

TREATMENT WITH A COLLAGEN DRESSING OF TWO PATIENTS WITH STAGNATING SKIN LESIONS CAUSED BY IRRADIATION THERAPY

L. Prouvost

Centre Hospitalier Service Consultation Externes (Ostomy and wound healing) TOURCOING, France - lprouvost@ch-tourcoing.fr

Introduction :

Stagnating ulcers caused by irradiation therapy, especially when combined with late irradiation damage or necrosis of the skin, are often difficult to treat. These ulcers may be characterized a by biochemical imbalance, the wound bed contains slough and they remain in the inflammatory phase for months or even years.¹⁻³

A fragile and damaged surrounding skin, the presence of fibrosis, atrophy or induration complicates the situation. Wound bed preparation, stimulation of granulation and epithelialization remains a challenge in the treatment of these patients.

Materials and methods :

The evaluated dressing is a *collagen dressing with a porous structure. The dressing has been shown to start up the stagnating wound healing process. It is used as a primary dressing and was covered with an absorbent pad as a secondary dressing. Two patients with ulcers and skin damage caused by irradiation therapy which had remained stagnant for over five years, were included in the case series. Dressing changes were performed every 24 hours.

Results :

The collagen dressing was well tolerated and easy to apply.

In one patient the ulcer had healed and in the second patient granulation had started and the skin condition had improved.

Conclusion:

The collagen dressing used in these two cases was shown to:

- Absorb exudate containing pro-inflammatory cells
- Prepare the wound bed
- Restore biochemical balance, starting up and stimulating the healing process

References :

1. Mast, B. A.; Schulz, G.S.: Interactions of cytokines, growth factors and proteases in acute and chronic wounds. Wound Rep Reg 1996; 4: 411-420
2. Metzmacher I, Ruth P, Abel M, Friess W, In vitro binding of matrix metalloproteinase-2 (MMP-2), MMP-9, and bacterial collagenase on collagenous wound dressings. Wound Rep Reg (2007) 15 549-555
3. Wiegand C, Schönfelder U, Abel M, Ruth P, Kaatz M, Hipler UC. Protease and pro-inflammatory cytokine concentrations are elevated in chronic compared to acute wounds and can be modulated by collagen type I in vitro. Arch Dermatol Res. 2009 Dec 22. [Epub ahead of print]

Case 1:



Fig. 1:
Irradiation ulcer. Situation at day 0,

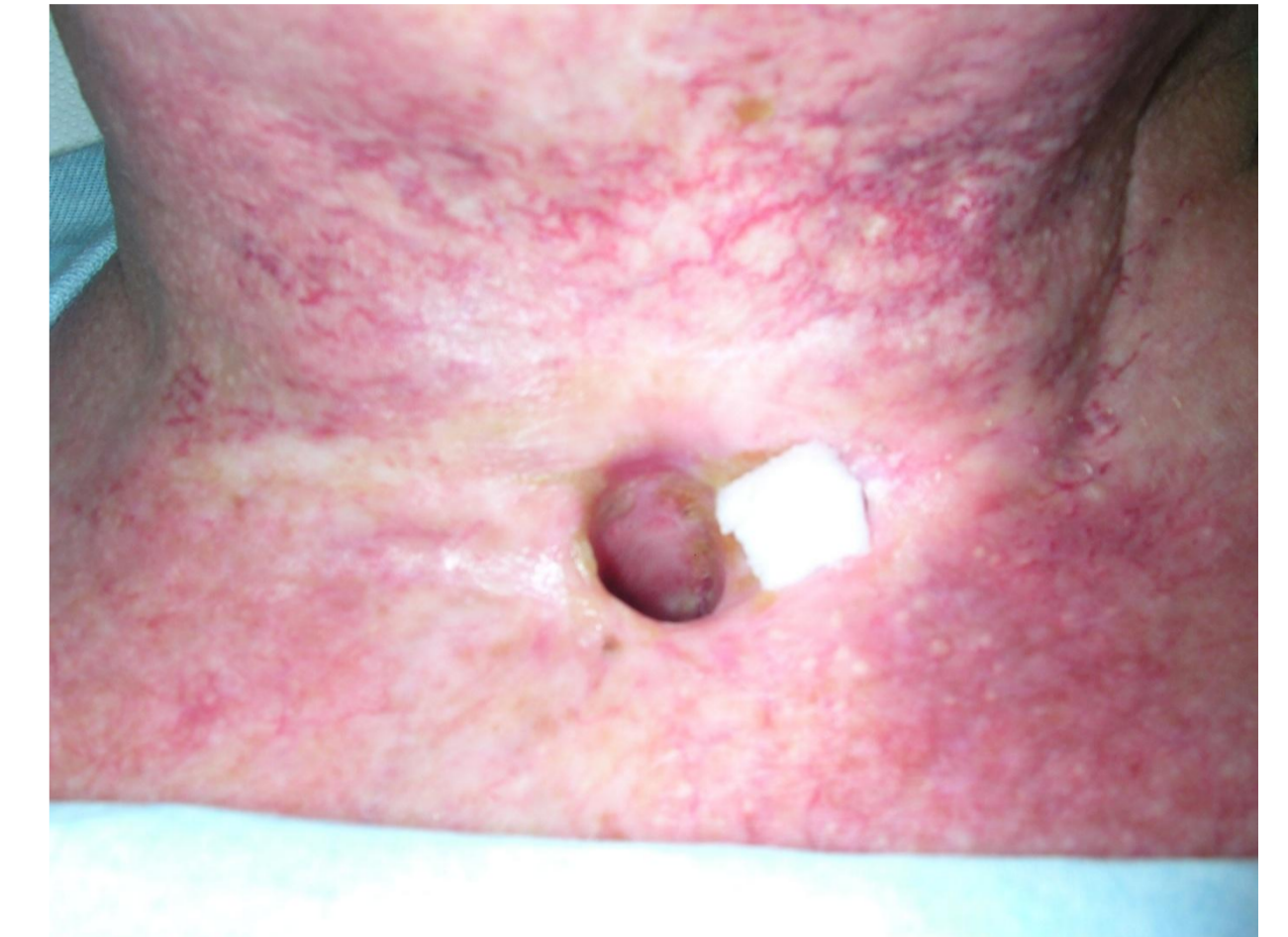


Fig. 2:
Collagen dressing in situ

Case 2:



Fig. 3:
Irradiation ulcer. On the thorax.
Situation at day 0.



Fig. 4:
Collagen dressing in situ, covered
with a foam.



Fig. 5:
Situation after 3,5 months. The
wound bed is covered with healthy
granulation tissue,



Fig. 6:
After 4 months the ulcer had
healed.