTCAE grading
 - Photograph of field
 - Date of RISR patient survey
 - Additional issues
- Staff in service, support and education pre, during and post.

CHALLENGES AND PERSPECTIVES

- PATIENT
 - Felt protected
 - Easy to apply in the early stages of treatment
 - Gel difficult to apply when RISR >grade 1-2 due to pain
 - Gel 'sticky' and hard to apply when skin is tender
 - Gel does not add moisture to skin, so skin is quite dry and feels 'tight'

CHALLENGES AND PERSPECTIVES

- STAFF
 - Ease of use for staff and patients
 - Noticeable delay in onset of RISR with most groups
 - RISR \neq > 2 moist wound healing principles used for 3-4 days to add moisture and lift any crust, then patients were able to switch back to Strata XRT gel
 - Gel did not appear to have an impact on the perianal treatment field - difficult to apply due to the nature of the area (moist, repeated wiping for toileting, patients found moist wound healing better for pain relief)
- Data collection difficult to due to short timespan, and treatment field/dose not identical within patient groups

RESULTS

Results were collated and a comparison made by Bradhurst and Donnelly (Southern Cross University, 2017) to a similar cohort of patients from eMR Mosaik who used standard care. Results were inconclusive, largely due to the data collected during the product trial, cohort number, and inconsistencies in areas such as patient compliance, objectivity of grading an RISR, and dose and field discrepancies. However, staff and patient feedback, and the cost analysis was presented to the MNCLHD product committee, who have endorsed the product for use within MNCCI Coffs Harbour. Patients deemed 'high risk' of skin reaction are now discussed during the MNCCI weekly Radiation MDT, and offered the gel to use.