

A treatment that has stood the test of time for over three and a half millennia

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An instruction for treating a dislocation of the mandible written more than three and a half millennia ago has been reproduced in *The James Lind Library*. This is because it provides an illustration of a treatment with effects that can be inferred confidently without the need for formal comparative studies, and which has stood the test of time.

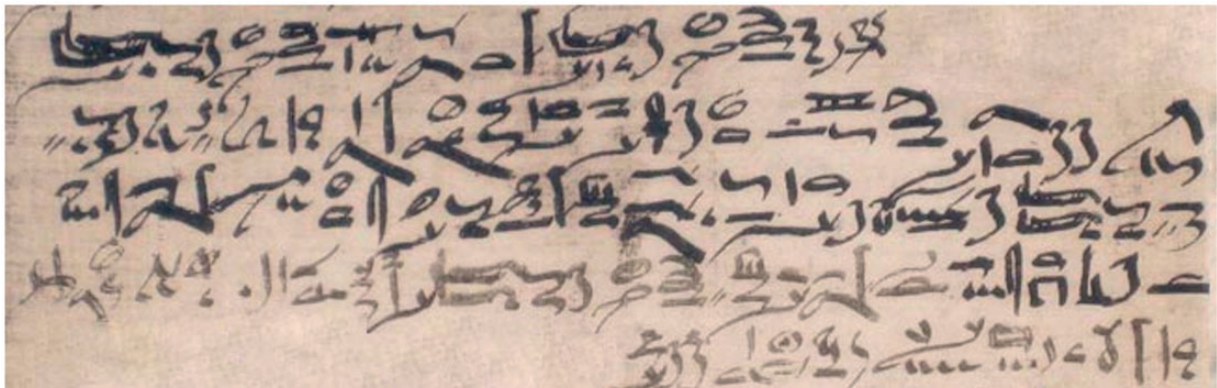
The ancient Egyptian medical papyri contain many accounts of diseases and their treatments, but there are often major difficulties in translating the name of the disease, and also many of the treatments which are prescribed. It is therefore a delight to read Case 25 in the *Edwin Smith Surgical Papyrus*, where the uncertainties of translation are minimal.

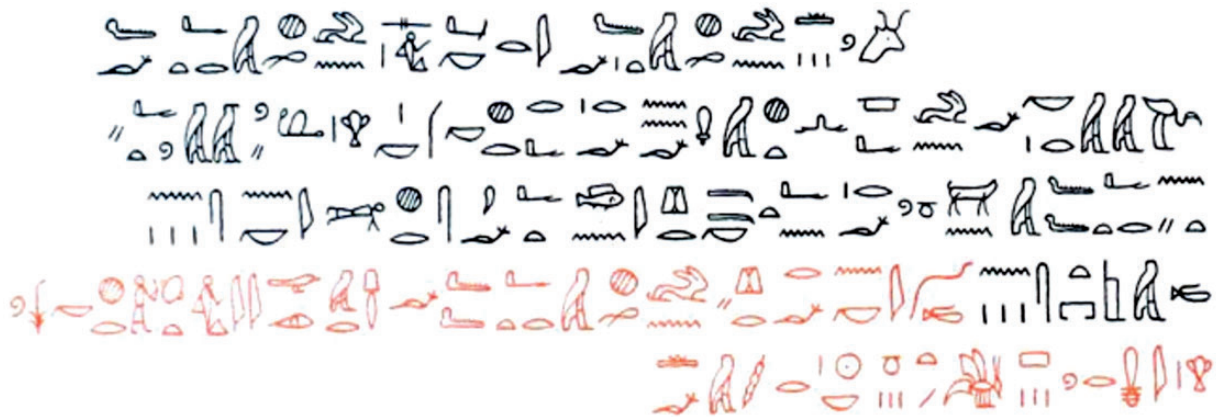
The *Edwin Smith Surgical Papyrus* has been dated to 1550 BC, during the reign of Ahmose I, in the 18th Dynasty (New Kingdom). The only extant copy of the papyrus was purchased in Luxor by Edwin Smith himself in 1862. Its original provenance is unknown. It is now in the New York Academy of Medicine, but it was intensively studied by the director of the Oriental Institute in Chicago, James Breasted, who published two magnificent volumes reproducing, translating and commenting on the papyrus.¹

The second of these two volumes comprises superb, full-sized colour plates (approximately A3 in size) of all 22 columns of the original papyrus. The text is written in cursive hieratic, but Breasted has provided transliteration into the classical and more familiar hieroglyphic text. All of the text is written from right to left. The surviving column 1, comprising cases 1–3, was on the outside of the papyrus roll and, as usual, was damaged, with many lacunae. Breasted therefore added his restoration of the missing parts in two additional pages, with hieratic and hieroglyphic texts.

Volume I of Breasted's commentary comprises 596 pages (approximately A4) and contains the full hieroglyphic text (as in Volume II) with his translation into English and his commentary on each case. The text comprises 48 clinical cases, nearly all of whom are victims of trauma.

Each case starts with a title, typically starting 'Instructions concerning...'. Next is the examination, typically starting 'If you examine a man having...'. This is followed by a pronouncement of the diagnosis and prognosis, typically starting 'You shall then say concerning him....'. The final section is the treatment, which has sometimes been omitted if the prognosis was unfavourable.





Case 25 starts with 'Instructions for a dislocation in his mandible'. The word *wenekh* is well attested to mean 'dislocation' or 'abnormal movement'. There can be no doubt of the word *aret* meaning jaw, because of the unmistakable ideogram, a human jaw bone, which is the 10th hieroglyph of the text. The examination contains the phrase 'you find his mouth open and his mouth does not close for him', which are cardinal signs of a dislocated jaw. The Egyptian words are known beyond doubt, and we can be certain of the diagnosis, which is formally pronounced as follows: 'You shall then say concerning him: one suffering from a dislocation in his two mandibles, an ailment which I will treat'.

The section on treatment is unusually included in the section on diagnosis, and therefore before the pronouncement of diagnosis and prognosis. A literal translation is as follows:

You then place your finger[s] (or thumb[s]) on the back of the two rami [of] the two mandibles inside his mouth, your two thumbs (or fingers) [anty] under his chin; you cause them to fall, so they are put in their [correct] place.²

The only uncertainty in the translation concerns which digits are used in treatment. The word for 'finger[s]' is written with no phonographic hieroglyphs, only the single ideogram unmistakably representing a finger. The full Egyptian phonographic hieroglyphs for 'finger', which would normally precede this ideogram, read as *djeba*. As written, it is singular, but the

ancient Egyptians were not always meticulous in distinguishing between singular and plural.



The word translated above as 'thumb' is *ant*, here written as *anty*, which is the dual of *ant*. The meaning of *ant* in Faulkner's³ dictionary of 1962 is 'claw' or 'nail of finger'. The reading of *ant* as 'thumb' in this context is favoured by the highly authoritative von Deines et al.^{4,5} and Hannig.⁶ It is therefore reasonable to assume the preceding solitary ideogram of the finger does indeed mean 'finger[s]'. However, Breasted took *anty* to mean 'finger[s]' in this context, and the solitary finger ideogram to mean 'thumb'.

Although it is likely that both methods would be effective, Breasted's interpretation corresponds to the current method of reducing a dislocated jaw, in which the thumbs are placed on the rami of the mandibles and the fingers are under the chin, as illustrated on the website of the *National Center for Emergency Medicine Informatics*.

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