Topics 8. Support therapy in Oncological Radiotherapy

Evaluation of medicated silk for topical use in acute local reactions in cancer patients undergoing radiotherapy

Valutazione dell' efficacia della seta medicata per uso topico nelle reazioni locali acute in pazienti oncologici sottoposti a radioterapia

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Aim: The collateral effects of radiotherapy on the skin are frequent and may cause the treatment to be suspended. There is no consolidated strategy for preventing or treating cutaneous toxicity. Silk fibroin is a protein very similar to the stratum corneum of the epidermis and knitted silk is a breathing garment able to absorb humidity.

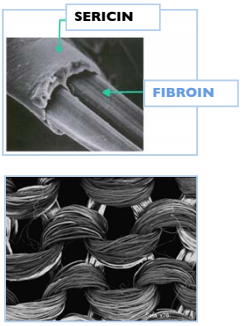
DERMASILK is a therapeutic garment

made of pure silk fibroin protected with a permanent antimicrobial

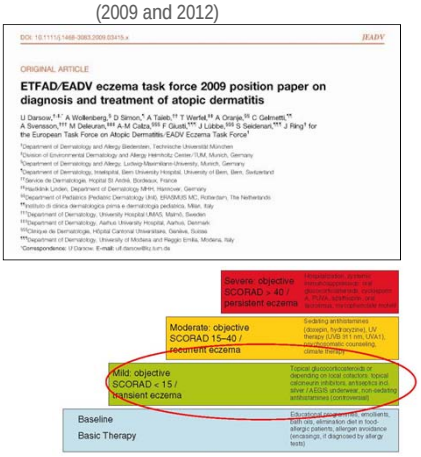
- **protective action**
- **cutaneous homeostasis**
- **softness** (long smooth yarn) → **non irritating**
- **high breathability** (knitted construction)
- **hygroscopic capacity** (absorbs moisture while remaining dry)
- **heat-regulating function**
- **promotes collagen synthesis**

} **Thermal and hydrolipid equilibrium**

DermaSilk



DermaSilk clothing is recommended in the Guidelines for the management of Atopic Dermatitis of the European Academy of Dermatology and Venereology (2009 and 2012)

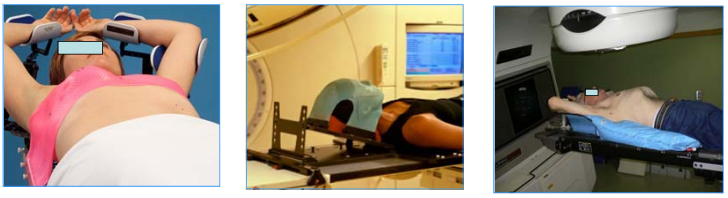


This study evaluates the efficiency in the prevention and treatment of acute cutaneous toxicity of DermaSilk medicated clothing, made of silk fibroin protected with specific antimicrobial substances.

Materials and Methods: Our Institute carried out an evaluation of the efficacy of DermaSilk garments on acute reactions in hypofractionated radiation therapy and/or associated with chemotherapy on the areas of the head and neck, thorax and abdomen/pelvis. All patients were given a supply of therapeutic clothing for the area treated, to be worn from the start and for the entire duration of the radiation treatment.

Primary objective: degree and duration of acute cutaneous toxicity.

Secondary objective: evaluation of compliance and aesthetic result.



Toxicity evaluated according to EORTC/RTOG (examination and photo before the start, during RT (1/wk) and up to 3 months after the end.

Ca larynx, combined RT/CT

Pre-RT

6th wk RT

Ca breast, hypofractionated RT (16 fr)

Pre-RT

3rd wk RT

CONFORMAL RT OR WITH MODULATED INTENSITY

Results: 12 patients, 9 suitable for evaluation
5 carcinoma of the breast
2 carcinoma of the head-neck area
1 secondary localisation in the lymph nodes of the armpit
1 carcinoma of the anus
Critical points: folds of the skin and areas subject to rubbing treated with doses ≥ 50 Gy or biologically equivalent ± CT

The compliance was good and the acute toxicity very limited or delayed, with the possibility of completing the therapy within the scheduled time. There were neither superinfections nor any need for analgesic therapy.

Conclusions: The preliminary data confirm that DermaSilk clothing can help protect against acute effects on the skin, reducing the extent of the inflammatory process, avoiding infections and accelerating tissue regeneration. A significant effect was observed on the quality of life of the patients, who can complete the treatment within the scheduled time.