NOTABLE NOTES

The Power to Heal

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Blood gushing out from skin that was ruthlessly sliced open; all of us have experienced a wound that needed healing. The oldest known record of wound care is a Mesopotamian clay tablet written around 2200 BCE that details the "3 healing gestures": cleaning injuries with beer; preparing plaster wound dressings out of oil, vegetation, mud, or clay; and wrapping the wound with a bandage soaked in wine and turpentine.[1,2] The Egyptians are credited with pioneering adhesive bandages and the use of honey in wound care,[1] which we now know has anti-inflammatory, antiseptic, and antibacterial properties, including the ability to kill methicillin-resistant *Staphylococcus aureus*.[2] The Egyptians also painted wounds with a green paint made out of copper, which is deadly to bacteria. In addition, Egyptian embalming to wrap dead bodies and prevent decomposition is thought to have influenced the development of infection control.[1]

Homer's Iliad, written in 800 BCE, describes wound care in ancient Greece, including the use of bronze spear scrapings to treat infected lacerations. In the fifth century BCE, Hippocrates suggested that injuries should be cleansed with vinegar or wine, bandaged with wool, and soaked with wine. Galen documented the ancient Roman use of styptics containing antibacterial properties and advocated for the drainage of pus to heal wounds in the second century AD.[2,3] Traditional Chinese medicine used a more holistic approach to promote the spiritual and physical elements of wound healing that involved a myriad of herbal powders, bronze instruments, anesthetics, acupuncture, and silk bandages, which are still used in Chinese medicine today.[3] By the 18th century, surgery was recognized as a respectable method of wound care. The invention of the antiseptic technique and antibiotics in the 19th century dramatically decreased the rate of wound infections and deaths.[1]

We now understand that injuries that damage the skin barrier open the door for pathogen entry into the body and initiate a cascade of events including hemostasis, inflammation, reepithelialization, and remodeling. Although woven gauze is still used, our recent technological discoveries have also advanced the creation of new wound dressing alternatives to further promote wound healing. Today, there are over 5000 products related to wound care[1] such as semipermeable films, calcium alginate, spray-on dressings, hydrocolloids, hydrogels, foams, silicone dressings, capillary action dressings, odor-absorbent dressings, scaffolds, and various antibacterial dressings, such as iodine dressings. New and improved materials as well as nanotechnologies and biosensors are being developed to enhance wound healing.[3] Wound healing is now its own field, and the United States alone has over 1000 wound healing centers.[1] Wound care has improved drastically over the millennia since the first recording of wound care, and it will be interesting to see how wound care continues to improve in the future.

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