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Soft silicone film prevents radiation-induced moist desquamation

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Aim: We previously showed that soft silicone dressings used in a management setting decreased the severity of radiation-induced acute skin reactions in breast cancer patients by 40% but did not affect moist desquamation rates. Here we investigated whether the prophylactic use of a transparent soft silicone film would decrease moist desquamation rates.

Method: Datasets of 78 breast cancer patients receiving radiation therapy, recruited between October 2012 and April 2013 in one department, were analyzed. Patient acted as their own controls to circumvent potentially confounding treatment and patient related factors. Lateral and medial halves of the skin areas to be irradiated were randomized to silicone film or aqueous cream; the film was applied by the radiation therapist and stayed in place for 1 or 2 weeks, aqueous cream was applied by the patient twice a day. Skin dose was determined by thermo luminescent dosimeters. Skin reaction severity was assessed using RISRAS and RTOG scales.

Results/Discussion: RISRAS analysis showed that the silicone film reduced overall skin reaction severity by 92% ($p<0.0001$). All patients developed some form of reaction in cream-treated skin which progressed to moist desquamation in 26% of patients (RTOG grades I: 28%; IIA: 46%; IIB: 18%; III: 8%). Only 44% of patients had a skin reaction under the film, which did not progress to moist desquamation in any of the patients (RTOG grades I: 36%; IIA: 8%).

Conclusion: Soft silicone film completely prevented moist desquamation from developing and reduced skin reaction severity by 92% when used prophylactically in this cohort.

Biography

Herst has been employed by the University of Otago since 2001 and divides her time between undergraduate and postgraduate teaching, preclinical and clinical research. She has been a committee member of the Health and Disability Ethics Committee (HDEC) since 2012. Herst has been a visiting scientist at the Malaghan Institute since completion of her PhD in 2006. There, she conducts research into drug resistance of highly aggressive cancer cells in collaboration with Professor Mike Berridge. Her most recent research, in close collaboration with Dr McConnell at the University of Victoria, Wellington. She has conducted randomized controlled clinical trials in NZ hospitals that investigate management of radiation-induced side effects since 2008. To date 5 trials (3 skin trials, one cystitis trial and one oral mucositis trial) have been completed, analysed and published

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