MANAGING SKIN REACTIONS IN RADIOTHERAPY PATIENTS

A PILOT STUDY

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Background

A common side effect of radiotherapy is a skin reaction in which the skin becomes red and itchy, similar to sunburn.
Choice of dressing to treat a skin reaction is limited and there is very little published data on radiotherapy skin care. In anal and rectal cancer patients the problem is further compounded as the wound is in a particularly hard to dress area. Historically only aqueous cream has been offered to prevent a reaction occurring, or once erythema has developed, topical relief using Geliperm® pads in combination with topical hydrocortisone is offered. In the Northern Centre for Cancer Care hydrogels have previously been used. Some creams that had been used with some anecdotal effect are no longer available. Therefore there is a significant product gap for managing skin reactions in patients receiving treatment, especially in hard to dress areas. It had been observed in the nurse-led clinic that Flaminal® offered relief to radiotherapy patients with a skin reaction.

Flaminal®

Flaminal® (Flen Health UK) is an antimicrobial enzyme alginogel. Enzyme alginogels are a new class of wound care product; they combine the benefits of hydrogels and alginates with an antimicrobial to create and maintain a moist wound healing environment.

Flaminal®'s key features are that it:

- Maintains a moist wound environment
- Continuously debrides the wound
- Restores bacterial balance
- Is non-cytotoxic
- Is hypo-allergenic
- Is easy to apply even in the most difficult areas.

Aim

To determine whether it is beneficial to apply Flaminal® at the start of radiotherapy treatment prior to a skin reaction developing or to apply Flaminal® at the first signs of the skin becoming red as a result of the radiotherapy.

Method

Patients receiving 25/30 fractions of radiotherapy over 5/6 weeks for rectal and anal cancers were randomised to one of two groups, with 10 patients in each group. The first 10 patients were randomised to Group A and the second 10 to Group B.
Group A were to apply Flaminal® to the treatment area twice a day, starting on the first day of treatment and, if applying before a radiotherapy session, to wash off Flaminal® before radiotherapy. Group B were to apply Flaminal® only once a skin reaction had developed. Both groups of patients were reviewed weekly in a nurse led clinic. Data collection forms were standardised (see Figure 1).

Results

No benefit was noted in patients who applied Flaminal® prior to a reaction occurring (Group A). Two patients in Group A experienced a skin reaction; the skin became red, inflamed and partially broke down. In those patients that had a reaction prior to the application of Flaminal® (Group B), there was marked improvement in the condition of the skin following application of Flaminal®, patients reported experiencing a cooling of the area and a relief from the burning sensation. These patients experienced a decrease in the size of the area of moist desquamation and a reduction in redness. In some cases, it reduced their skin reaction score, therefore, the skin improved whilst still on treatment.

Method

In this study, there was a marked improvement in skin condition in patients who experienced a skin reaction following radiotherapy.
There was no additional benefit noted in applying Flaminal® prior to the development of a skin reaction. The skin reaction in two patients in Group A following the radiotherapy treatment may be related to the radiotherapy treatment or it is possible that the patients had not fully removed Flaminal® from the treatment area prior to radiotherapy treatment. Therefore, these results demonstrate that Flaminal® use may benefit patients with a radiotherapy induced skin reaction following radiotherapy, but that applying Flaminal® prior to the development of a skin reaction confers no benefit.

Based on these results, the nurse-led clinic will continue to use Flaminal® to treat skin reactions resulting from radiotherapy as the evidence supports it being of benefit. A larger audit will be performed using a larger sample size, which will take into account the tumour site, patient age and adjuvant chemotherapy. This should help further our knowledge on when Flaminal® treatment should commence and if there are differences between patient groups.

Conclusion

- Application of Flaminal® to a radiotherapy site prior to radiotherapy is unlikely to prevent a skin reaction developing
- It appears that Flaminal® applied post treatment does offer a benefit to patients who have a skin reaction resulting from radiotherapy
- A larger study is necessary to confirm these results

Figure 1. Flaminal® data collection (example form)

Addressograph	Week of treatment	Number of fractions	Flaminal® in use?	Skin reaction grade	Area size of desquamation	Distress score	Pain score	Comments
	1							
	2							
	3							
	4							
	5							
	6							

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