

Wound Pain Reduction with Hydrolyzed Collagen*

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Abstract:

Pain is a common characteristic of healing wounds. Exposed nerve endings, not protected by normal surrounding tissues are the source of wound pain. Occlusive dressings have long been associated with pain reduction upon application due to the protection they provide. Hydrolyzed collagen powder and gel absorb wound fluid and conforms to the wound space, provides protection to those exposed nerve endings and reduces wound associated pain. We have demonstrated significant pain reduction in three (3) case studies using Hydrolyzed Collagen powder and gel in conjunction with a variety of wound treatment regimens to include non-adherent dressings, compression dressings and vacuum assisted pressure devices.

CASE STUDY #1:

82 year old female admitted with multiple wounds to both right and left legs, secondary to a fall/trauma with a history of hypertension and Parkinson's disease. This patient was experiencing a large amount of pain being 8 – 10 on a scale of 1-10, with any touch to any of the surrounding areas of the wounds. Hydrolyzed Collagen powder was applied to the wound bed and covered with non-adherent dressing secured with unna boots bilaterally.

As a result patient activity has increased, drainage minimized and pain reduced significantly during normal activities and dressing changes. Within 8 weeks of injury, all wounds had completely healed with minimal scarring permitting the patient to return to her optimal level of functioning.

CASE STUDY #2:

78 year old female presented with a surgical wound with associated abscess. Wound was to left upper leg and thigh with a large amount of serous drainage. Surgical debridement was performed 1 day prior during hospitalization. Pain was noted on a scale of 1-10 to be at 8 during dressing change. Hydrolyzed Collagen powder was applied to wound bed with pain relief noted by the patient upon initial application. At this time vacuum-assisted negative pressure therapy was applied continuously at 70mmhg.

At week 4 drainage was minimal and patient was dressing changes with no pre-medication. Pain was expressed to be 2 on a scale of 1-10. The patient's activities were increasing and pain diminishing. This dressing was changed twice weekly and PRN. At week 6 this patient was discharged, completely healed with minimal scarring noted.

CASE STUDY #3:

78 year old female patient was admitted for wound care. The patient presented with a dehisced right upper leg wound with a moderate amount of drainage. Hydrolyzed Collagen was applied to the right upper leg surgical site wound bed and a vacuum-assisted negative pressure device used at 70mmhg continuously.

Vacuum-assisted negative pressure therapy was discontinued after three (3) weeks and Hydrolyzed Collagen powder clear film dressing continued with twice weekly dressing changes. At week four (4) the upper leg wound had healed completely. At week 3 the patient was returned to OR for a below the knee amputation with no closure to the wound. Hydrolyzed Collagen powder and Hydrolyzed Collagen gel were then mixed together to form a paste. The paste was then applied to the wound bed and covered with a secondary, non-adherent dressing.

This dressing was changed every 3 days with minimal discomfort to the patient. Within 2 weeks this patient had full re-granulation of soft tissue, leaving only bone exposed, which we continue to treat with paste and non-adherent dressings.

Conclusion:

Regardless of wound type the intradermal compartment is breached. That breach exposes damaged and undamaged nerve tissue to the external environment, significant tissue drying and pain. Dry nerve tissue presents the potential for additional nerve damage and associated wound pain. The aforementioned case experiences clearly demonstrate the protection the highly conformable Hydrolyzed Collagen powder and gel provides via immediate coverage of those damaged nerve tissues. This wound management process is further shown to be compatible with a variety of secondary dressing regimens and wound treatment protocols.

*CellerataRx Hydrolyzed Collagen Powder and Gel, WoundCare Innovations Inc.

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ACTIVATED COLLAGEN (ORCA)

References:

- 1.) Braakenburg A, et. al. "The clinical efficacy and cost effectiveness of the vacuum-assisted closure technique in the management of acute and chronic wounds: a randomized controlled trial." *Plast Reconstr Surg.* 2006 Aug;118(2):390-7
- 2.) Vermeulen H, et. al. "Dressings and topical agents for surgical wounds healing by secondary intention." *Cochrane Database Syst Rev.* 2004;(2):CD003554
- 3.) Newman JP, et. al. "Closed dressings after laser skin resurfacing." *Arch Otolaryngol Head Neck Surg.* 1998 July;124(7):751-7
- 4.) Ohlsson P, et. al. "A cost-effectiveness study of leg ulcer treatment in primary care. Comparison of saline gauze and hydrocolloid treatment in a prospective, randomized trial." *Scand J Prim Health Care.* 1994 Dec;12(4):295-9
- 5.) Eisenberg M, "The effect of occlusive dressings on re-epithelializations of wounds in children with epidermolysis bullosa." *J Pediatr Surg.* 1986 Oct;21(10):892-4