

# Using Hydroconductive Dressings on Wounds Where Healing is Delayed due to Steroid or Immunosuppression Therapy

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**W**ound bed preparation is the management of a wound in order to accelerate endogenous healing or to facilitate the effectiveness of other therapeutic measures.<sup>1</sup> The concept *wound bed preparation* has evolved to provide a systematic approach to removing the barriers to natural wound healing and enhancing the effects of wound therapies.<sup>2</sup> To be effective in wound bed preparation, a product has to facilitate debridement of necrotic tissue and debris, decrease excessive wound exudate, decrease the tissue bacterial level, remove deleterious chemical mediators, and set the stage for acceleration of endogenous healing.<sup>3</sup>

Removal of necrotic/nonviable tissue, debris, and slough from the wound is the first step of wound bed preparation. When the necrotic tissue has formed a dry, hard eschar, surgical, enzymatic, mechanical, biological, or autolytic debridement may be provided.<sup>4</sup> Once the eschar is removed from a wound, other techniques, such as hydroconductive dressing use, are available to address any remaining wound debris and/or slough.<sup>5</sup> Further surgical or sharp debridement may not be preferred when only nonviable debris and slough remain. When the disease process is such that enlarging the wound appears to inhibit the healing trajectory or when the patient is on medication detrimental to healing such as steroids or immunosuppressive agents, the clinician may want to avoid sharp removal of tissue debris and slough. In such circumstances, one of the other modalities may be used to facilitate wound bed preparation.

We decided to use the hydroconductive dressing Drawtex (SteadMed Medical LLC, Fort Worth, TX) as the first-line treatment for patients for whom sharp removal of tissue debris and slough was not the preferred choice. This decision was based on reports that the hydroconductive dressing could successfully facilitate removal of nonviable tissue debris and slough while leaving healthy granulation tissue intact.<sup>5,6</sup> This treatment was envisioned only for very select patients where the use of sharp removal of tissue debris and slough was of concern. Five patients fit these criteria: three with rheumatoid arthritis, one with necrobiosis lipoidica, and one with severe chronic obstructive pulmonary disease (COPD) being treated with systemic steroids.

## Case Reports

An 87-year-old woman with chronic rheumatoid arthritis being treated with immunosuppressive medications presented with a 1-month history of an ulcer on her right lower leg (see Figure 1a). After seven-and-one-half weeks of treatment with hydroconductive dressings, the ulcer was totally healed (Figure 1b). A second case involved a 67-year-old woman who was a chronic heavy smoker with rheumatoid arthritis being treated with systemic steroids; she presented with a nonhealing ulcer on her leg (see Figure 2a). Following 10 weeks of treatment with Drawtex dressing changes, the ulcer had no depth and was substantially smaller in size (see Figure 2b). In a third case, a 54-year-old woman with diabetes mellitus presented with necrobiosis lipoidica of the anterior shin area (see Figure 3a). She had been treated with multiple local therapies and several courses of systemic antibiotics without any improvement to her wounds. Seventeen (17) weeks after instituting treatment with the hydroconductive dressing, the wounds were dramatically decreased in size and are continuing on a healing trajectory (see Figure 3b).

We have found that when sharp removal of tissue debris and slough is undesirable, hydroconductive dressings provide a viable alternative for facilitating wound bed preparation. Four of the five patients completely healed in less than 10 weeks and the necrobiosis lipoidica patient is continuing to heal on an impressive trajectory. However, this alternative is reserved for when sharp removal of tissue debris and slough are not a viable option, but they need to be removed. ■

## References

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Figure 1a. Right lower leg ulcer at day 0.



Figure 1b. After 7½ weeks of hydroconductive dressing.



Figure 2a. Leg ulcer at day 0.



Figure 2b. After 10 weeks of Drawtex treatment.



Figure 3a. Necrobiosis lipoidica of the anterior shin at day 0.



Figure 3b. . After 17 weeks of hydroconductive dressing therapy, showing marked improvement.