

The Edwin Smith Papyrus 17th Century B.C.

The Edwin Smith Surgical Papyrus, dating from the seventeenth century B.C., is one of the oldest of all known medical papyri. It differs fundamentally from the others in the following ways:

1. The seventeen columns on the recto comprise part of a surgical treatise, the first thus far discovered in the ancient Orient, whether in Egypt or Asia. It is therefore the oldest known surgical treatise.
2. This surgical treatise consists exclusively of cases, not recipes. The treatise is systematically organized in an arrangement of cases, which begin with injuries of the head and proceed downward through the body, like a modern treatise on anatomy.
3. The treatment of these injuries is rational and chiefly surgical; there is resort to magic in only one case out of the forty-eight cases preserved.
4. Each case is classified by one of three different verdicts: (1) favorable, (2) uncertain, or (3) unfavorable. The third verdict, expressed in the words, 'an ailment not to be treated,' is found in no other Egyptian medical treatise. 5-This unfavorable verdict occurring fourteen times in the Edwin Smith Papyrus marks a group of cases (besides one more case) which the surgeon cannot cure and which he is led to discuss by his scientific interest in the phenomena disclosed by his examination."

According to Breasted, the Edwin Smith Papyrus is a copy of an ancient composite manuscript which contained, in addition to the original author's text (3000-2500 B.C.), a commentary added a few hundred years later in the form of 69 explanatory notes (glosses). It contains 48 systematically arranged case histories, beginning with injuries of the head and proceeding downward to the thorax and spine, where the document unfortunately breaks off. These cases are typical rather than individual, and each presentation of a case is divided into title, examination, diagnosis, and treatment. There is a definite differentiation between rational surgical treatments and the much less employed medico-magical measures. Significantly, trepanation is not mentioned.

Of the 48 cases described in the Edwin Smith Papyrus, 27 concern head trauma and 6 deal with **spine trauma**. Of the 27 head injuries, 4 are deep scalp wounds exposing the skull, and 11 are skull fractures.

"The latter, according to our present day terminology would be classified as follows: two compound linear fractures; four compound depressed fractures; four compound comminuted fractures; and one comminuted fracture without external wound. The symptoms and signs of head injury are given in considerable detail. Feeble pulse and fever are associated with hopeless injuries and deafness as well as aphasia are recognized in fractures of the temporal region."

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FIGURE 1.1

Imhotep.



FIGURE 1.2

The Edwin Smith papyrus.

CASE 33

TRANSLATION AND COMMENTARY

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Translation

If thou examinest a man having a crushed vertebra in his neck (and) thou findest that one vertebra has fallen into the next one, while he is voiceless and cannot speak; his falling head downward has caused that one vertebra crush into the next one; (and) shouldst thou find that he is unconscious of his two arms and his two legs because of it, (conclusion follows in diagnosis).

Commentary

𓂏𓂏𓂏 *šhm*, "crush" is explained in Gloss A.

𓂏𓂏𓂏 *hr*, "has fallen," is an unusual application of the common verb "fall," and is perhaps peculiar to surgery. The explanation in Gloss A shows that it means "penetrate," the force of the man's fall driving one vertebra into the next.

𓂏𓂏𓂏𓂏 *dgm-y*, "speechless, voiceless," has been explained in Case 22, Gloss C (VIII 16-17).

𓂏𓂏𓂏𓂏 *yšhdhd*, "be head downward," is discussed in Gloss B (XI 15-17).

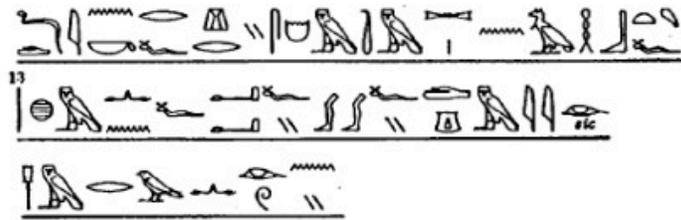
𓂏𓂏𓂏𓂏 *hmy*, "be unconscious," literally "not to know," employed to indicate paralysis of arms and legs, has been discussed in Case 81 (X 18).

DIAGNOSIS

The Edwin Smith Papyrus
17th Century B.C.

DIAGNOSIS

XI 12-13



Translation

Thou shouldst say concerning him: "One having a crushed vertebra in his neck; he is unconscious of his two arms (and) his two legs, (and) he is speechless. An ailment not to be treated."

Commentary

The terms will all be found discussed above, except *shm*, which is treated in Gloss A. It is interesting, and grammatically important to notice that the *n*-form of the verb, *hmy-n-f*, is employed with a permansive meaning parallel with that of the following pseudo-participle (*dgm-y*).

Verdict 3 indicates that there is no hope of recovery. See Case 5 (II 15). It is therefore, as usual, followed by no directions for treatment.

z 2

The following is Case 33 of the Papyrus regarding crushed vertebrae of the neck.

The significance here is the fact that as of the 17th Century B.C. it was medically known and documented that damage to the central nerve system via injury to the spine causes loss of function to connected organs and limbs. Note that the author describes the damage to the spinal cord and nerve roots as permanent and without hope of recovery.

How can it be that thousands and thousands of years later we still care so little for the health of the spine and nerve system?