

Assessment of wearing time and dermato-physiological parameters over 14 days on volunteers with film dressing Suprasorb® F

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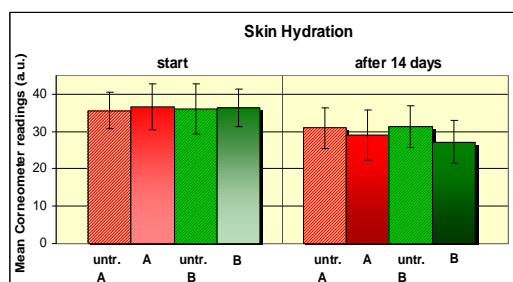
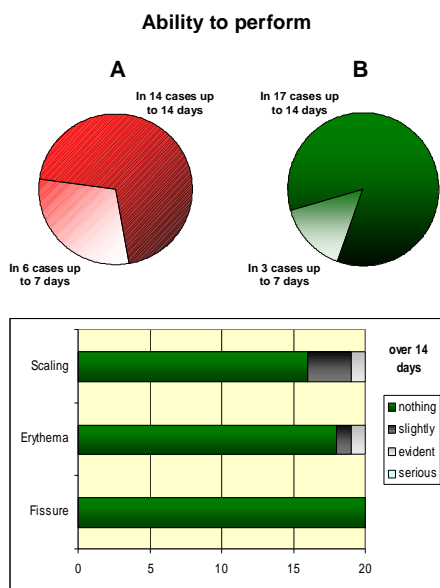
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Introduction:

Film dressings of the Modern Wound Management are very often used for treating acute and chronic wounds up to seven days (1, 2) – for vaccination (e.g. pocks) up to 14 days over the location of the injection (3, 4). The moisture milieu of the wound is essential for the fast and careful healing of wounds. The development of maceration on healthy surrounding skin of the wound is possible by a long wearing time of the dressing compared with a very moisture wound milieu (5). The possible risk of maceration after the application of film dressings with a wearing time of 7 up to 14 days was investigated by measurement of the change of dermato-physiological parameters with non-invasive methods on healthy skin of volunteers as test model.

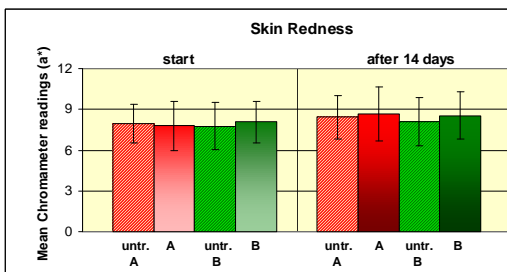
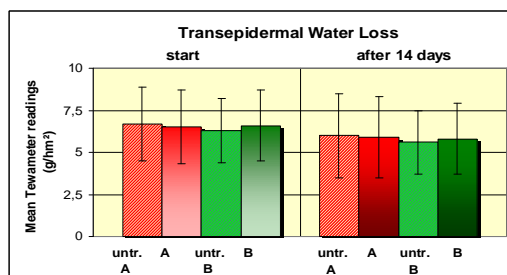
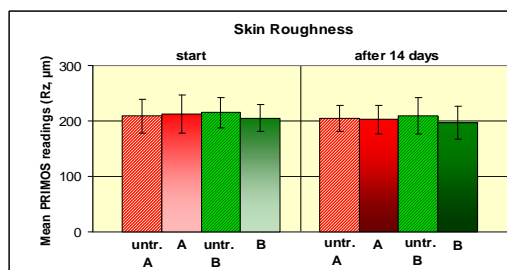
Material and Methods

On both forearms of 20 volunteers (age: 32 – 69) four different test areas of Suprasorb® F film wound dressing (A) and Suprasorb® F film dressing off the role (B) were compared with the neighbouring untreated area on day 0, 7 and 14. Beside the clinical score (adhesiveness and wearing properties of the dressing, skin condition) and visual assessment of the local skin tolerability (erythema, scaling, fissure) following dermato-physiological parameters were measured by non-invasive methods: moisture (Corneometer CM 825), redness (Chromameter CR 300), transepidermal water loss (TEWL, Tewameter TM 210), roughness with optical 3D-in-vivo-skin-measurement-system PRIMOS (Phaseshift Rapid In-vivo Measurement of Skin). The positive approval of the Freiburger Ethic Committee (feki Code: 04/1518) and the insurance for patients exist.



Results:

Both film dressings showed excellent skin tolerability in this test. The investigated dermato-physiological parameters (moisturisation, redness, TEWL, roughness) were not negatively influenced during the wearing period of 14 days. No maceration or other skin irritations were observed. Under extreme environment conditions (temperatures of the day up to 30 °C) the adhesiveness of at least 7 days could be demonstrated – even most of the volunteers up to 14 days.



Discussion:

After a longer wearing of semi-occlusive products of the Modern Wound Management macerations or skin irritations of the surrounding skin of wounds were often observed (1, 5). The reasons may be multiple – maceration of the skin caused by insufficient moisture vapor transmission rate (MVTR) of the dressing, to strong pasting of the film dressing with the skin or over-exsudated, aggressive wound exsudate on healthy surrounding skin of the wound. Therefore, protection of the surrounding skin as well as sufficient high MVTR values of the dressings are necessary. The „breathing“ of the surrounding skin and of the wound through the dressing results in a balanced moisturizing milieu under the dressing. The use of both film dressings in their certified indications offers a wearing time of at least 7 days for wounds or vaccinations due their excellent skin tolerability.

References

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