

## References

- Armfield, Derek, MD; Hyun-MinKim, David, MD; Towers, Jeffrey D. MD; Bradley, James P., MD; Robertson, Douglas D., MD; "Lower Extremity Sports Related Muscle Injury"; Clinics in Sports Medicine; 2006; pp. 803-842
- Bryant, Ruth; Nix, Denise; Acute and Chronic Wounds, Current Management Concepts; Third Edition, 2007; pp. 66-79, 136, 465-466
- Gotti, Jasmine, John Hopkins Medical Institutes, Baltimore Maryland; American Family Physician, June 1, 2002; 65 (11) pp. 2259-2260
- Madhuri, Reddy, MD, MSc; "Skin and Wound Care: Important Considerations in the Older Adult", Advances in Skin and Wound Care: Volume 21, #9, September 2008, pp. 424-435

Clinical Symposium on  
Advances in SKIN &  
WOUND CARE  
The Conference for Prevention and Healing

September 30 - October 3, 2010

Gaylord Palms Resort & Convention Center  
Orlando, Florida

Presentation supported by



southwest technologies inc.

"Treating the world well"®

1746 Levee Road, North Kansas City, MO 64116  
ph: (800) 247-9951 ph: (816) 221-2442 fax: (816) 221-3995  
email: info@elastogel.com • website: www.elastogel.com

# CLINICAL CASE STUDIES DEMONSTRATING EFFECTIVE USE OF A GLYCERINE HYDROGEL SHEET IN THE TREATMENT OF TRAUMATIC LOWER LEG WOUNDS

*Ruth E. Anderson RN, CWS • Cathy Wetzeler RN, BSN, CWOCN  
Boone County Hospital, Boone, IA*

**Purpose:** To educate wound care clinicians in an effective treatment of hematomas caused by trauma to the lower legs. Currently there is minimal research or data related to the care and treatment of this type of hematoma.

**Objectives:** *At the conclusion of this presentation the participant will be able to:*

- #1.** Formulate an effective treatment plan utilizing a hydrogel sheet for traumatic injuries resulting in hematomas.
- #2.** Describe the benefits of a glycerine hydrogel sheet related to the healing process.
- #3.** Recognize the affordability and management ease of a glycerine hydrogel sheet.

**Abstract:** **CASE #1:** Seventy-four year old patient presented with a traumatic wound of the right lower leg. Patient had fallen down a flight of stairs in home setting, resulting in a large leg hematoma with full thickness skin loss. Wound was covered with a glycerine hydrogel sheet and wrapped with four layer compression, changed weekly. Wound healed in 54 days.

**CASE #2:** Twenty-eight year old patient presented with traumatic wounds of the right lower leg due to a fall against a wooden bed. Two crater-like openings with palpable hematomas are evident. Wound treated with wound gel, covered with a glycerine hydrogel sheet and four layer compression, changed weekly. Wound healed in 28 days.

**CASE #3:** Eighty-three year old Alzheimer's patient, fell in the nursing home and presented with a large hematoma of the left lower leg. Presented with 100% slough and eschar, bulging hematoma with extensive tissue damage. Treatment included calcium alginate, a glycerine hydrogel sheet and four layer compression, changed weekly. Wound healed in 41 days.

**CASE #4:** Seventy-four year old insulin dependent diabetic patient presented with a traumatic injury incurred by falling on the stairs. Wound presented with slough at the surface of the wound. The wound was de-roofed to reveal a large crater with extensive undermining and several hematomas. After cleansing the wound well, a glycerine hydrogel sheet was applied followed by four layer compression, changed weekly. Wound healed in 68 days.

**Conclusion:** Hematomas of the lower extremities can be a challenge to wound care clinicians. The use of a glycerine hydrogel sheet on the hematoma under compression has many benefits, including comfort, absorbability and allowing clots to be drawn to the surface of the traumatic wound. The glycerine hydrogel sheet is bacteriostatic and bacteriocidal, therefore cost efficiency plays a role in the treatment of the hematoma. It will reduce bacteria load and the need for antibiotics. Cost efficiency is also reflected in the fact that when the glycerine hydrogel sheet is placed on the hematoma, it prepares the wound for bedside debridement. Surgical intervention to incise and drain a hematoma is not needed.

*September 30 - October 3, 2010*

*Gaylord Palms Resort & Convention Center • Orlando, Florida*

# CLINICAL CASE STUDIES DEMONSTRATING EFFECTIVE USE OF A GLYCERINE HYDROGEL SHEET IN THE TREATMENT OF TRAUMATIC LOWER LEG WOUNDS

## Case #1:

**Photo #1 (2-4-10):** Traumatic wound from falling down steps. This event resulted in a large area of deep tissue injury, approximately one month previous to admission to wound clinic. Black eschar had formed on surface of wound. Glycerine hydrogel sheet was applied, preparing the wound for debridement. Compression wrap applied.

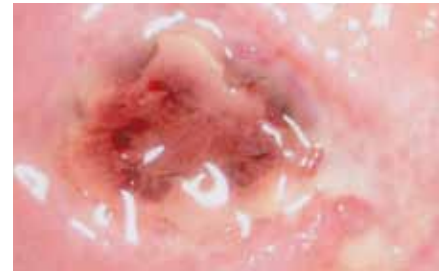


Photo #1 (2-4-10)



Photo #2 (2-11-10)



Photo #3



Photo #4

Glycerine hydrogel used for a total of four weeks to provide the wound bed with moist environment, reduce bacteria and therefore, enhance healing.



Photo #5



Photo #6

## Case #2:

**Photo #1 (9-11-10):** Elderly patient presented with traumatic injury to the left lower leg, resulting in a large hematoma. Wound debrided with several clots expelled. Measured 3.3 cm long X 1.5 cm wide with a depth of 0.6 cm. Undermining present in four areas. Wound packed and glycerine hydrogel sheet applied to cover newly debrided traumatic wound, followed by four layer compression.



Photo #1 (9-11-10)



Photo #2 (9-22-10)

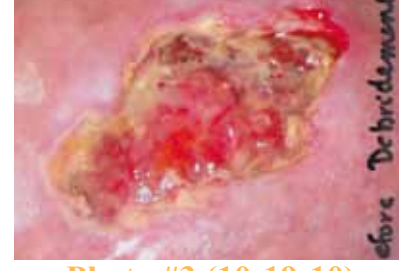


Photo #3 (10-19-10)



Photo #4 (10-27-10)



Photo #7

**Photo #2 (9-22-10):** Glycerine hydrogel sheet produced a drawing effect of the hematomas in the depth of the wound. This enabled clinicians to easily expel the remainder of the hematomas. Follow up treatment again included the use of the glycerine hydrogel sheet followed by compression.

**Photo #3 (10-19-10):** Left lower leg wound measured 2.2 cm long X 0.8 cm wide. Glycerine hydrogel sheet remains effective in maintaining moisture and absorption under the four layer compression wrap. Same treatment continued.

**Photo #4 (10-27-10):** Left leg wound healed without complications. Patient maintained comfort throughout the treatment.

## Case #3:

**Photo #1 (11-12-10):** Traumatic wound resulted from a fall on the stairs. Presented with a wound in the left lower leg measuring 1.8 cm long X 0.7 cm wide with depth of 1.7 cm. Undermining from 1.4 cm to 4.5 cm in four areas. Glycerine hydrogel sheet was utilized to cover the wound to prepare for debridement; followed by four layer compression.



Photo #1 (11-12-10)



Photo #2 (11-23-10)



Photo #3 (11-28-10)



Photo #4 (1-4-10)



Photo #5 (1-19-10)

**Photo #2 (11-23-10):** One week later, presented with large amount of bloody and clabbered blood clots and non-viable tissue adhered to the glycerine hydrogel sheet. Dark, bloody drainage expressed from wound with no discomfort verbalized. Wound bed clean after expression of clots. Covered with a glycerine hydrogel sheet with four layer compression.

**Photo #3 (11-28-10):** Wound measures much less in undermining and depth. Continued to progress nicely and patient was comfortable. Verbalized this comfort with each application of the glycerine hydrogel sheet.

**Photo #4 (1-4-10):** Wound vastly improved. No undermining remains. Continued same treatment.

**Photo #5 (1-19-10):** After 45 days, wound healed.

## Case #4:

**Photo #1 (1-25-10):** Middle aged woman fell against a wooden bed post. Initially thought she had splinters. Presented with two traumatic wounds with possible hematomas and two wounds measuring 0.4 cm long X 0.7 cm wide and 0.3 cm long X 0.5 cm wide with a depth of 1.2 cm. Wounds bled readily. Glycerine hydrogel sheet applied with four layer compression.



Photo #1 (1-25-10)



Photo #2 (2-8-10)



Photo #3 (2-15-10)



Photo #4 (2-22-10)

**Photo #2 (2-8-10):** First photo depicts expression of blood clots from a traumatic wound.

Clots continue to be expressed with the glycerine hydrogel sheet. Undermining healed at 3:00 and 6:00 improved. Measured 0.9 cm X 1.5 cm with depth of 0.7 cm. Continued with the glycerine hydrogel sheet with compression. Client denies discomfort with this dressing.

**Photo #3 (2-15-10):** Wound continues to improve with measurements of 0.5 cm long X 1.2 cm wide, no depth and no undermining with the use of a glycerine hydrogel sheet. Followed with foam and compression.

**Photo #4 (2-22-10):** Wound healed in less than one month. Benefits of the glycerine hydrogel sheet were comfort, ease of expressing clots; related to the action of drawing them to the surface and the antibacterial properties of the glycerine.

## Product used:

\* *Elasto-Gel™ Wound Dressing*