3.1 Overview

The history of wound healing is as old as the history of medicine and probably as mankind itself. In light of its magnitude, we shall not cover the whole subject in this chapter. We shall focus rather on the principal milestones in the history of wound healing.

In the past centuries and in recent decades, there have been breakthroughs which have made significant changes in our scientific understanding of wound repair processes. These events have influenced the currently accepted approach to treating wounds and ulcers.

This historical survey is an overview of the treatment of wounds and skin lesions in general. In the medical literature, one can find historical surveys of specific types of cutaneous ulcers, especially venous leg ulcers, since they are common [1, 2].

3.2 The Ancient World

Naturally, the topic has no clear starting point. It may be attributed to that ancient father of humanity who once used leaves as a dressing and then even washed his wound in water – blissfully unaware of the fact that he was opening up new horizons in the history of medicine and of humanity.

Later, though still well prior to documentation by clear historical records, various substances were rubbed on wounds or skin lesions; natural materials were used, such as mud, various plant extracts, or honey. Throughout history, the putting together of these remedies became more complex, requiring exact notation of the mixtures that were used, as well as of just how they were to be prepared.
Magical and religious connotations were always dominant features of ancient medicine. These elements have accompanied medicine since the dawn of history, and only with the advent of modern medicine have they begun to fade.

A unique aspect in the history of medicine is the attempt to explain ancient healing rituals by relying on modern medical knowledge and technological capabilities. Thus, for example, the Greeks used to scrape the point of a lance over a wound, so that some metal powder was sprinkled on it. It has been suggested that metallic copper, when combined with vinegar, produces copper acetate, which has antibacterial properties that could help in the treatment of wounds and cutaneous ulcers [3, 4].

Similarly, inscriptions and marble carvings found in shrines to the Greek god Asklepios (or to Aesculapius, in the Roman world) associate healing with having been in contact with the oral cavity of non-poisonous serpents. Angeletti et al. [5] have suggested that salivary growth factors may have contributed to the healing process.

It is impossible to evaluate these and other suppositions today, since the ancients neither conducted nor documented strict clinical trials. It is nonetheless reasonable to assume that such magical or ritualistic treatments had significant psychological consequences.

### 3.2.1 Medicine in Mesopotamia

The first written historical record was found on a Sumerian clay tablet from ca. 2100 BC (Fig. 3.1). This is actually the world’s oldest medical manuscript. The “three healing gestures” described in this tablet are: washing the wound, applying dressings/plasters, and bandaging the wound. These constitute the basic principles of wound treatment today.

In his book *The Healing Hand: Man and Wound in the Ancient World* [6], Guido Majno states that there were 15 prescriptions recorded on the tablet, without indication of the diseases for which they were intended. Twelve of the 15 were for external use, eight being plasters, indicating that they may have been used for local diseases. Majno presents several examples of these prescriptions, such as [6]: “Pound together: dried wine dregs, juniper and prunes, pour beer on the mixture. Then rub (the diseased part) with oil, and bind on (as a plaster).”

Beer was widely used in Sumerian treatments and it is likely that, owing to the antiseptic ingredients it contains, it did have some beneficial effect in the treatment of wounds and skin lesions [6].

However, it is impossible to assess today the beneficial effect, if any, these remedies had on the treated lesions. In fact, the Sumerians had a variety of topical agents that could have been useful. Oils may have been beneficial in soothing dry wounds. As mud and inorganic salts absorb water, they could have dried out wounds and thus prevented proliferation of bacteria. Certain plant extracts could also have had some antibacterial effect. At present, nobody knows whether the Sumerians actually made reasonable use of the materials at hand.

### 3.2.2 Ancient Egypt

The information we have on medicine in ancient Egypt is based on the Smith and the Ebers...