

Puzzling Cases: Non-healing Venous Leg Ulcer



BY Rob Miller

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A 65-year-old female presents with a chronic venous ulcer (Figure 1) of one year's duration that will not heal with standard venous ulcer management, including adequate compression. Her Doppler studies are normal with respect to her arterial circulation, and her venous studies show deep-vein incompetence.



Questions

1. Why does this ulcer not heal?
2. What clinical features suggest the cause of non-healing?
3. How would you restart the healing process?

Answers

1. This ulcer illustrates the features of critical colonization. As shown in Diagram 1, there is a range of bacterial insult in a wound depending on not only the virulence of the organism but also the quantity of bacteria and the host resistance to this bacterial growth. A wound can normally tolerate contamination or colonization to a certain degree, but once critical colonization develops there is less chance for wound healing to occur.
2. Critical colonization can stall or create a non-healing

wound environment. Signs of critical colonization are as follows:

- (a) **N**on-healing wound
- (b) Increased **E**xudate
- (c) Increased **R**ed colour or easy friability or bleeding
- (d) Increased **D**ebris
- (e) Increased **S**mill

Remember N.E.R.D.S.

3. The fastest way to kick-start the healing process is through debridement by means of curettage. Subsequent treatment of the wound with a silver dressing or cadexomer iodine would help to prevent critical recolonization. Curettage may have to be repeated more than once. ☞

References

1. Sibbald G, Orsted H, Coutts P. Best practice recommendations for preparing the wound bed: Update 2006. *Wound Care Canada*. 2006;4(1):15-29.

