**CASE REPORT**

ELLIPSA medical services GmbH, Regensburg

# Cold plasma therapy in addition to an optimized, stage-appropriate wound care leads to healing in a complicated post-operative wound healing disorder.

Older patients with comorbidities have a greater tendency to develop surgical side infection wound healing disorders. These strain the physical and psychological well-being and represent a risk of infection. Optimal wound care in combination with cold plasma therapy improves the wound environment so that even patients with problematic wound conditions and concomitant diseases can recover within a reasonable period of time.

## CASE REPORT

In June 2019, a 77-year-old patient suffered a soft tissue trauma on her left lower leg in a car accident, which was treated with a split-thickness skin graft and a flap. As a result, a surgical side infection developed. The patient already suffered from chronic venous insufficiency and cardiac insufficiency and was prone to edema in the legs. Consistent compression therapy and lymph drainage were already carried out when the patient was admitted to outpatient wound care. In addition, a guideline compliant wound cleaning was carried out. The patient confirmed to bed for the first three weeks.

**At the end of November 2019 (see Fig. 1), cold plasma therapy was started twice a week, and shortly thereafter the dressing regime was changed to moist wound treatment using hydrogel to soften the dry necroses**. As a result, the wound debris could be removed and were significantly reduced (Fig. 2), fibrinous necroses and fibrin layers decreased and the wound area was continuously reduced (Fig. 3). After 10 weeks with optimized wound care and a total of 18 plasma treatments, the wound was completely epithelialized (Fig. 4).

Fig. 1: Initial Situation

Fig. 2: 4 CAP Treatments and change to moist wound treatment

Fig. 3: 12 CAP Treatments

Fig. 4: 18 CAP Treatments

## Profile Woundmanager

**ELLIPSA medical services GmbH**
Wound expert (ICW) at Ellipsa medical services GmbH, a mobile wound care home service in Regensburg

## Patient Overview

**77-year-old female patient with post-operative wound healing disorder**
Disturbance of wound healing after split skin transplantation and flap plasty as a result of trauma (contusion) in a car accident, CVI and heart failure known

**References**

[1]J Heinlin et al. (2011) Plasma applications in medicine with a special focus on dermatology, JEADV 25, 1-11
[2]T. von Woedtke et al. (2019) Plasma Medicine: A Field of Applied Redox Biology, in vivo 33, 1011-1026

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