Case Study
Application of R1 Gel and R2 Lotion in the Treatment of Radiation Dermatitis
Pilot Experiences of the Oncology Clinic, Faculty Hospital Ostrava

Purpose:
To evaluate a 2-step system of skincare products for patients undergoing radiotherapy in the treatment of radiation dermatitis.

Introduction:
Radiation dermatitis is caused by vasodilatation of small blood vessels in skin at the treated volume which clinically appears like a hyperaemia of the affected area. Hyperaemia leads to redness of skin and a subjective feeling of burns – this reaction is typical at the end of the third week of the fractional radiotherapy, and at accelerated schemes can appear a little sooner. The reaction culminates in the following weeks (4th-6th), when more sensitive patients can record even a distortion of skin cover, especially at the area of skin folds. This damage typically heals approximately 2-3 weeks after the end of radiotherapy.

Method/Materials:
In 2009-2010 our clinic conducted a test of 2 products used in a two-phase treatment for symptomatic therapy of acute radiation dermatitis. R1 gel was applied immediately after treatment, while R2 lotion was used during the day according to the subjective feelings of patients. In total, both products were used by 26 patients. Application was uniform: At the beginning of the first symptoms of dermatitis (Erythema), R1 gel was always applied on the affected area immediately after the radiotherapy, left there for about 20 minutes and then wiped off. R2 lotion was applied on the same area after 2-4 hours. The following applications of R2 lotion were individual and their frequency depended on the subjective feelings of each patient.

Of the total number of 26 patients, 15 patients were treated in the head and neck area, 8 patients in the thorax area during radiotherapy of breast cancer, and 3 patients in the pelvic area. Average duration of R1 and R2 application was 4 weeks. For a majority of cases, R2 was applied 2-3 times a day.

Results:
Twenty-five of 26 patients (96%) reported subjective feelings of relief, reduction of pain, burning or itching. The symptomatic effects of R1 and R2 cannot be questioned. Objective findings in the treated area seemed to be at a lower limit of normal post-radiation reaction. It also seems possible to observe a certain regenerative effect of R2; however due to the design of the evaluation, this viewpoint can be considered subjective only.

Conclusion:
From the viewpoint of the patient, we classify R1 and R2 very high: The products were easy to use. Consistency of R1 is very light, and the product can be wiped off from the patient’s skin easily without pain or other negative feelings even at 2nd degree dermatitis (when skin cover is distorted). R2 lotion is easily absorbed and does not create any hermetical layer which would inhibit access of air.

We recommend the use of this 2-step system for routine use in a radiotherapy practice.