

## **CLINICAL CASE STUDY DEMONSTRATING TIMELY HEMATOMA FROM TRAUMATIC LEG WOUND UTILIZING A HYDROGEL SHEET\***

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### **ABSTRACT**

The incidence of hematomas is a frequent occurrence in the elderly population both in nursing homes and out patient settings, because of their fragile skin and tissue. A hematoma can develop from relatively minor bumps and scrapes on wheelchairs, beds and other hard objects. Often the age of the patients and their general health prevent immediate removal or drainage of these wounds because of the potential for high levels of blood loss. We have discovered a simple protective manner to treat such injuries. This presentation details this general cost effective method.

This case study is of a 97 year old woman who sustained a traumatic injury to the lower leg resulting in a 4 cm x 3 cm boggy hematoma.

The hematoma required protection and maintenance of its integrity while allowing for its atraumatic removal. Weekly treatment was: cleansing, covering with an absorbent, bacteriostatic hydrogel sheet\* and securing the dressing with an elastic bandage.

Two (2) weeks after initiation of the weekly protocol, 100% of the hematoma was mechanically debrided with essentially no bleeding and revealed a beefy red wound bed. Twenty one (21) days following the hematoma removal, the wound had granulated and scarred (healed).

The bacteriostatic hydrogel sheet\* was effective in protecting the hematoma as well as keeping the area infection-free. The absorption properties of the hydrogel sheet\* helped in the extraction of the excess fluids within the hematoma which left only the devitalized tissue that was easily removed and caused no trauma or damage to the wound bed. The open wound was then covered with the hydrogel sheet\* with weekly dressing changes. The wound was fully healed in four (4) weeks with no signs of infection or other complications. Using this protocol, management of the wound was easy and truly cost effective.

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**Problem:**

A 4 cm x 3 cm hematoma was sustained by trauma to the lower leg of a 97 year old female. The goal was to promote wound healing while atraumatically removing the hematoma.

**Photo #1 2/10/99** - Initial visit. The following protocol was indicated: gentle cleansing, cover the hematoma with an absorbent, bacteriostatic hydrogel sheet\* and secure the dressing with a elastic bandage. Change dressing once a week.

**2/16/99** (no photo) - The area measured 4 cm x 3 cm. However, the bogginess of the hematoma was no longer present and no sign or symptoms of infection were noted. Edges of the hematoma had begun to retract away from the wound margins. Same protocol continued.

**Photo #2 2/23/99** - 100% of the hematoma was gently mechanically debrided revealing a vascular viable wound bed. No odor or infection was present. The wound measured 2.4 cm x 3.7 cm. Same protocol continued.

**Photo #3 3/2/99** - The wound measured 2.2 cm x 3.3 cm. Fibroblasts and collagen fibers were present in the wound bed and granulation was progressing. Same protocol continued.

**Photo #4 3/16/99** - There was an island of epithelialization present and migration from the wound margins were noted. Same protocol continued for protection of the new epithelialized tissue and until the tensile strength showed improvement

**Photo #5 3/23/99** - Wound was totally healed.

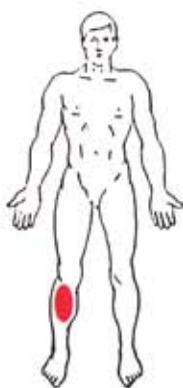
**Rationale:** The hydrogel sheet\* was effective in protecting the hematoma while the absorption properties helped to extract the excess fluids from within the hematoma which left only the devitalized tissue to be easily removed, causing no trauma or damage to the wound bed.

**Methodology:** Gentle cleansing of the area, covering the hematoma with an absorbent, bacteriostatic hydrogel sheet\*, and securing the dressing with an elastic bandage. Same protocol was continued after the hematoma was removed to protect the wound from factors that impede the healing process such as slough, debris, bacteria, infection and necrotic tissue.

**Result:** Total healing occurred within twenty one (21) days.

**Conclusion:** Following this simple protocol reduced the number of dressing changes to once a week which proved to be cost effective in the overall wound management costs.

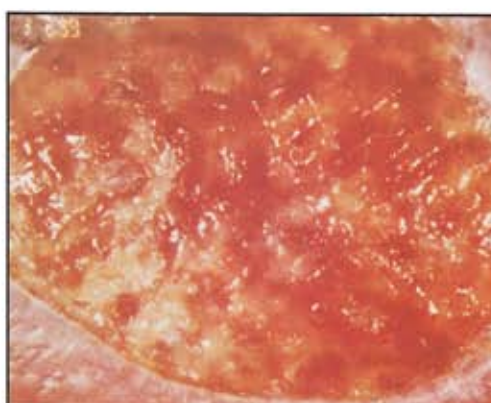




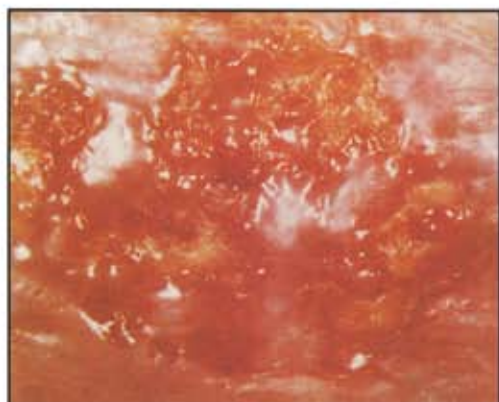
**Photo #1 2/10/99**



**Photo #2 2/23/99**



**Photo #3 3/2/99**



**Photo #4 3/16/99**



**Photo #5 3/23/99**



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