

Eye diseases in the Ebers Papyrus

Part 3: Eb 387–417

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1 Introduction

Detailed information on the Ebers Papyrus can be found in the metadata of the translation by L. Popko.¹ The so-called “Eye Book” includes Eb 336 to Eb 431.

After having dealt with the eye diseases from Eb 336 to Eb 386 in parts 1 and 2 of this work,² this is to continue with Eb 387–417. The respective disease name was translated³ and subjected to a modern ophthalmological interpretation. Frequent diagnoses were preferred over rare ones, and the environmental and living conditions in Ancient Egypt were taken into account. Repetitions of ideas from the previous parts of this work were unavoidable, because certain (presumably common) eye diseases appear two or more times in the Ebers Papyrus. Many prescriptions are simply titled “Something else” (k.t) without specifying the eye condition being treated. In my opinion, they must be viewed as alternative treatments for the last-mentioned disease.⁴ All statements must be viewed as hypotheses.

¹ L. Popko (online), *Metadaten*, <<https://sae.saw-leipzig.de/de/documents/papyrus-ebers>>, with literature overview (last accessed 08.01.2024).

² E. Traunmüller, *Eye diseases in the Ebers Papyrus*, Parts 1 and 2 (Vienna 2023), <<https://www.egyptological-hypotheses.org>>.

³ Dictionaries used:

- A. Erman and H. Grapow, *Wörterbuch der ägyptischen Sprache*, Vols I–VII, (Berlin, 1897–1961; unchanged reprint; Berlin, 1971), subsequently 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), subsequently referred to as “Hannig” for short.

Other translations used on a case-by-case basis:

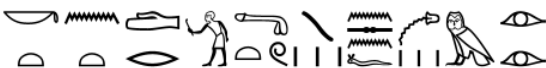
- B. Ebbell, *Alt-ägyptische Bezeichnungen für Krankheiten und Symptome* (Oslo, 1938), subsequently referred to as “Ebbell” for short.
- B. Ebbell, “Die ägyptischen Krankheitsnamen”, *ZÄS* 59 (1924), 55–59, subsequently referred to as “Ebbell, *ZÄS*” for short.
- B. Lalanne and G. Métra, *Le texte médical du Papyrus Ebers: Transcription hiéroglyphique, translittération, traduction, glossaire et index* (Langues et cultures anciennes 28; Brussels, 2017), subsequently 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 08.01.2024), subsequently 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), subsequently referred to as “Westendorf” for short.

⁴ Westendorf called these prescriptions “k.t prescriptions” (Westendorf, 55, 89, 91, etc.).

2 The eye diseases (Eb 387–417)

As in the previous parts, the text occasionally refers to images in the online “Atlas of Ophthalmology” (<https://www.atlasophthalmology.net>).⁵


Eb 387 (61,3–4)

Text:	
Transcription:	k.t n(j).t dr mt.w n(j)<.w> znf m jr.tj
Translation:	Something else to remove the blood vessels in both eyes

This remedy is probably intended to eliminate inflammatorily dilated blood vessels.⁶ Dilated vessels occur in all inflammatory conditions of the eye (AoO 4194). When the iris is inflamed (iritis), they are particularly pronounced around the edge of the cornea (AoO 7938). In my opinion, the same suffering is elsewhere described as “blood in/on the eyes” (znf m/ħr jr.tj).⁷

Cosmetic treatment is also possible, if not very likely. With increasing age, the fine veins of the conjunctiva become more visible and tortuous, and the eyeball no longer appears as brightly white and clear as it did in youth. The women (or men) of high status who were concerned about beauty might have found this cosmetically disturbing.

Eb 388 (61,4–6)

Text:	
Transcription:	jrr.wt m 3bd ĥmt.nw n(j) pr.t nfry.t-r 3bd jfd.nw n(j) pr.t

⁵ Such references consist of the abbreviation “AoO” and an image number. To access an image on the website <<https://www.atlasophthalmology.net>>, please select the “Search” function in the green menu bar, enter the image number in the search field that opens (“Search phrase”) and click the “Search” button.

⁶ The anatomical word mt.w can mean hollow vessels or solid strands such as muscle strands, tendons, and ligaments (Hannig, 395, [14196, 14198]; Wb II, 167.9–13). The expression mt.w nj.w znf leaves no doubt that blood vessels are meant here.

⁷ E.g. in Eb 348 (57,6–8) and Eb 384 (60,13–16).

Translation:	Something that can be made (only) from the third to fourth month of the Peret season
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The sentence has been translated somewhat shortened.

The ancient Egyptian year had three seasons of four months each. Peret (from the end of October to the end of February) was the season of germination of the seeds (pr.t, “the coming forth”), i.e. the growth phase of crops, which falls in the winter in Egypt. It was obviously expected that the doctor knew which eye condition is intended to be treated with this prescription.

It is reasonable to assume that the specified remedy contains a certain herbal ingredient that is only available during this limited period of time.⁸ The remedy consists of everyday minerals and ḥt-ꜥwṯ which has been translated by some as “rotten wood” or “petrified wood” (from ꜥwṯ, “to rot, to ferment”).⁹ However, this is anything but certain. The word could just as plausibly be derived from the verb ꜥwṯj for “to harvest” or “to plunder, to rob”.¹⁰ If so, ḥt-ꜥwṯ(.j) literally is “harvested/robbed wood”, possibly green shoots that can be collected in the late Peret season. In the dictionary by R. Hannig (2006), one finds the assumption that ḥt-ꜥwṯ could be *Aloe vera*.¹¹ The original home of the *Aloe* (there are over 500 species) is probably the Arabian Peninsula, as the genus name comes from Arabic. Appropriately enough, *Aloe vera* blossoms from January to February.¹² Thus, we can (purely speculatively) shortlist *Aloe* blossoms. Personally, I think one has to read the name of this officinal ingredient in a different way, namely ḥt-ꜥ wṯ(.w), making it a “drug from far away”.¹³ Perhaps it was only available for purchase in the late Peret season, when caravans of traders from Asia arrived in Egypt (which does not exclude the *Aloe*). On the other hand, the ingredient appears in several other prescriptions without any seasonal restriction.¹⁴

⁸ Westendorf (p. 26) held a different opinion: Accordingly, seasonal remedies were intended to cure seasonal diseases. At least for Eb 393 (page 7) this is not true, because this remedy was aimed at the “common” diagnosis of visual impairment.

⁹ Hannig, 671 (24480); Lalanne and Métra, 127; Popko (online), Eb 388; Westendorf, 618; Wb III, 340.8.

¹⁰ Hannig, 144 (4914), 145 (4927); Wb I, 171.3, 171.18.

¹¹ Hannig, 671 (24480).

¹² U. Eggli (ed.), *Sukkulenten-Lexikon: Einkeimblättrige Pflanzen (Monocotyledonen)* (Stuttgart, 2001), 189.

¹³ ḥt-ꜥ : Hannig, 671 (24475); wṯ.w : Hannig, 182 (49732); Wb I, 245.15; 246.2.

¹⁴ For example, Eb 336 (55,20–56,6), Eb 348 (57,6–8), Eb 355 (57,15–17), Eb 369 (59,10–13), Eb 374 (59,18–20), and others.

Eb 389 (61,6-8)

Text:	
Transcription:	k.t <nj.t> sdm jrr.t m šmw pr.t ʒḥ.t
Translation:	Something else (for) making up (the eyes) which can be made during the Shemu, Peret and Akhet seasons

All three seasons are mentioned: Shemu is the season of harvest (dry season, end of February to end of June), Peret is the season of germination of the seeds (end of October to end of February), and Akhet is the season of Nile flooding and sowing (end of June to end of October). Thus, this eye make-up can be made all year round; the ingredients galena and goose fat are not tied to a specific season.

The word *sdm* that is determined with D4 (eye) is most frequently translated as “to make up the eyes” and “eye make-up”, respectively.¹⁵ However, in a medical context it can also mean “to anoint”.¹⁶ Therefore, *sdm* should not be taken as eye make-up in the narrow (decorative) sense, but must more generally be understood as the application of a paste (be it medical remedy, ointment, protective paint, or cosmetic *khol*) onto the eyelids. For the sake of simplicity, I will nevertheless stick with “eye make-up”. In general, eye make-up had a medical background, but the cosmetic side effect was valued and it was also practiced ritually.¹⁷

The eye disease to be treated remains unclear. It is possible that the two medical prescriptions with a seasonal reference, Eb 388 and Eb 389, must be understood as alternative prescriptions for removal of the blood vessels in both eyes (Eb 387, see page 3).


The following prescription Eb 390 (61,8–9) with the simple title “Something else” contains, judging by the ingredients (galena, malachite, lapis lazuli, ocher, and honey), another instruction for preparing eye make-up.

¹⁵ For the translation as “another eye make-up”, it would have to be “kv sdm”.

¹⁶ Hannig, 855 (31627); Wb IV, 370.4–8.

¹⁷ J. Illes, *Ancient Egyptian Eye Makeup*, <https://www.hashmisurma.com/images/ancient_egyptian_eye_makeup.pdf> (last accessed 08.01.2024); S. El-Kantiry, *Ancient Egyptian Cosmetics*, <<https://studylib.net/doc/7413929/ancient-egyptians-cosmetics>> (last accessed 08.01.2024).


Eb 391 (61,9-11)

Text:	
Transcription:	k.t n(j).t dr ḥnt m tp m sdm
Translation:	Something else to remove secretion from the head using eye make-up

This is close to the traditional translation.¹⁸ Alternatively, the character combination of m and tp could be read as m-tp (“before, on top of, additionally”¹⁹), and the heading would then read: “Something else to eliminate secretion, [to be applied] additionally as eye make-up”.

The exact source of *hnt* (“secretion”²⁰) is not specified here.²¹ The spelling of the word *hnt* (also *hnt.j*)²² with the hieroglyphs W17 (water jugs in a rack) and D19 (face in profile) is identical to the spelling of *hnt* for “forehead, face”.²³ This points to a derivation from the preposition *hnt* (“anterior, in front of, in the forefront of”). The literal translation of the disease *hnt(.j)* is therefore “the anterior” (neuter). This was perhaps the popular name for a common cold which is often associated with acute sinusitis and watery eyes.²⁴ It cannot be ruled out that the ancient Egyptians also knew the allergic form of rhinitis (*Rhinitis allergica*) in which the eye symptoms are even more pronounced.

Eb 392 (61,12-14)

Text: 

Transcription: k.t phr.t n(j).t jr.t hpr.t(j) (j)h.wt nb.(w)t dw.wt r=s

¹⁸ Lalanne and Métra, 127 ("*mal-khent qui est dans la tête*"); Popko (online), Eb 391; Westendorf, 619.

¹⁹ Hannig, 330 (11896).

²⁰ Hannig, 654 (23811); Wb III, 308.2.

²¹ Two more prescriptions against *hnt m tp* are in Eb 298 and Eb 299 (Lalanne and Métra, 109; Popko [online], Eb 298, Eb 299; Westendorf, 602–603). In Eb 367 (59,3–6) it is “secretion in the eyes” (*hnt m jr.tj*), in Eb 418 (63,2–3) it is “secretion from the nose” (*hnt m fnd*).

²² Hannig, 654 (23811).


²³ Hannig, 652 [23749]; Wb III, 302.1–4.

²⁴ The viruses that cause colds could have been more dangerous thousands of years ago than they are today (U. Greber, <https://www.imls.uzh.ch/static/CMS_publications/greber/literatur/pdf18/647.pdf>, p. 1, [text in German, last accessed 08.01.2024]).

Translation:	Another remedy for the eye when it is infested by all sorts of bad things
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I deliberately chose the verb “infested” to do justice the prepositional phrase *r=s* which suggests a directional process. The “bad things”²⁵ here could primarily mean disease processes that spread from the area around the eye to the eye. However, it seems more likely to me that the ancient Egyptian doctors already suspected that certain eye diseases are infectious in nature and can be transmitted from person to person or by flies.²⁶

Eb 393 (61,14–16)

Text:	
Transcription:	k.t <nj.t> s.rwd m ³³ jrr.t m 3bd tpj n(j) pr.t nfry.t-r 3bd sn.nw n(j) pr.t
Translation:	Something else (for) strengthening the eyesight that can be prepared (only) from the first to the second month of the Peret season

The sentence has been translated somewhat shortened.

The medical indication of this remedy is visual impairment (as so often in the Eye Book; a narrower definition of the diagnosis is not possible). However, this remedy can only be made in the first and second months of the Peret season which roughly correspond to November and December. The formula consists of equal parts “male” galena,²⁷ galena, and an ingredient named snn. The latter has been interpreted as resin or balsam.²⁸ It is likely that snn came from a plant the resin or oil of which could be collected in the winter months. One possibility is the so-called Balsam of Mecca.²⁹

²⁵ The “bad things” also appeared in the magic spell in Eb 385 (60,16–22) (Traunmüller, *Eye diseases, Part 2*, 15).


²⁶ Cf. Westendorf, 21, 457–458.

²⁷ Sexual differentiation of medicinal ingredients was not uncommon, but the significance of this is not known (Westendorf, 515 note 57; Popko [online], Eb 359 note 1).

²⁸ Hannig, 779 (28617); Wb IV, 166.13; Lalanne and Métra, 127; Popko (online), Eb 393; Westendorf, 619.

²⁹ Cf. Hannig, 779 [28617]). Balsam of Mecca is the valuable and fragrant mixture of essential oils and resin from *Commiphora opobalsamum* (a shrub, formerly named *C. gileadensis*) which is native to the coasts of the Red Sea and was later also cultivated in Egypt (K. Gauckler, “Die kostbarsten Drogen der Alten Welt: Weihrauch, Myrrhe, Balsam”, in *Abh. Naturhist. Ges. Nuernberg* 35, 1970, 154–155). In East Africa, the plant grows during the short pluvial period from October to December. In ancient times, Balsam of Mecca was used to cure various ailments.


Eb 396 (61,18-19)

Text:	
Transcription:	k.t n(j).t wb³ m³
Translation:	Something else for “opening” the eyesight

This is another of a total of 15 prescriptions³⁰ for “opening”, strengthening, or treating the eyesight. Virtually every eye disease is accompanied by visual impairment.

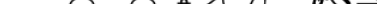
The treatment instructions are somewhat peculiar: A pottery shard from a new hnw vessel³¹ had to be incensed over grain mucilage and afterwards given to the eyes (r jr.tj) very often (^{cš}3 zp 2, “twice as often”).

Eb 397 (61,19-20)

Text:	
Transcription:	k.t <nj.t> sdm n(j) wb' m3'
Translation:	Something else (for) making up (the eyes) for “opening” the eyesight

It is another formula for improving/restoring vision, expressly intended for use as eye make-up.


Eb 398 (61,20-21)

Text: 

³⁰ Nine prescriptions with *wbʾ mʾb*, *s.rwd mʾb*, or *srwh mʾb* mentioned in the title, and six alternative prescriptions.

³¹ The hnw vessel was used as a measure of capacity (0.48 liter).


Eb 402 (62,4–5)

Text:	
Transcription:	k.t n(j).t dr s.ḥd.w ḥpr(.w) m jr.tj
Translation:	Something else to eliminate the corneal scars that have developed in the eye

As mentioned in my comments on Eb 347 (57,5–6) and Eb 360 (58,6–15),³³ the disease is unequivocally identified with corneal scars. (There is no other externally visible eye disease that would fit the term “the whitened ones.”). Corneal scars arise from chronic inflammation, injury, or chemical burn. In the most severe case, the entire cornea has become white and opaque, and blood vessels have grown in (AoO 297). There is a total of 8 prescriptions for corneal scars in the Eye Book.³⁴

The following prescriptions, Eb 403 (62,5–6), Eb 404 (62,6), Eb 405 (62,6–7), and Eb 406 (62,7) have the simple title “Something else” and are probably also remedies for corneal scars.

Eb 407 (62,7–8)

Text:	
Transcription:	k.t n(j).t dr nh̓.wt
Translation:	Something else to eliminate nh̓.wt

The term nh̓.wt describes an unclear eye disease. I have already discussed it in my comments on Eb 350 (57,10–11) and Eb 383 (60,12–13) where the disease explicitly affects both eyes.³⁵ I agree with other authors³⁶ in thinking that the literal translation is

³³ Traunmüller, *Eye diseases, Part 1*, 10; *Part 2*, 4.

³⁴ Four prescriptions with this medical indication named in the title, and four alternative prescriptions. In reality, corneal scars are irreversible and can only be healed through laser ablation (in mild cases) or a corneal transplant.

³⁵ Traunmüller, *Eye diseases, Part 1*, 11–12; *Part 2*, 14. Translations by other authors: same as wh̓.wt (Ebbell, 26; Hannig, 223 [8051], 445 [16043]; Westendorf, 611 note 92, 621); something rough, not smooth (Lalanne and Métra, 119 and note 48); nh̓.t-affliction (Popko [online], Eb 350, Eb 407); eye disease (Wb II, 290.19).

³⁶ Hannig, 445 (16043); Popko (online), Eb 407; Westendorf, 621.

The second possible translation as "the terrible ones, the wild ones" (according to the second meaning of the verb *nḥʾ*) would indicate a very painful eye disease. However, such conditions, e.g. acute glaucoma, trigeminal neuralgia or shingles with eye involvement, usually occur on one side only. Perhaps the ambiguous verb *nḥʾ* was used as a pun to describe trachoma,³⁷ as this eye infection causes unevenness/roughness (of the eyelids) in its early stages, and has "terrible" consequences in its later stages (AoO 4909).


Text:	
Transcription:	k.t n(j).t dr šsm.w dšr(.w) m jr.tj
Translation:	Something else to remove red inflammation in both eyes

It is surprising that the symptom “red inflammation³⁹ in both eyes” only appears once in the Eye Book, although it is a symptom of many eye diseases such as infections (AoO 3014), injuries, chemical burns, chronic inflammation on an immunological basis, glaucoma, etc. In my opinion, this is because severe redness of the eyeball due to

³⁹ Actually, šsm.w dšr.(w) is a pleonasm because according to the Edwin Smith Papyrus, šsm.w (also: šsm.wt) means “redness” (see also Hannig, 905 [33582]). Translations of šsm.w dšr.(w) by other authors: ptosis or similar (Ebbell, 54–56), red inflammation (Popko [online], Eb 408; Westendorf, 621); in Lalanne and Métra (p. 129) šsm.w remains untranslated.

inflammatory dilatation of the blood vessels was usually circumscribed as “blood in/on the eyes” (znf m/hr jr.tj).⁴⁰ Perhaps this was the more popular expression.

Eb 409 (62,10–12)

Text:	
Transcription:	k.t n(j).t dr 3dy.t m jr.t
Translation:	Something else to remove decay from the eye

The eye disease that was written 3dy.t here and was written 3d.t elsewhere⁴¹ is probably derived from the verb 3d, determined with the hieroglyph Aa2 (pustule? round package of mummy bandages?), that means “to decay, to putrefy”⁴². A related verb determined with the hieroglyph I3 (crocodile) means “to rage, to be angry, to be aggressive”.⁴³ The 3d.t/3dy.t disease occurs three times in the Eye Book; in two cases it was written using Aa2, in the remaining case it was written using both, Aa2 and I3.⁴⁴

In Part 2 of this work, I have interpreted 3d.t/3dy.t as a severe infection (AoO 546) or an invasive tumor⁴⁵ (AoO 8558).⁴⁶ The two diseases have tissue breakdown and aggressive progression in common. The ancient Egyptians naturally could not yet recognize their different pathophysiological basis.

The following four prescriptions, Eb 410 (62,12–13), Eb 411 (62,13–14), Eb 412 (62,14–15), and Eb 413 (62,15–17), again have the simple title “Something else”, so they probably also work against 3d.t/3dy.t.

⁴⁰ Eb 336 (55,20–56,6; znf m jr.t as an accompanying symptom of whd.w), Eb 348 (57,6–8), Eb 352 (57,12), Eb 384 (60,13–16). Cf. Traunmüller, *Eye diseases, Part 1*, 4–5, 10–11, 13–14; *Part 2*, 14–15. See also Eb 387 (page 3), where the goal of treatment is “elimination of the blood vessels in the eyes”. Real blood on the surface of the eye or under the conjunctiva is a self-limiting problem. Blood inside the eyeball cannot be detected without modern optical aids.

⁴¹ Eb 365 (59,1–2) and Eb 369 (59,10–13). Cf. Traunmüller, *Eye diseases, Part 2*, 6–7, 9.

⁴² Hannig, 18 (601); Wb I, 24.24.


⁴³ Hannig, 18 (585, 591); Wb I, 24.15.

⁴⁴ Eb 369 (59.10–13). Cf. Traunmüller, *Eye diseases, Part 2*, 9.

⁴⁵ Some malignant tumors do not appear as a solid growth, but rather as ulcerated tissue decay (for instance basal cell carcinoma).

⁴⁶ Translations by other authors: eye disease (Hannig, 18 [606]; Wb I, 24.25); *pterygium* (Ebbell, 6; Hannig, 18 [606]); 3dy.t formation (Lalanne and Métra, 129); raging in the eye (Popko [online], Eb 409; Westendorf, 621).

Eb 414 (62,17-18)

Text:	
Transcription:	k.t n(j).t wb³ m³³
Translation:	Something else for “opening” the eyesight

It is one of the many prescriptions that promise successful treatment of severe vision loss (of unknown cause).

Eb 415 (62,18-22)

Text:	
Transcription:	k.t n(j).t dr ḥʿt.j kk.w ḥ3<r>.w s.t- ^c ḥpr.t(j) m jr.tj
Translation:	Something else to eliminate blurring, darkness, and a squint when the influence appears in both eyes.

The heading names three symptoms that affect both eyes:

The symptom ḥṣ.tj is already known to us from Eb 339 (56,11–15) as “blurred/cloudy vision”. Cloudy vision, aptly indicated by the weather-associated determinative (N4, sky with falling rain or dew), occurs with all kinds of opacity of the eye (blurring of the cornea, anterior chamber humor, lens, or vitreous body).⁴⁷

What is new here is the symptom *kk.w* (“darkness”⁴⁸) which may be interpreted as a paraphrase for blindness. However, other expressions were used more frequently for blindness and vision loss (*šp.t*, *k3mn*, *wb3 m33*). Therefore, I suggest that *kk.w* is an abbreviation for “visual impairment in the dark”, i.e. night blindness. Night blindness is a result of vitamin A deficiency,⁴⁹ which was certainly widespread among the lower-class

⁴⁷ Traunmüller, *Eye diseases, Part 1*, 6. Translations by other authors: watery eyes/*lippitudo* (Ebbel, 32; Hannig, 543 [19675]); blepharitis (Ebbell, 33; Hannig, 543 [19675]); blur (Hannig, 543 [19675]; Popko [online], Eb 339, Eb 415; Westendorf, 610, 622); leukoma (Hannig, 543 [19675]); impaired vision (Lalanne and Métra, 117, 129); eye disease of humans and cattle (Wb III, 35.13–14).

⁴⁸ Hannig, 960 (35494, 35501); Lalanne and Métra, 129; Popko online, Eb 415; Westendorf, 622.

⁴⁹ Vitamin A is needed to form the visual pigment in the cells of the retina. A deficiency manifests itself primarily in the so-called rods, which enable adaptation to darkness.

population.⁵⁰ Importantly, night blindness can be accompanied by blurred vision (ḥꜣt.j) even at daytime, because advanced vitamin A deficiency leads to bilateral degeneration of the cornea (*xerophthalmia*; AoO 8280). Earlier translators postulated that the ancient Egyptian word for night blindness is šꜣ(r).w (see Eb 351 [57,11–12]).⁵¹ I myself have šꜣ(r).w instead interpreted as epithelial defects of the cornea,⁵² so that in my work, night blindness is still “free” for kk.w.


The third symptom, here written ḥꜣ.w, also occurs for the first time in the Eye Book. It was said to be a defective spelling of ḥꜣr.w (also: ḥꜣrr.w).⁵³ Depending on the author, the symptom was translated as “weak-sightedness” or “squint” (*strabismus*).⁵⁴ If the reduced visual acuity of an otherwise healthy eye is not caused by a refractive anomaly (short- or far-sightedness, astigmatism), one must take *amblyopia* into consideration (from the Greek ἀμβλῦς, “blunt”, and ὄψις, “to see”; in colloquial speech called “lazy eye”). Amblyopia occurs during early childhood as a permanently inchoate interaction between the retina and the visual center in the brain. It is often the result of congenital strabismus because the brain suppresses the visual input of one eye to avoid double vision. With certain forms of strabismus, children try to compensate for the double vision by tilting and turning their head until, over time, this becomes a permanent wry neck (ocular *torticollis*; AoO 5141). This is reminiscent of two Egyptian text passages where an association is made between ḥꜣr(.w) and an ailment of the neck.⁵⁵ Because of all that, I

⁵⁰ From preserved supply documents, we know that grain products (bread, beer), onions and little meat or fish formed the basis of the diet of working men (W. Helck, “Arbeiterversorgung”, in M. Fierro et al. (eds), *Wirtschaftsgeschichte des alten Ägypten im 3. und 2. Jahrtausend vor Chr.*, [HdO 5, Leiden, 1974], 231–234). However, significant amounts of vitamin A are only found in milk, eggs and liver. Red and yellow fruits and vegetables, which contain a precursor of vitamin A (carotene) were also hardly available in ancient Egypt, especially to the lower class.

⁵¹ Ebbel, 48; Hannig, 869 (32185); Popko (online), Eb 351; Westendorf, 612.

⁵² Traunmüller, *Eye diseases, Part 1*, 12–13.

⁵³ Ebbell, 32. The ḥꜣrw/ḥꜣrr.w eye disease also appears in the spell of Eb 385 (60,16–61,1) and in Eb 856e (103,8–11).


⁵⁴ Translations by other authors: weak-sightedness (Ebbell, 31–32; Hannig, 542 [19637, 19638]; Lalanne and Métra, 129; Popko [online], Eb 415; Westendorf, 622); squint (Hannig, 542 [19638]). The translation as “weak-sightedness” is based on a Coptic word (Ebbell, 32). But if the correct name of the disease is ḥꜣ.w, as spelled in Eb 415, no etymological derivation is possible, because  is a word root that forms many different words. The conjecture by Erman and Grapov (Wb III, 18.12) that ḥꜣ.w was a misspelling for ḥꜣt.j is obsolete, because both these diseases are mentioned in the heading of Eb 415.

⁵⁵ Eb 856e (103,8): “If he suffers from his neck and his two eyes have ḥꜣr(.w) [...]” (Lalanne and Métra, 211; Westendorf, 698). Gynecological Papyrus Kahun I (1,1): “Healing [for a woman whose eyes are] sick, and she cannot see and suffers from her neck [...]” (L. Popko, *Gynäkologischer Papyrus Kahun*, <<https://sae.saw-leipzig.de/de/documents/gynaecological-papyrus-kahun>>, last accessed 08.01.2024).

advocate that ḥꜣ(r).w should be interpreted as strabismus (squint) with or without amblyopia in one of the two eyes.

The word st-^c (“influence, access, activity”⁵⁶) in the subordinate clause indicates that the ancient Egyptians partly imagined illness as being caused by gods, demons, or the dead.⁵⁷ A question arises as to whether this remedy helps against a combination of blurred vision, night blindness and strabismus in the same person, or whether one and the same remedy works against these three different eye problems. But perhaps it is an even more versatile remedy, and one should read the second part of the heading as a parataxis: s.t-^c ḥpr.t m jr.tj (“... and [other] symptom(s) that have developed in both eyes”).⁵⁸

Eb 416 (62,22–63,1)

Text:	
Transcription:	k.t n(j).t dr qnj.t
Translation:	Something else to eliminate qnj.t

Some authors considered qnj.t to be an alternative spelling of qn.t.⁵⁹ We are already familiar with qn.t (see Eb 354 [57,14–15]).⁶⁰ Like most authors, I have derived this disease name from the verb qn (“to be greasy”⁶¹) and interpreted it as *pinguecula* or *pterygium*.⁶² However, the disease qnj.t, as clearly written here in Eb 416, is probably a separate condition and should be derived from the verb qnj (“to injure”⁶³).⁶⁴ The root qn is also contained in the words for to be strong, to beat up, power, evil, harm (done by someone)

⁵⁶ Hannig, 702 (25565, 25566).

⁵⁷ Westendorf, 329, 360–398.

⁵⁸ Similar translations in Westendorf, 622 and Popko (online), Eb 415.

⁵⁹ Lalanne and Métra, 129; Ebbel, 56. Ebbell argued that qn.t and qnj.t are spelling variants analogously to ȝd.t and ȝdy.t. However, qn.t and qnj.t can be traced back to two different verbs, whereas ȝdy.t is a participle of ȝd.

⁶⁰ Traunmüller, *Eye diseases, Part 1*, 14–15.



⁶¹ Hannig, 926 (34293–34297); Wb V, 40.8–12, 41.19–20.

⁶² Both, *pinguecula* and *pterygium* are in essence circumscribed, yellowish-white proliferations of the bulb conjunctiva, which are visually reminiscent of a fat accumulation. The interpretation of qn.t as *pinguecula* can also be found in Westendorf, 612.

⁶³ Hannig, 929 (34409); Wb V, 52.7.

⁶⁴ Translations by other authors: damage/injury to the eye (Ebbell, 56; Hannig, 929 [34410]; Westendorf, 622); eye disease (Wb V, 52.8); corneal ulcer? (Ebbell, 56; Hannig, 929 [34410]); fat accumulation (= same as qn.t; Lalanne and Métra, 129); qnj.t suffering (Popko [online], Eb 416).

and violence.⁶⁵ This indicates that qnj.t is possibly a blunt eye trauma caused by a blow to the eye, in contrast to the thn injury⁶⁶ which is presumably caused by pointed objects. A blunt eye trauma can have serious consequences such as bleeding inside the eye (AoO 2816), torn iris, dislocation of the lens, or partial retinal detachment.

Another possible origin of the disease name qnj.t () is qnj.t (), a golden-yellow mineral pigment (arsenic sulfide) that was used in embalming and wall painting.⁶⁷ Yellow discoloration of the sclera of both eyes is an early symptom of jaundice which is even noticeable before the skin turns yellow (AoO 7707).⁶⁸ Jaundice can have many different causes. In ancient Egypt, the primary causes were probably viral infection (hepatitis A), blockage of the bile ducts by adult stages of the *Schistosoma mansoni* parasite (hepatobiliary schistosomiasis), liver-damaging toxins (including alcohol), or a malignant tumor of the liver or pancreas.

The following prescription, Eb 417 (63,1–2), is entitled “Something else”, so it is probably also intended for the treatment of qnj.t.

To be continued in Part 4.

⁶⁵ Hannig, 926 (34300), 927 (34320, 34332, 34352, 34360); Wb V, 42.4, 48.2–8, 48.14. The verb qnj when determined with the hieroglyph D32 has additional meanings like “to embrace” and “to gather grain sheaves” (Hannig, 928 [34384, 34386, 34400]; Wb V, 50.11–16, 52.4), but these do not indicate any eye disease.

⁶⁶ Eb 337 (56,6–10) and Eb 381 (60,8–10). Cf. Traunmüller, *Eye diseases, Part 1*, 5–6, *Part 2*, 13.

⁶⁷ Hannig, 929 (34412); Wb V, 52.10–15.

⁶⁸ qnj-ḥr “one with yellow face” (Hannig, 929 [46554]).