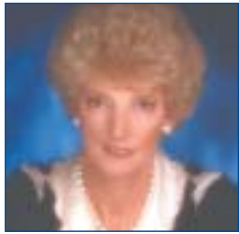


WOUND HEALING AND MATURATION: CLINICAL CONSIDERATIONS



Ms Jan Rice

Leading medical and health care company, Paul Hartmann Pty Ltd, invests considerable resources in clinical education and training on wound management for nurses around Australia. As part of its commitment, the Company has sponsored a series of articles, which take an in-depth look at the stages of wound healing for the Australian Nursing Journal.

In the latest article in this series, Jan Rice, Manager, Education and Clinical Services, Wound Foundation of Australia, Monash University, contributed this article on maturation, the final stage of wound healing.

"With Hydrocoll, clinicians can be assured that the wound bed will remain moist but not wet, and protected from bacterial contamination or damage."

The final stage of wound healing is known as the maturation phase, also known as the epithelialisation or contraction phase. It is characterised by wound stability and remodelling. There are many aspects to consider when reviewing the role of a wound care product at this stage including a thorough understanding of the process of healing at the cellular level. This helps in understanding what other factors can be influenced to alter the healing process, or at least maintain it on track.

The principles of wound management state that it is necessary to consider certain factors in each individual that may influence wound healing. One critical factor is the individual's nutritional status, and the influence of dietary intake on cellular requirements. The dietary requirements to maintain cellular activity for wound healing include:

- Protein:** poor protein levels result in impaired granulation tissue formation, decreased collagen synthesis and delayed wound remodelling;
- Vitamin C:** deficiency results in decreased collagen synthesis, poor capillary integrity and increased risk of infections;
- Vitamin B:** required for collagen synthesis and antibody formation;
- Zinc:** inadequate levels result in reduced collagen formation and protein synthesis, reduced epithelialisation and wound fibroplasia.

Physiologically, the final phase of wound healing involves the fibroblasts (fibroblasts produce collagen) converting to myofibroblasts to become contractile forces, and epithelialisation, the laying down of skin cells to complete wound closure. When wound contraction occurs, it indicates that the oxygen levels within the tissue are high enough to support epithelialisation. The clinician will recognise healthy granulation tissue as beefy red, granular and firm.

When the wound has reached the maturation stage, the main role of a dressing is to maintain a moist wound interface, without being unduly wet, and to protect the newly formed tissue. The new Hydrocoll™ wafer dressings are considered appropriate to achieve these goals.

Hydrocoll is a self-adhesive absorbent hydrocolloid dressing covered with a semi-permeable polyurethane layer that prevents bacterial and moisture penetration. It is a moisture retentive dressing that allows any excessive moisture to be absorbed into the hydrocolloid particles. These particles swell and come in contact with the moisture-vapour transmission film layer which facilitates excess moisture to vaporise off without dehydrating the wound bed.

With Hydrocoll, clinicians can be assured that the wound bed will remain moist but not wet, and protected from bacterial contamination or damage.



For further information about the new Hydrocoll, one of Hartmann's products that facilitates wound maturation, or other Hartmann products, please call Hartmann toll-free on 1800 805 839.