

# Managing Second-Intention Horse Wounds Presenting With Exuberant Granulation Tissue Using a Plant-Derived Wound Dressing: A Retrospective Non-Controlled Study.

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## ABSTRACT

**Objective:** To evaluate the healing performances of traumatic horse wounds at the distal part of the limbs, presenting with **Exuberant Granulation Tissue (EGT)**, using a plant-derived wound dressing (1Primary Wound Dressing, ONE VET for the Italian market, Phytoceuticals, Zurich) in association, when feasible, with a permanent semi-occlusive bandaging.

**Methods:** A retrospective analysis was conducted on 25 horses presenting with accidental wounds at the distal part of the limbs and treated with a plant-derived wound dressing associated, when feasible, with permanent semi-occlusive bandaging, daily changed. The presence of the **EGT** was evaluated using the **Score System (EGT-SS)** indicated by Ducharme-Desjarlais et al. (*Am J Vet Res*, 2005, **66**, 1133-1139). **Initial Wound Area (IWA - cm<sup>2</sup>)** (calculated using a scaled digital photograph or a wound contour traced on plastic film) and **Time To Heal (TTH- days)** were used for calculating the **Epithelialisation Rate (ER - cm/days)**, (Stashak, 1991, *Equine Wound Management*. First Edition pp 1-18). **Wound Appearance** was recorded weekly as inflamed or healthy on the basis of a scoring scale (**WA score**) as indicated by Silveira et al. (*Am J Vet Res*, 2010, **71**, 229-234). **Time of First Epithelium appearance (TFE -days)** was evaluated weekly, **Cosmetic Aspect** of the final **Scar (CAS score)** (Ketzner et al. (*Austr Vet J*, 2009, **87** (9), 368) was evaluated at the end of the healing process. Pain, complications, number of surgical EGT resections and ease of handling were recorded and evaluated. **Main Results and Conclusions:** Based on the **EGT-SS**, all of the 25 analyzed wounds presented EGT formation, the mean size (**IWA**) varying from 12,90±4,51 cm<sup>2</sup> (wounds <25 cm<sup>2</sup>) to 62,76±26,55 cm<sup>2</sup> (wounds >25 cm<sup>2</sup>). **TTH** showed a mean value of 79±54,32 days, **ER** was 0,0742±0,0342 cm/day and **TFE** was 18 days. The **WA** score showed that the majority of the wounds reached a healthy wound state during the second week (15 days). At the 30<sup>th</sup> day, and during the whole remaining period, all wounds presented a healthy wound state, no clinical signs of infection were observed, not even in those wounds in which bone was exposed (n=3). Bandaged Wounds (n=16) presented better **CAS** score performances (88% excellent, 12% good, 0% hypertrophic scar) than Not Bandaged Wounds (n=9) (43%, 24%, 32%). Surgical resection was never necessary, but the wound surface slightly protruded the skin level when wounds were left un-bandaged. Horses became confident with medication without sign of discomfort or pain all over the time courses. Usually equine wounds, complicated by the EGT, have low healing performances and poor scar quality. The plant-derived wound dressing shows the capacity to regulate the EGT formation, obtaining a high quality final scar, particularly when a permanent bandage is associated. It is simple to use and safe.

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