Targeted Use of Collagen/ORC Improves Clinical Outcome

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OBJECTIVES
- To examine the effect of Collagen/ORC and Collagen/ORC/Silver as a treatment for wounds with elevated protease activity (EPA)
- To demonstrate how targeted use of Collagen/ORC and Collagen/ORC/Silver improves clinical outcome

INTRODUCTION
Wound healing is a complex process, with many contributing factors which can affect healing. It is therefore important to diagnose a non-healing wound correctly in order to select the most appropriate therapy, as they are unlikely to have any benefit over moist wound healing if they cannot correct the underlying defect of the wound. Clinical studies have shown that Collagen/ORC and Collagen/ORC/Silver can reduce protease activity; including human neutrophil-derived elastase (HNE) and matrix metalloproteinases (MMPs). Therefore, we hypothesise that the efficacy of these treatments may improve if they were targeted for wounds with elevated protease activity (EPA).

MANY FACTORS CAN CONTRIBUTE TO DELAYED WOUND HEALING
Background: Wound healing describes a complex sequence of events, and therefore a number of contributing factors can lead to a non-healing wound.

THE STUDY
Methods: In this clinical study, venous leg ulcers were randomised to receive either Collagen/ORC or Collagen/ORC/Silver treatment. Every 2 weeks wound fluid samples were collected and elastase activity measured using a fluorogenic substrate assay. Wound healing status was calculated based on wound area reduction; healing was defined as ≥30% reduction in wound area over 4 weeks.

EPA wounds were defined as wounds with elastase activity >25mU/110µL, this has been found to be indicative of a non healing wound.*

The total population for analysis was 56. The response rate was 63% (35/56). This increased to 77% (10/13) when wounds with EPA were treated with these therapies. Therefore, stratifying the patients according to protease activity at baseline shows patients entering the study with EPA had a higher probability of responding to Collagen/ORC and Collagen/ORC/Silver.

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CONCLUSIONS
- Targeted therapies are most effective when used on appropriate wounds.
  - Collagen/ORC and Collagen/ORC/Silver reduce elevated protease activities (MMP and HNE activity)
  - Targeting Collagen/ORC and Collagen/ORC/Silver for use on EPA wounds could increase the efficacy of these therapies