

Eye diseases in the Ebers Papyrus

Part 2: Eb 358–386

*Eva Traunmüller, Austria*¹

1 Introduction

The Ebers Papyrus is an important medical papyrus from a West Theban necropolis (el-Assasif) dating from the period of the 17th to early 18th Dynasty. Written in hieratic script, the papyrus contains 877 individual texts consisting of medical prescriptions, instructional texts, and magic spells for a variety of medical problems. The so-called “Eye Book” (Eb 336–431) contains 96 prescriptions for the treatment of various eye diseases and eye injuries.²

Part 1 of this work described the eye diseases in Eb 336–357. In this second part, we will continue with Eb 358–386. The names of the diseases were translated³ and subjected to

¹ Correspondence to: eva.traunmueller@gmx.net

² For more information about the papyrus, see L. Popko (online), metadata, <<https://sae.saw-leipzig.de/de/documents/papyrus-ebers>>, with literature overview (last accessed 08.12.2023).

³ Dictionaries and translations used:

- A. Erman and H. Grapow, *Wörterbuch der ägyptischen Sprache*, Vol. I–VII, (Berlin, 1897–1961; unchanged reprint; Berlin, 1971), hereinafter referred to as “Wb” for short;
- R. Hannig, *Die Sprache der Pharaonen: Großes Handwörterbuch Ägyptisch – Deutsch, Marburger Edition* (KAW 64; 4th revised edn; Mainz, 2006), hereinafter referred to as “Hannig” for short.
- B. Ebbell, *Alt-ägyptische Bezeichnungen für Krankheiten und Symptome* (Oslo, 1938), hereinafter referred to as “Ebbell” for short.
- B. Ebbell, “Die ägyptischen Krankheitsnamen”, *ZÄS* 59 (1924), 55–59, hereinafter referred to as “Ebbell, ZÄS” for short.
- B. Lalanne and G. Métra, *Le texte médical du Papyrus Ebers: Transcription hiéroglyphique, translittération, traduction, glossaire et index* (Langues et cultures anciennes 28; Brussels, 2017), hereinafter referred to as “Lalanne and Métra” for short.
- L. Popko, “Papyrus Ebers: Übersetzung und Kommentar”, in *Science in Ancient Egypt* (Leipzig, online) <<https://sae.saw-leipzig.de/de/documents/papyrus-ebers>> (last accessed 08.12.2023), hereinafter referred to as “Popko (online)” for short.
- W. Westendorf, “Handbuch der Altägyptischen Medizin”, Vols 1 and 2, in H. Altenmüller et al. (eds), *Handbuch der Orientalistik, Erste Abteilung: Der Nahe und Mittlere Osten* (Boston, Cologne and Leiden, 1999), hereinafter referred to as “Westendorf” for short.

a modern ophthalmologic interpretation. Frequent diagnoses were preferred to rare ones, and the environmental and living conditions in ancient Egypt were taken into account. Since some eye diseases and symptoms appear twice or more in the Eye Book, occasional repetition was unavoidable. Many prescriptions are simply titled “Something else” without specifying the condition being treated. I interpret them as alternative treatments for the last mentioned condition. All statements must be considered hypotheses.

2 Eye diseases (Eb 358–386)

As in Part 1 of this work, the text occasionally refers to images in the online “Atlas of Ophthalmology” (<https://www.atlasophthalmology.net>).⁴

Eb 358 (58,2–3)

This prescription is headed “Something else” without specifying a disease. It is probably intended as an alternative treatment for *šp.t m ir.tj* (blindness in both eyes), which is the subject of the previous prescription Eb 357 (57,21–58,2).⁵

Eb 359 (58,3–6)

Text:	
Transcription:	<i>k.t n(j).t srwh mꜣꜣ m jr.tj</i>
Translation:	Something else for improvement of the eyesight in both eyes

The verb *srwh* means “to treat medically”.⁶ It can be loosely translated as “to improve/improvement”, since this is the goal of the treatment. Eyesight that needs to be improved can be a (non-pathological) refractive anomaly in the most benign case, but of course it can also be a symptom of a serious eye disease. A more precise classification is not possible. Here, however, it seems to be a somewhat milder affliction than in Eb 342 (56,17–19),⁷ for there the text speaks of an “opening of the eyesight”, which indicates a

⁴ Such references consist of the abbreviation “AoO” and an image number. To access an image on <https://www.atlasophthalmology.net>, select “Search” from the green menu bar, enter the image number in the search field (“Search phrase”), and click the “Search” button.


⁵ E. Traunmüller, *Eye diseases in the Ebers Papyrus, Part 1: Eb 336–357* (Vienna, 2023), <https://www.egyptological-hypotheses.org>, 17.

⁶ Hannig, 788 (28969, 28973); Wb IV, 193.13–15, 194.1–3.

⁷ E. Traunmüller, *Eye diseases, Part 1*, 7–8.

more advanced loss of sight.


Eb 360 (58,6–15)

Text:	
Transcription:	<i>k.t n(j).t dr s.hḏ.w m jr.tj</i>
Translation:	Something else to eliminate corneal scars from both eyes

The symptom of *s.hḏ.w* (the “whitened ones”) refers to corneal scars that appear as white areas. They have already been identified in Eb 347 (57,5–6) as an irreversible consequence of trauma, alkali burn (AoO 6229) or chronic inflammation (AoO 653).⁸

The prescription consists almost entirely of a spell to be recited over a turtle's gall bladder mashed with honey. It is assumed that ancient Egyptian doctors knew this spell, because after a few sentences it ends with the phrase “[to be continued] according to the ability of the mouth” (*hm.wt r*). This phrase means something like “and so on”. The spell implies that the illness being treated was caused by dead people of both sexes (*mwt mwt.t; s^cmD* kind of revenants?). Therefore, one can speculate that this prescription does not refer to corneal scars caused by trauma or chemical burn, but rather to scars after chronic inflammation, the cause of which the ancient Egyptians could not explain other than by malevolent spirits of the dead.

Eb 361 (58,15–17)

Text:	
Transcription:	<i>k.t n(j).t dr t³.w m jr.tj</i>
Translation:	Something else to remove the heat from both eyes

We have already encountered *t³.w* (“heat”) in Eb 351 (57,11–12). There the problem was even a “concentration of heat” (*swš n[j] t³.w m jr.tj*).⁹ I interpret the suffering as a burning sensation in the eyes, since the “burning” pain (also on the skin) is described in many languages with words related to fire and heat. A burning sensation in the eyes is the

⁸ E. Traunmüller, *Eye diseases, Part 1*, 10.

⁹ E. Traunmüller, *Eye diseases, Part 1*, 12–13, 14.

typical symptom of corneal epithelial defects caused by physical influences (sand, dirt, ultraviolet sunlight [AoO 6791]), reduced tear production (*keratoconjunctivitis sicca*; AoO 7260) or advanced vitamin A deficiency.

The next prescription, Eb 362 (58,17–20), is simply titled “Something else”. It should be interpreted as an alternative treatment “for the temple”, as described in the following prescription, Eb 363. The remedy (bone marrow from the lower jawbone of a donkey mashed in cold water) is similar to the remedies prescribed in Eb 363 and Eb 364, and is also to be applied to the patient's temple.

Eb 363 (58,20–21)

Text:	
Transcription:	<i>K.t n(j).t m^{3c}</i>
Translation:	Something else for the temple


The medical indication for this prescription appears to be pain in the temporal region. Temporal headache in the course of migraine, trigeminal neuralgia (severe nerve pain in the hemilateral innervation area of the sensitive fibers of the trigeminal nerve) and temporal arteritis (Horton's disease) come into consideration.¹⁰ The latter is a chronic inflammation of the arteries of unknown cause which mainly affects the aorta, the carotid arteries and their extracranial branches and leads to local circulatory disorders. The disease manifests itself with severe headaches (often in the temporal region), visual disturbances up to blindness (AoO 356), weakness of the chewing muscles (initially hemilateral) and general symptoms such as fever and fatigue. The impairment of vision in temporal arteritis or a severe migraine attack would also explain why the prescription “for the temple” is included in the Eye Book. However, the prescription states that the remedy with the declared immediate effect – it simply consists of celery chopped in cold water – should be applied to the patient's temple.¹¹ Thus, the relief of local pain is obviously a priority.

¹⁰ Other authors made no assumptions about the nature of the disease (Lalanne and Métra, 121; Popko [online], Eb 363; Westendorf, 614). In my comments on Eb 356 (57,17–21), I have already discussed temporal arteritis as a possible underlying cause of blindness (*šp.t*), since the magic spell included in this prescription averts „raging suffering” (E. Trau Müller, *Eye diseases, Part 1*, 16–17).

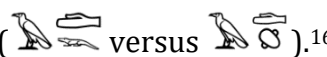
¹¹ If the patient to be treated is mentioned in the Ebers Papyrus, it is always in the masculine form, for example in Eb 363 (58,21): *rd(.w) n(j) zj r m^{3c}=f* (“[it] should be given the man to his temple”). However, it can be assumed that women were treated equally and that men and women were combined under the masculine form.

The next prescription Eb 364 (58,21–22) is entitled “Something else” and is to be understood as an alternative prescription “for the temple”, since the remedy (this time a donkey’s tooth pounded in cold water) is also to be applied to the patient's temple “so that he will recover immediately”.

Eb 365 (59,1–2)

Text:	
Transcription:	<i>k.t n(j).t dr 3d.t m jr.t</i>
Translation:	Something else to eliminate decay from the eye

In my opinion, the word *3d.t* (or sometimes *3dy.t*) classified with the hieroglyph Aa2 (pustule? round package of mummy bandages?) is derived from the verb *3d* which means “to decay, to putrefy”.¹² It should not be confused with the verb *3d* classified with hieroglyph I3 (the crocodile) which means “to rage, to be angry, to be aggressive”, or a similarly written verb *3d* related to pottery.¹³

B. Ebbell suspected in *3dy.t* a *pterygium* (a triangular, conjunctival proliferation extending from the inner corner of the eye to the cornea) and presented it as a kind of malignant disease.¹⁴ However, it is benign. In the worst case, a particularly large *pterygium* may limit vision on the affected side, cause a foreign body sensation, or interfere slightly with the motility of the eyeball (AoO 9602). Otherwise it is more of a cosmetic problem. Also, I cannot agree with M. Vogel's opinion who suggested that *3d.t* is an acute glaucoma.¹⁵ None of this can be reconciled with the description of “decay in the eye”. Both Ebbell and Vogel obviously did not pay attention to the classifier ().¹⁶

¹² Hannig, 18 (601); Wb I, 24.24.

¹³ Hannig, 18 (585, 591, 602); Wb I, 24.15, 25.1.


¹⁴ Ebbell, 6. As an explanation, Ebbell stated that in Eb 412 (62,14–15), the remedy had to be placed in the corner of the eye. In fact, in two of the 13 medical prescriptions for *3d.t/3d.y.t*, the remedy is to be given in the corner of the eye (Eb 412 and Eb 413, where the instruction is “*mjt.t*” [“the same”]).

¹⁵ Martin Vogel is the late former head of the University Clinic for Ophthalmology in Goettingen (Germany). See Westendorf, 614, note 100.

¹⁶ Neither did Popko and Westendorf, who translated *3d.t m jr.t* as „raging in the eye“ (Popko [online], Eb 365; Westendorf, 614). To be fair, it must be admitted that the eye disease was sometimes (erroneously?) written with I3, the crocodile (Hannig, 18 [606]; Wb I, 24.25). Otherwise, the two spellings represent different eye diseases (but see Eb 369 on page 9). Translations by other authors: eye disease (Hannig, 18 [606]; Wb I, 24.25); proliferation of the conjunctiva or cornea (Hannig, 18 [606]); *3d.t* formation (Lalanne and Métra, 122).

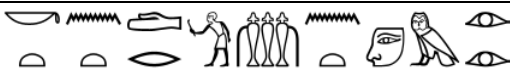
To me, *3d.t/3dy.t* is clearly progressive destruction in one eye, such as a progressive bacterial infection with purulent tissue necrosis (dead tissue; AoO 7807) or an invasive malignant tumor¹⁷ (AoO 6228). Both of these conditions can produce a foul odor in their advanced stages, especially if anaerobic bacteria are involved.

Eb 366 (59,2–3)

Text:	
Transcription:	<i>k.t n(j).t dr t3.w</i>
Translation:	Something else to eliminate the heat

Although the location of the “heat” was not explicitly stated in this prescription, it is likely that the burning sensation in the eyes due to corneal epithelial defects is meant (see above in Eb 361, page 3).

Eb 367 (59,3–6)

Text:	
Transcription:	<i>k.t n(j).t dr hnt m jr.tj</i>
Translation:	Something else to eliminate secretion from both eyes

The word *hnt* (also *hnt.j*¹⁸) in its spelling with the hieroglyphs W17 (water jugs in a rack) and D19 (face in profile) is most likely derived from the preposition *hnt* (“anterior, before, in front of”).¹⁹ Literally, then *hn.t* is “the anterior” (neuter). Traditionally, *hnt* is interpreted as a common cold,²⁰ for which a description as “the anterior” does not seem inappropriate. However, this prescription is specifically for the removal of *hnt* from both eyes. It could therefore be a remedy for ocular secretion as a symptom of conjunctivitis (bacterial [AoO 546], viral, or allergic).

¹⁷ E.g. squamous cell carcinoma, basal cell carcinoma or melanoma of the eyelid or conjunctiva.


¹⁸ Hannig, 654 [23811].

¹⁹ The noun *hnt* meaning “forehead, face” is written identically (Hannig, 652 [23749]; Wb III, 302.1–4).

²⁰ Translations by previous authors: rhinitis/*hnt* rhinitis (Hannig, 654 [23811]; Popko [online], Eb 367; Westendorf, 615); catarrh (Westendorf, 615; Hannig, 654 [23811]); disease in the head (eyes, nose) (Wb III, 308.1); in Lalanne and Métra (p. 123), the word remained untranslated.

In later parts of this work, I will discuss examples of *hnt* without a specified source (Eb 391 [61,9–11]) and “*hnt* from the nose” (Eb 418 [63,2–3]). Therefore, *hnt* should be translated simply as “secretion”.

Eb 368 (59,6–10)

Text:	
Transcription:	<i>k.t n(j).t dr bjdj m jr.tj</i>
Translation:	Something else to eliminate <i>bjdj</i> from both eyes

The *bjdj* disease is unclear.²¹ Other words beginning with *bjd*, *bjd*, *b^cd*, or *b^cd*, which could serve as etymological support, are not listed in the dictionaries. The disease appears only once in the Eye Book of the Ebers Papyrus. Both eyes are affected. In the list of various eye disorders in the magic spell in Eb 385 (60,16–22; see page 13), *bjdj* is between *h³r.w* (a vision disorder that will be discussed in more detail later) and *šp.t* (blindness). This indicates that *bjdj* had something to do with the ability to see. However, it then seems to be a specific visual impairment that differs from *h³r.w* and *šp.t* and also from the non-specific limitation of vision (as in *wb³ m³³/s.rwd m³³/srwh m³³*). In any case, the *bjdj* disease does not seem to have been unusual or congenital. Ptolemaic temple inscriptions give the following epithet for the goddess Sekhmet, who was invoked in the case of illness: [*Shm.t*] *m³³ jr.t nb.t <r> tm hpr(.w) b(j)d(j)* (“[Sekhmet], on whom every eye looks, lest it gets *bjdj*”²²).

To prepare the remedy, in addition to the almost ubiquitous galena, one also needs poultry²³ fat and milk from a woman who has given birth to a boy. The mixture must dry for 9 days before it can be ground and used with myrrh to make up the patient's eyes. T. Pommerening suggested that the yellow fat and milk symbolized the purulent secretions of the eyes, and the drying step in the preparation of the remedy represented the goal of

²¹ Translations by other authors: eye disease/pathological condition of the eye (Hannig, 264–265 [9624], Wb I, 445.18); *bjdj/bjdj* disease (Lalanne and Métra, 123; Westendorf, 615); *bjdj* blindness (Popko [online], Eb 368).

²² My own translation takes Sekhmet as the object of an imperfective relative form of the verb *m³³* (which was also used in a religious context [Hannig, 332, 12018]), followed by the negative infinitive of the verb *hpr* (meaning here: “to get, to develop”). The epithet is interesting, because it would indicate that this goddess was not only asked to cure an existing disease, but also to be spared from a disease. If Sekhmet were the subject who looks at every eye, it would have to be *m³³.t*, as in another epithet: [*Shm.t*] *m³³.t jr.t nb.t dg.t jm=s* (“Sekhmet who sees every eye that looks at her”). See the discussion in Popko (online), Eb 368, note 1.

²³ Westendorf (p. 615) and I read *zt* (pintail), Lalanne and Métra (p. 123) read *zr* (grey goose).

the treatment.²⁴

Eb 369 (59,10–13)

Text:



Transcription: *k.t n(j).t dr ʒd.t m jr.t*

Translation: Something else to eliminate decay from the eye

This is another prescription for *ʒd.t* (“decay, putrefaction”), and again only one eye is affected. I have explained my hypotheses about the medical background of this condition in my comments on Eb 365 (page 5). Here, *ʒd.t* is written with the hieroglyph I3 in addition to Aa2. Nevertheless, I believe that the disease was primarily referred to as “the decay” rather than “the aggressive/raging.” A severe infection and advanced invasive tumor (AoO 8558) are indeed both, aggressive and associated with tissue decay.

The next six prescriptions have only the title “Something else” or no title at all: Eb 370 (59,13–15), Eb 371 (59,15–16), Eb 372 (59,16–17), Eb 373 (59,17–18), Eb 374 (59,18–20), and Eb 375 (59,20–21). If it is true, as I suspect, that they describe alternative treatments for *ʒd.t*, this condition must have been common in ancient Egypt (there are a total of 13 prescriptions and possible alternative prescriptions for *ʒd.t* in the Eye Book of the Ebers Papyrus).

Eb 376 (59,21–22)

Text:



Transcription: *k.t n(j).t dʒdf.t m jr.t*

Translation: Something different for the (pathological) tear flow from the eye

The name of the disease comes from the verb *dʒdf* (“to be drizzled”) and the noun *dʒdf.t* (“tear” in the medical sense). The problem appears to be excessive tearing (*epiphora*) in one eye. This is a common consequence of a drooping, outwardly curled lower eyelid,

²⁴ T. Pommerening thought of trachoma or another bacterial conjunctivitis (T. Pommerening, “Medical Re-enactments: Ancient Egyptian Prescriptions from an Emic Viewpoint”, in: G. Rosati and M. C. Guidotti (eds), *Proceedings of the XI International Congress of Egyptologists, Florence Egyptian Museum, Florence, 23–30 August 2015*, Archaeopress Egyptology 19 [Oxford, 2017], 523–524).

which can occur with age-related relaxation of the eye ring muscle (*ectropium senile*; AoO 2629), facial paralysis (*ectropium paralyticum*), and scarring after an injury (*ectropium cicatriceum*; AoO 2628). The inferior lacrimal punctum, which drains the tear fluid from the eye into the nasolacrimal duct, is turned away from the eyeball and therefore does not perform its function. As a result, tears constantly spill over the edge of the lower eyelid. It would be strange, however, if the ancient Egyptian doctors had named ectropion simply for the overflow of tears, and not for the obvious misalignment of the lower eyelid. Another possible cause of constantly overflowing tears is nasolacrimal duct obstruction, which is not visible from the outside. It may be congenital or acquired due to chronic inflammation (AoO 6201). Tearing can also be an accompanying symptom of unilateral conjunctivitis, corneal inflammation, injury, or a foreign body in the eye. This prescription would therefore be intended for symptomatic treatment.

Eb 377 (60,1-3)

Text:



Transcription: *k.t wb3 m33*

Translation: Something else (to) “open” the eyesight

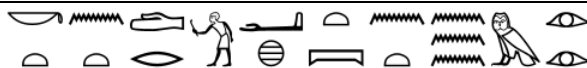
Prescriptions for improving eyesight appear a total of 15 times in the Eye Book.²⁵ This is to be expected, since practically every eye disease is accompanied by visual impairment. The causes may be nearsightedness or farsightedness (refractive anomaly), clouding of the lens (cataract²⁶), sequelae of infection, inflammation or injury to various parts of the eye, damage to the optic nerve due to glaucoma, multiple sclerosis or poisons. The term “opening” of the eyesight best describes the successful treatment of total vision loss due to externally visible clouding of the cornea or pupil, or adhesions of the eyelids (*symblepharon*; AoO 9429).

²⁵ Follow-up prescriptions entitled “Something else” or “Another eye make-up” are included. See also Eb 359 (58,3–6) on page 3.

²⁶ As mentioned in Part 1 in my comments on Eb 342 (56,17–19), frequent exposure to UV sunlight is a risk factor for early development of cataract. Lens opacity can also be congenital or a long-term consequence of blunt trauma.

Eb 378 (60,3-6)

Text:

Transcription: *k.t n(j).t dr ^{ch}.t n(j).t mw m jr.tj*

Translation: Something else to remove the congestion of water in both eyes

The word ^{ch}.t is the infinitive of the verb ^{chj} which means “to raise, to elevate, to lift up”²⁷ and seems to be used here in the sense of increase, congestion, or accumulation. The interpretation of the accumulation of water in both eyes by other authors as a clouding of the lens (cataract)²⁸ does not convince me. The ancient Egyptian doctors named diseases either on the basis of objective observation or on the basis of the patient's subjective complaints. So, one would expect them to name a cataract after the visible whitish opacity in the pupil, or after the patient's "cloudy" vision.

First, let us assume that *mw m jr.tj* (“water in both eyes”) means the water inside the eyeballs. If this water “rises”, i.e. increases or accumulates, this is the perfect description of glaucoma. In this case, the ancient Egyptian doctors would have correctly identified one of the common disease mechanisms of glaucoma, namely an outflow obstruction in the anterior chamber. I think this is quite possible, because in acute glaucoma, the increase in intraocular pressure is palpable. The eyeball then feels rock hard. However, an equal increase in pressure in both eyes is unusual. On the other hand, if it is accumulation of tear fluid, it may be due to a drooping lower eyelid (*Ectropium senile* often affects both eyes) or a bilateral obstruction of the nasolacrimal ducts (usually congenital).²⁹

The dictionaries also give a translation for the verb ^{chj} as “to get away”.³⁰ Then the problem would be a decrease in the amount of water in the eye. Reduced water in the eyes could be used to describe shrinkage of the eyeballs. It can occur as the final stage of a serious but healed infection. However, it rarely occurs in both eyes.³¹ On the other hand, if the tear fluid “gets away”, the treatment is for dry, irritated eyes. This can occur with chronic exposure to sun, wind and sand, or with reduced tear production in old age. In

²⁷ Hannig, 170 (5903); Wb I, 224.2-3.

²⁸ Ebbell, 11; Hannig, 170 (5909); Westendorf, 616. Other translations of ^{ch}.t mw: accumulation of water (Wb I, 224.8); water congestion (Hannig, 170 [5909]); rising secretions (Lalanne and Métra, 125); “elevation” of water (Popko [online], Eb 378).

²⁹ See also my comments on Eb 376 (59,21-22), page 10.


³⁰ Hannig, 170 (5904); Wb I, 224.6.

³¹ It should be noted, however, that *jr.tj* may sometimes be a scribal error due to habit.

addition, advanced vitamin A deficiency³² is associated with cornea degeneration in both eyes, in which the epithelial cells take on the characteristics of epidermal cells (keratinization). For historical reasons, this condition is described as “dehydration” of the cornea, hence the technical term *xerophthalmia* (from ancient Greek ξηρός, dried up, and ὄφθαλμός, eye [AoO 8280]).


The next prescriptions, Eb 379 (60,6–7) and Eb 380 (60,7–8), have only the title “Something else”.

Eb 381 (60,8–10)

Text:	
Transcription:	<i>k.t n(j).t dr thn m jr.t</i>
Translation:	Something else to remove a <i>thn</i> injury in the eye

Like Eb 337 (56,6–10),³³ this is another prescription for treating a *thn* injury. The verb *thnj* means “to hurt, to attack, to injure”.³⁴ In my opinion *thn m jr.t* was specifically used to describe an eye injury caused by a pointed object (puncture wound [AoO 7448] or scratch wound),³⁵ because I think it is possible that the root *thn* had an original meaning of “to be pointed”. It also forms the words for ibis (bird with a long, pointed beak) and obelisk.³⁶

Eb 382 (60,10–11)

Text:	
Transcription:	<i>k.t n(j).t dr s.hḏ.w m jr.t</i>
Translation:	Something else to remove corneal scars from the eye

³² The traditional grain-based diet of ordinary people in ancient Egypt predisposed them to vitamin A deficiency.

³³ E. Traunmüller, *Eye diseases, Part 1*, 5–6.


³⁴ Hannig, 1010 (37403, 37404); Wb V, 327.2–6.

³⁵ Translations by other authors: hit on the eye (Ebbell, *ZÄS*, 58); eye injury/*thn* injury (Hannig, 1010 [37405]; Lalanne and Métra, 117; Popko [online], Eb 337; Wb V, 327.7); scratch wound (Westendorf, 609).

³⁶ Hannig, 1010 (37394, 37402); Wb V, 326.15, 326.25.

Here, *s.ḥd.w* (literally: the “whitened ones”) appear for the third time in the Eye Book after Eb 347 (57,5–6)³⁷ and Eb 360 (58,6–15; see page 3). This term is almost pathognomonic for the irreversible whitish scars of the cornea (AoO 653) following severe infection (including late stage trachoma), corneal inflammation, injury or alkali burn (e.g. from natron or quicklime [AoO 6229]).³⁸

Eb 383 (60,12–13)

Text:	
Transcription:	<i>k.t phr.t n(j).t dr nh³.<w>t m jr.tj</i>
Translation:	Another remedy to eliminate <i>nh³.(w)t</i> from both eyes

In my comments on Eb 350 (57,10–11) where *nh³.(w)t* (plural) appears for the first time as a medical condition in the Eye Book,³⁹ I wrote that it either refers to the word *nh³* for “to be uneven, to be rough”/“bumpiness, roughness”,⁴⁰ or for “to be dangerous, to be terrible, to be wild”⁴¹. Bumpiness immediately recalls the papules (lymph follicles) of the eyelid conjunctiva in stage 2 trachoma (AoO 4908).⁴² The attributes “terrible” and “wild” make me think of terrible pain, e.g. in acute glaucoma or neuralgia in the eye area.⁴³ However, these diseases do not affect both eyes at the same time.

In all these cases the plural *nh³.(w)t* is justified. This time, however, the plural strokes are missing. With the singular *nh³.t*, it would then be a single bump, e.g. a tumor in the eye area, or something “wild” in one eye, e.g. a serious eye infection. On the other hand, as in Eb 350, both eyes are affected according to the title of the prescription. I therefore suspect that the missing plural strokes here are a scribal error.

³⁷ E. Traunmüller, *Eye diseases, Part 1*, 10.

³⁸ The cornea can become completely white and opaque (AoO 639), and interspersed with ingrowing blood vessels (AoO 586). In modern ophthalmology, corneal scars can be healed by corneal transplantation.

³⁹ E. Traunmüller, *Eye diseases, Part 1*, 11–12.

⁴⁰ Hannig, 445 (16041, 16049); Wb II, 291.2.


⁴¹ Hannig, 445 (16036, 16039, 16046); Wb II, 290.5–14.

⁴² According to this view, *nh³.(w)t* and *whd.w* would be synonymous or they indicate different stages/severities of conjunctival papules. See page 16, and also part 1 of this work (E. Traunmüller, *Eye diseases, Part 1*, 4–5, 7).

⁴³ Also, because the remedy contains labdanum (resin of *Cistus ladanifer*), an ancient analgesic (not to be confused with laudanum, the opium preparation). P. Dioscurides, *Arzneimittellehre in fünf Büchern* (translated by J. Berendes; Stuttgart, 1902), 1st book, 112–113.

the phrase “[to be continued] according to the ability of the mouth” (*hm.wt r*).⁴⁶

Eb 386 (61,1–3)

Text:	
Transcription:	<i>k.t n(j).t sdm n(j).t hsf whd.w m jr.tj</i>
Translation:	Something else to make up to ward off the papules in both eyes

This is another prescription for *whd.w* (plural) which I interpreted as papules in my comments on Eb 336 (55,20–56,6) and Eb 341 (56,16–17) in Part 1 of this work.⁴⁷ In the case of the eye, papules are lymph follicles of the conjunctiva in stage 2 trachoma (AoO 4908). As in Eb 341, this eye make-up is intended for prophylaxis (*hsf*, “to ward off”).⁴⁸

To be continued in Part 3.

Abbreviations

AoO: *Altals of Ophthalmology*; BiOr: *Bibliotheca Orientalis* (Leiden); Wb: Adolf Erman/Hermann Grapow, *Wörterbuch der ägyptischen Sprache*, Vols. I–VII (Berlin, 1897–1961), unchanged reprint 1971.

⁴⁶ Like the magic spell in Eb 360 (page 4).

⁴⁷ E. Traunmüller, *Eye diseases, Part 1*, 4–5, 7. The traditional translation of *whd.w* is “pain substances” or “pain demons” (Hannig, 229 [8261]; Westendorf, 609; Popko [online], Eb 336).

⁴⁸ In contrast, for prescriptions to treat existing symptoms of disease, the verb *dr*, which means “to eliminate, to expel”, is used in the title.