CASE REPORT

ELLIPSA medical services GmbH, Regensburg

Successful cold plasma therapy after unsuccessful NPWT.

Cold plasma therapy is a physical treatment method in which the wound surface is exposed to an ionized gas in order to inactivate wound pathogens and stimulate wound healing.[1, 2]

CASE REPORT

A 73-year-old, multimorbid and immobile patient developed a surgical side infection of a split abdominal wall abscess. She had been taking cortisone for several years because of rheumatoid arthritis. **The secondary healing surgical wound on the right lower abdomen did not heal within a three-month hospital stay with several NPWT therapy attempts.**

The patient refused to have another operation to cover the wound. Therefore, a wound care home service took over the dressing change three times a week after the inpatient stay.

At the beginning of the cold plasma therapy the wound was clean with a small area covered with a fixed fibrin coating at 5 o'clock and a cavity at 3 o'clock (Fig. 1). **The wound** measured 7.7 cm x 16.7 cm and exuded moderately to much tough exudate. The patient **was given two treatment cycles of eight plasma treatments each with an interruption of one month with otherwise constant wound care**. In the course of the first treatment cycle, little vital granulation tissue was formed, especially along the edge of the wound, and progressive epithelialization could be observed. The wound size was reduced to 5.1 cm x 13.2 cm (Fig. 2), but the amount and nature of the exudate did not change. After the second treatment cycle with cold plasma (Fig. 3; 4.8 cm x 11.4 cm> Fig. 4; 2.7 cm x 9.3 cm) the epithelialization was more advanced, the cavity granulated from the inside, the **wound exudate decreased and a skin ridge had formed. The edge of the wound and the surrounding area were normal and there were no signs of inflammation**.

Fig. 1: Initial Situation, **Cycle 1**

Fig. 2: 8 CAP Treatments

Fig. 3: Initial Situation, **Cycle 2**

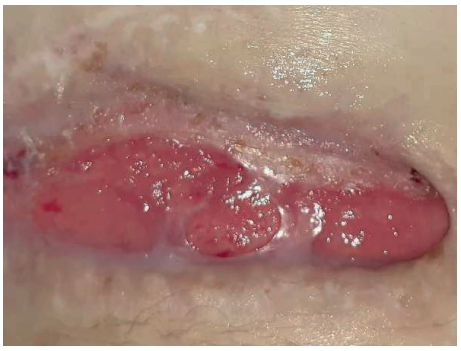

Fig. 4: 8 CAP Treatments

Profile Woundmanager

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

Patient Overview

73-year-old, multimorbid, immobile patient with abdominal abscess
Wound healing disorder after abdominal abscess revision in immobile patients with chronic polyarthritis and years of cortisone therapy

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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