

Medical grade honey facilitates the healing of minor injuries in pediatrics

Children are at risk to injuries and wounds as it is their nature to play and explore in adventurous environments. At the same time, they are less experienced in calculating the risk when performing some stunts. However, wounds can also be out of the control of the children and for example be caused by medical or surgical intervention. As the skin is the first line of defense against infections, it is important to restore the integrity of the skin as soon as possible. When wounds get infected, antibiotics are often prescribed. Resistance of bacteria towards antibiotics is an increasing problem. This makes treatments difficult and will limit the treatment possibilities. Therefore, wound care products are warranted that besides improving the healing also resolves infections.

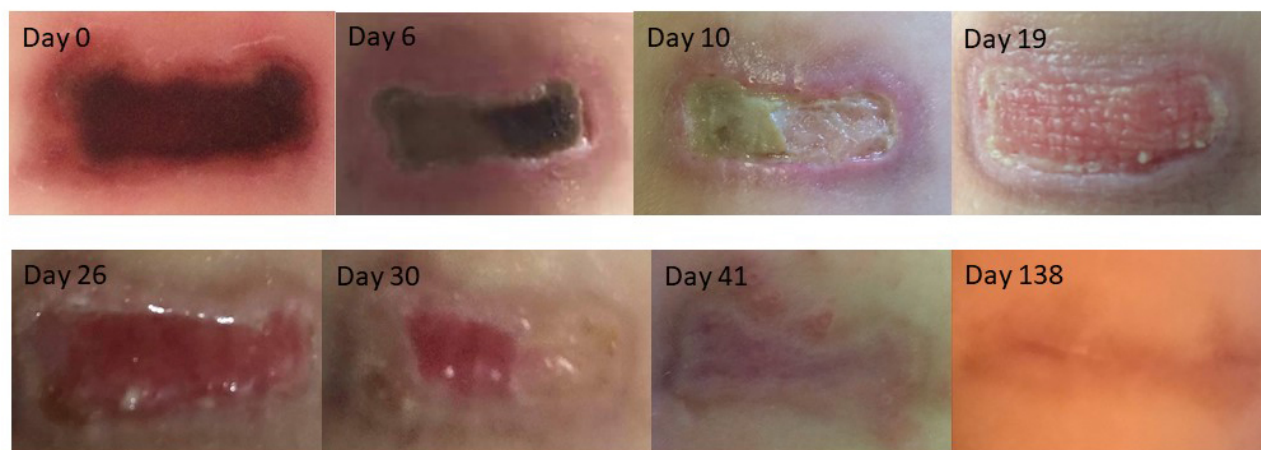


Fig. 1. The healing of an extravasation-induced injury in time is facilitated with MGH therapy, resulting in a minimal scar.

Honey is used since ancient times for wound care because of its ability to kill bacteria and to promote healing. In modern times, to assure safety and efficacy of honey for clinical application, strict selection, production, and storage conditions are followed to introduce medical grade honey (MGH). MGH is free of pollutants, such as herbicides, pesticides, heavy metals, and dormant endospores (resting bacteria) that can be present in the environment. Therefore, MGH is collected in an organic environment and subsequently sterilized using gamma irradiation to destroy any remaining endospores. MGH resolves infections by multiple mechanisms. MGH has a low pH that make it hard for bacteria to survive. MGH consists for the larger part of sugars that attracts water, including the water from bacteria, leading to dehydration of the bacteria. The sugar is metabolized when coming into contact with the wound fluid and will release small amounts of hydrogen peroxide that can kill the already damaged bacteria. Moreover, there are several components in honey that could directly kill bacteria as well.

Despite these good characteristics of MGH, the use of it for wound care in pediatrics is still reserved. In this study, we argue that MGH should be used more often as a go-to product, also in minor injuries. Therefore, multiple pediatric wounds of different origin are presented to point out the specific mechanisms of MGH that contribute to enhanced wound healing.

Wounds included an extravasation-induced injury, ulcerated hemangioma on the coccyx, infected surgical wound, and a traumatic wound. All wounds were treated with MGH-based formulation L-Mesitran Ointment (manufactured in the Netherlands).



Fig. 2. The healing of an infected lesion following an abscess removal receiving MGH therapy.

Detailed information on the wound progression of each case can be found in the full version of the article. In general, MGH prevents the infiltration of bacteria by forming a physical barrier and by its anti-bacterial activity. MGH creates a moist wound environment, which is important because moist wounds heal faster than wet and dry wounds. Besides, MGH promotes autolytic debridement, leading to a faster release of necrotic (death) tissue. MGH decreases inflammation and oxidative stress, factors that otherwise would have a negative impact on the healing trajectory. Moreover, MGH stimulates the formation of new blood vessels, granulation tissue and re-epithelialization. These processes are important to restore the integrity of the skin. The MGH formulation also limited scar formation, by resolving inflammatory and oxidative stress, both are factors that otherwise would elevate scarring. MGH was easy to apply and none of the patients experienced pain or any negative side effects due to the treatment.

MGH was safe and effective to heal minor wounds of different causes and can be recommended for wound care in pediatric patients.

Eleftherios Smaropoulos¹, Niels A.J. Cremers²

¹*Aristotle University of Thessaloniki, Thessaloniki, Greece; St. Luke Private Clinic, Thessaloniki, Greece*

²*Triticum Exploitatie BV, Maastricht, the Netherlands*

Publication

[The pro-healing effects of medical grade honey supported by a pediatric case series](#)

Smaropoulos E, Cremers NAJ

Complement Ther Med. 2019 Aug