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SHORT COMMUNICATION

The History of Wound Care

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KEYWORDS:

History;
Wound healing

Abstract The history of wound healing is, in a sense, the history of humankind. This brief history of wound healing has been compiled for the benefit of readers. It is amazing to see that some of the basic principles of wound healing have been known since 2000 BC.

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The history of wound healing is, in a sense, the history of humankind. One of the oldest medical manuscripts known to man is a clay tablet that dates back to 2200 BC. This tablet describes, perhaps for the first time, the “three healing gestures”—washing the wounds, making the plasters, and bandaging the wound.^{1,2,3}

What the ancients and early moderns referred to as plasters is the present-day equivalent of wound dressings. These plasters were mixtures of substances including mud or clay, plants, and herbs. Plasters were applied to wounds to provide protection and to absorb exudate. One of the most common ingredients used in plasters was oil. Oil may have provided some protection from infection as bacteria grow poorly in oil, and oil would have prevented the bandage from sticking to the wound as a nonadherent dressing.¹

One of the interesting earliest known wound care products was beer. The Sumerians brewed at least 19 different types of beer. An interesting prescription for wound healing described in Mesopotamian culture stated, “Pound together fur-turpentine, pine-turpentine, tamarisk, daisy, flour of inninnu strain; mix in milk and beer in a small copper pan; spread on skin; bind on him, and he shall recover.”¹

The Egyptians may have been the first people to use adhesive bandages and were most certainly the first people to apply honey to the wounds. Honey, grease, and lint were the main components of the most common plaster used by Egyptians. Lint made from vegetable fiber probably aided drainage of the wound; grease and honey may have protected the wound from infection. Grease made from animal fat may have provided a barrier to bacteria. While honey appears to be an effective antibacterial agent, it has many other healing properties. Honey has been used for thousands of years and is still part of many advanced wound dressings. Honey was also used for wound care in India long before the time of Christ, demonstrating that separate medical cultures empirically arrived at the same successful therapy.^{1,4,5}

Egyptians painted wounds with green color. Green indicates life, and green paint contains copper, which is toxic to bacteria. When most people think of ancient Egypt, they think of pyramids and mummies, and the art of wrapping the bodies of the dead probably influenced the bandaging of wounds. Also the art of preventing decomposition by embalming may have contributed to early advances in controlling infection.^{1,2}

The Greeks stressed the importance of cleanliness. They recommended washing the wound with clean water, often boiled first, vinegar (acetic acid), and wine. The Greeks also differentiated between “fresh,” or acute, and non-healing, or chronic, wounds. One of the interesting excerpts

Conflict of interest: The author reports no conflicts of interest.

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from the Hippocratic collection about wound healing is, "For an obstinate ulcer, sweet wine and a lot of patience should be enough." An early description of the "four cardinal signs of inflammation"—*rubor, tumor, calor, et dolor* (redness, swelling, heat, and pain)—came from the Romans.^{1,2,6,7}

It was not until the 18th century that surgery began to be considered as a distinct and respected branch of medicine. In the 19th century, the antiseptic technique was a major breakthrough. The introduction of antibiotics helped control infections and decrease mortality.^{1,7,8}

In the 20th century came the advent of modern wound healing. At the present time, there are more than 5,000 wound care products. Most modern dressings contain materials that are highly absorbent, such as alginates, foam, or carboxymethylcellulose. There are occlusive dressings and semiocclusive dressings. There are growth factors, advanced honey-based dressings, and hypochlorous acid-based cleansers. Bioengineered tissue, negative pressure therapy, and hyperbaric oxygen therapy have changed the way we treat a lot of chronic wounds today.

There are more than 1,000 wound healing centers in the United States today, and wound healing has become a specialty, with fellowship programs offered at some academic centers.

In summary, The first wound treatments were described 5 millennia ago. Since then, various principles of wound care have been passed on from generation to generation. In

contrast to large numbers of general technological inventions over the past 100 years, progress beyond ancient wound care practices is a recent phenomenon. It is essential to know the historical aspects of wound treatment (both successes and failures) in order to continue this progress and provide future direction.⁹

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