ISAAC TODROS ON FACIAL PARESIS: EDITION OF THE HEBREW TEXT WITH INTRODUCTION, ENGLISH TRANSLATION AND GLOSSARY

by

GERRIT BOS*

Isaac Todros, usually called Isaac Ben Todros (from the mid-14th century) and known as Isaac Tauroci (ben Todros) in Latin, was a French physician who practised in Carpentras and audited the accounts of the local Jewish community in the year 1367.1 Isaac

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Todros was most probably the son of the physician maître Toros, also called magister Taurosius who lived in this city in the year 1357. Subsequently, he moved to the city of Avignon where he became a student of the famous mathematician and astronomer Immanuel Ben Jacob Bonfils, known for his astronomical tables called “Shesh Kenafayim” (Six Wings). Together they calculated the constellations in Avignon during the Hebrew month of Nisan, 1373. Isaac Todros was one of several physicians practising in that region at that particular period. Alteras lists five Jewish physicians who were active in the city of Carpentras in the second half of the 14th century and the beginning of the 15th, and for Avignon we find the names of 14 medical practitioners and two medical translators over the same period. As Blumenkranz remarks,

The number of Jewish physicians in the Provence was particularly great and in some towns they formed 5% of the Jewish working population; this would have amounted to one physician for every 100 persons if their services had been restricted to the Jewish community, but they also treated Christians, often holding the official function of municipal physician, and were particularly in demand when epidemics broke out. Their fees were nevertheless far lower than those of their Christian colleagues.

Carpentras had been ceded to the Holy See by the King of France in 1274 and would remain in its possession until 1791, so it

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witnessed an influx of Jews as a result of their expulsion from the Kingdom of France in 1306, and after the renewed expulsion in 1322. In the second half of the 14th century, the Jewish community of Carpentras consisted of 90 families, its members occupying the first Jewish quarter, the rue Fourmaque, near the ramparts. Avignon belonged to the Holy See from the year 1348, when it was sold to Pope Clement VI, until the French Revolution. Thus, just as in the case of Carpentras, Jews could remain there, even after the expulsions from the rest of France. In 1358 the Jewish quarter measured approximately 100 yards by 100 yards and housed a population of over 1000. While the pope resided in Avignon (1305–1377), Jewish commerce flourished in the city, as the Jews supplied the papal court with a large variety of commodities.

Isaac Todros is known best for a treatise on the plague occurring in Avignon in the year 1377, entitled הָלַע (Source of Life). In this treatise the author provides the reader with the customary description of both the prevention and treatment of the plague, with the addition of interesting details of a more personal kind. An example of such an addition is the author’s critical attitude to contemporary discussions regarding the causes and treatment of the plague, especially that of Jean of Tournemire.

This French physician taught at Montpellier and in 1370 composed a treatise on the plague entitled Preservatio contra pestilenciam.

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10 The treatise was published on the basis of one defective manuscript Moscow, Ginzbourg 165/15, fols 375r–400r, by D. Ginzbourg, Be‘er la-Hay, pp. 104–126. The edition by Ginzbourg based on this defective manuscript suffers from many mistakes and omissions, cf. the review by Kaufmann, Gesammelte Schriften 3, pp. 486–487.
In addition to his treatise on the plague, Isaac Todros was the author of a small treatise called *מָסָרֵר בַּהֲקָם* (On Facial Paresis). This text is extant in one manuscript in the Bodleian Library in Oxford (MS Laud. Or. 113, fols. 258b–260a). The manuscript, hailing from the Provence, was copied in a Sephardic semi-cursive script in the early 16th century by Vidal de Tournon.

Isaac's treatise is unique insofar as it is the only original Hebrew treatise dealing with the subject of facial paresis that has been preserved in Hebrew medical literature. Moreover, it gives the impression of being a real consilium written in response to the request of his friend, as Isaac states that on the basis of the symptoms of his friend's disease, it seems clear to him that “it is a paralysis (feebleness; *rifyon*), not a spasm (*kewiqah*) of the muscles, [that is] the muscles of the eyelids and the face”. Isaac’s statement is reminiscent of the description of the two causes of this disease, as it featured in the *K. al-Qānin fi al-tibb*, the medical encyclopaedia composed by the famous Islamic philosopher and physician Ibn Sinā (980–1037). According to Ibn Sinā, it is

caused either by *istirkhāt* (= *rifyon*) or by *tasjamnūt* (= *kewiqah*) of the muscles of the eyelids and face. As to the disease itself, Isaac states that “it stretches one side of the face and changes it so that it does not have its natural shape any more.” He adds that the crooked side [of the face] is the diseased one, and that he does not agree with those who hold the opposite opinion. An example of someone who was of the opposite opinion, and whom Isaac possibly had in mind, was Ibn Sinā who remarked:

Some of them say that the diseased (crooked) side is the one that seems to be healthy, but that [in reality] it holds the cause [of the disease], and that the healthy side tries to stretch it and make it straight. This is incorrect in most cases.

Ibn Sinā’s opinion is similar to that held previously by the Byzantine physician Paul of Aegina (7th century), who states in his medical handbook entitled *Pragmataia* that “it is necessary to know that the jaw which appears to be distorted is not the one which is paralysed, but the opposite one.” A physician who sided with Isaac in this issue was al-Rāzī, who states in the medical notebook *K. al-Hāwī fi al-tibb*:

Some say that the disease of facial paresis is in the straight non-inclining side [of the face] in which [the eye] has
become small, because the healthy side of the face attracts crookedness. This [opinion] is mistaken in most cases because the disease is in the side of the face where the eye has become small, and this is in the inclining side.\footnote{Al-Razi, \textit{K. u-Ihw\textsuperscript{i} fi al-\textit{jibb}}, vols. 1-23, Hyderabad 1952--1974, vol. 1, p. 175.}

Isaac shows himself as a physician who had an open and critical mind and attitude, who did not accept certain medical concepts and ideas at face value, but tested them by observation and logical reasoning. He revealed a similar critical attitude in his treatise on the plague, \textit{Nishmat ha\textsuperscript{a}r\textit{a}ḥ (Source of Life)} mentioned above. It is even, as Barkai remarks, his major motive for writing this treatise, since “contemporary physicians do not take into consideration the various circumstances and manifold causes of the plague”\footnote{Barkai, \textit{Jewish Treatises on the Black Death}, p. 12.}. The two criteria of observation and logical reasoning remind us of Maimonides’ criteria of “experience” (\textit{tajriba}) and “analogical reasoning” (\textit{qiyās}) which, according to him, mark the difference between good and bad physicians. Maimonides considered theoretical study as an essential part of the medical art since the treatment of every individual case had to be deduced by means of analogical reasoning (\textit{qiyās}) from general rules formulated in the medical literature. Thus, a physician had to be familiar with this literature in order to be able to treat his individual patient\footnote{Cf. Gerrit Bos, “Maimonides’ Medical Works and their Contribution to his Medical Biography”, \textit{Maimonidean Studies}, Vol. 5. Ed. by A. Hyman and A. Ivry. New York 2008, pp. 243--266.}. Isaac’s discussion of the controversy regarding the question of which side of the face is the diseased one and which side is healthy, as well as his explicit reference to both Galen and Ibn Sin\~{a} and his quotation from the last-mentioned author, show his familiarity with ancient (Galen) and more contemporary discussions of facial paresis in medical literature. As to the question of which specific version of Ibn Sin\~{a}’s \textit{K. al-Qānūn} Isaac consulted, one may assume that this was the Hebrew translation prepared by Nathan ha-Me\textsuperscript{a}ṭi in Rome in 1279\footnote{For Nathan ha-Me\textsuperscript{a}ṭi (of Cento), see H. Vogelstein and P. Rieger, \textit{Geschichte der Juden in Rom}. 2 vols, Berlin 1895--6, vol. 1, pp. 398--400; M. Steinschneider, \textit{Die hebräischen Übersetzungen des Mittelalters und das Judentum als Dolmetscher}, Berlin 1893, repr. Graz, 1956, p. 766; Gad Freudenthal, “Les sciences dans les communautés juives médiévales de Provence: L’er appropriation, leur rôle”, \textit{Revue des Études juives} 152 (1993): 29--136, pp. 69--70; Lola Ferre, “Avicenna Hebraico: La traducción del \textit{Canón de Medicina}. The Hebrew translation of Avicenna’s \textit{Canon},” \textit{MEAH}, section Hebrew 52 (2003): 163--182, p. 169ff.}. As central terms featuring in Nathan’s translation such as \textit{almā} (i.e. a transcription of Arab. \textit{laqwa}) \textit{Ṭarīq} and \textit{Ṭarīq} also feature in Isaac’s text. Moreover Nathan’s translation was by far the most popular and most easily accessible of the translations of the \textit{K. al-Qānūn}.

As to the origin of the disease, Isaac remarked that it is either a weakness of the nerves or a plosma (overfilling) of the humors. What the author probably meant was that facial paresis can be caused by a primary affection (idiopathy) of the facial nerves themselves, or by sympatry, a dyscrasie in the cerebral cavities, since these nerves are derived from the brain. This interpretation is in accordance with Galen’s explicit descriptions of the disease in \textit{De locis affiectis} 3:8 (K8:170)\footnote{For Nathan’s translation I consulted MS Oxford Can. Or. 88 (cat. Neuberger 2101) which was copied in a Sephardic semi-cursive script early in the 15th century (see Neuberger, \textit{Catalogue of the Hebrew Manuscripts in the Bodleian Library}. And: \textit{Supplement of Addenda and Corrigenda}. The section on \textit{laqwa} features on fols. 165a--166a.} and 4:5 (K8: 235--237).

To treat the disease, Isaac recommended a wide variety of means, such as concocting and evacuating the phlegm, i.e. the...
phlegm in the cerebral cavities which obstructs the outlet of the pneumonia; rubbing the neck of the patient in the spot where the nerves originate; application of the meat of a hare to the diseased spot itself, to both sides of the head, and to the origin of the nerves; ingestion of various remedies; fumigation of the diseased spot; putting a small sack (poultice?) on the head to strengthen the head and the brain; venesection (in the springtime); cupping-glasses on the spinal vertebrae; and gargles. These means are similar to those featuring in the discussions of this disease in ancient and medieval medical literature in general, and in Ibn Sinâ’s K. al-Qâmiq fi al-tibb in particular, as the following comparative table may demonstrate:

<table>
<thead>
<tr>
<th>Isaac Ben Todros</th>
<th>Hebrew translation</th>
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<tr>
<td>inemma shehoh shetah</td>
<td>וְמוָאָרָמָה שֶׁכֶּהוּ שֶׁשֶּׁתֶּהָ</td>
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<tr>
<td>vayemam shenemesh sheshem</td>
<td>בְּכָל טִימִי נְגִילָא וּבְרִיקָא</td>
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<tr>
<td>dibro belev me'atem</td>
<td>וּבְעֶשֶׂת בְּלֵבָּא</td>
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<tr>
<td>boker doreh mamor</td>
<td>רַבּוֹךְ דְּוֶרֶח מָמוֹר</td>
</tr>
</tbody>
</table>


Edition

Sigla and abbreviations:

O = Oxford, Bodleian Library, MS Laud. Or. 113
O1 = Note in the margin of MS O
O2 = Note above the line in MS O
(?) = doubtful reading

המהרי (הלך) (fol. 258b)

1. אמר צדק 무료ת המעי והמכים הבאים לברך חמידנו יהוה אלהי לברך

2. מהמרות המעי והמכים הבאים לברך חמידנו יהוה אלהי לברך
שחיתו על הלקות. טוהר הידור ערב עזרה. המקדש ארך ימים.

dאתה עזרה לעב ומקים. והיה להם המים.

(רח' א.ד') א_MARGIN

שעתון על הלקית. טוהר הידור ערב עזרה. המקדש ארך ימים.

dאתה עזרה לעב ומקים. והיה להם המים.

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dאתה עזרה לעב ומקים. והיה להם המים.
Treatise on Facial Paresis

1. Says Isaac Todros the learned physician to one of his friends who suffered from the disease of facial paresis, that is crooked mouth: From the symptoms of your disease it seems clear to me that it is not a spasm but a paralysis (feebleness) of the muscles, [that is] the muscles of the eyelids and the face. This kind of crookedness is caused by obstruction of the pneuma in its course; this [kind of crookedness] is the one that is more safe (less dangerous) than the second kind. But whatever [kind] it is, if it [i.e. facial paresis] stretches one side of the face and changes it so that it does not have its natural shape any more (distorts it). In my opinion, the crooked side of the face is the diseased one. [I do not agree with] those who have the opposite opinion. [My opinion] is based on observation and on logical reasoning. On observation: Are not the tears a clear proof, since they stream from the crooked side where the disease is manifest? On logical reasoning: Our common sense tells us that the organ which is in an unnatural state is necessarily the one that is diseased. All this is clear from the words of Ibn Sinā, [K. al-Qānūn fi al-ṭibb] 2:2, regarding the disease of [facial paresis], one of [the symptoms of which] is feebleness of the eyelids. It is also clear from the definition of health given by Galen and Ibn Sinā, [K. al-Qānūn fi al-ṭibb] 1:1, namely that it is both theoretical (‘ināyān) and practical (qināyān), etc. Thus, we see that the opposite of the definition of health (i.e. illness) can be explained from the place, i.e. the substratum (organ), from which the activities [of the body] do not originate in a perfect way. [This holds good] when that [organ] appears to us to be in an unnatural condition and shape, when its [size has increased or decreased], or [when we see] how that which was straight turned into crooked and that which was crooked changed into straight. This is the diseased [part of the body], [which] is not the [part] in which there is no change.

2. If the controversy only [concerns] the aspect of the place where [the disease] appears and manifests itself, but not the aspect of how it is active, it is indeed a foolish one, and not one that one should consider and familiarize oneself with. For we admit that this disease is instrumental (secondary) in the face [and that] its origin is a weakness of the nerves or their overfilling [with humors], either in the [diseased part of the body] or in the [part] that is connected [to the diseased part], or in [the part] that is near to that which is connected to the membrane that divides the palate (i.e. palate ridge?), or in a part that is slightly farther away, or when the disease is in the brain.

3. And since the fundamental basis [of medicine] which one should always keep in mind is the observation of the six non-naturals which are necessary and vital for a human being in order to [stay healthy], one should be very careful in their observance and observation. Then one should observe the matter of the brain since it is the ruling and major factor in this matter (i.e. the disease of facial paresis).

4. [To treat this disease one should] first of all concoct the phlegm which is its cause in most cases, as it has been explained in its [proper] place [in the medical books]. The composition of a

32 For Hebrew אָלָמִין, cf. Introduction.
33 Cf. Introduction.
34 Cf. Introduction.
35 Cf. Introduction.
38 Cf. Introduction.
[remedy] that concocts [the humors] is: half a liter\(^{39}\) of the syrup of esticados (Jupiter's beard, Anthyllis Barba Jovis or lavender, Lavandula stoechas)\(^{40}\), a quarter (of a liter) of squillitic oxymel, one eighth of a liter of salvia (Salvia officinalis) juice and sweet reed (Acorus calamus) juice; this should be mixed and then [the patient] should take three spoons of it with five spoons of the juice of a decoction of salvia, hyssop (Hyssopus officinalis), root of sweet reed and of fennel (Foeniculum vulgare). Once the concocting remedy has been effective, evacuate the matter [that produces the illness] with the pill that has the following composition: two drams\(^{41}\) each of ashes of the fig tree and choice agaric; four [fruits] each of the five [different] kinds of myrobalans\(^{42}\); two scruples\(^{43}\) of turpith (Ipomoea turpethum R. Brown); half a drachm each of white ginger (Zingiber officinale) and lavender (Lavandula stoechas);\(^{44}\) [one] scruple each of epityme (Cuscuta epithymum), salt, and gum Arabic. Pulverize [these ingredients], knead them with fennel juice and wormwood syrup and prepare a pill from [this substance]. The patient should take a dose of one dram or more as far as his strength and individual condition allow. The next day he should take one dram of the Mithridates [electuary]\(^{45}\) with three spoons of wine mixed with a decoction of the root of sweet reed and salvia, and sometimes mixed with fresh water. Administer this pill once every ten days; likewise the Mithridates [electuary] or choice theriac,\(^{46}\) and rub every evening at bedtime the neck of the patient in the spot where the nerves originate with the ointment that has the following composition: two ounces\(^{47}\) each of the oil of iris and lily; one ounce each of spurge (Euphorbia resinera Berg.) and castoreum;\(^{48}\) half an ounce of white vinegar; one dram of pounded pellitory (Anacyclus pyrethrum), and wax as much as is needed. In the cold season, when it has to be feared that it (i.e. the neck) will be affected by cold, one should use it as a salve for the neck and rub it


42 For the different kinds of myrobalans, mostly the fruits of Terminalia citrina Retz., Combretaceae, black chebulic myrobalan, see M. Meyerhoff and G.P. Sobby (eds.), The abridged version of “The Book of Simple Drugs” of Ahmad ibn Muhammad al-Ghāfiqi by Gregorius Abu -r-Farrag (Bar Ḥibrācus), 2 vols., Cairo 1932–1940, vol. 2, pp. 551–552.


44 “lavender” (esticados arabišī). Cf. Mensching, La Sinonima delos nombros delas medecinas griegos e latinos e aranigos, p. 253: “esticados arauico – Lavandula stoechas, semelico de l b. lat. sticados arabicum”.


46 On the theriac, a medical concoction made of opium, flesh of viper and a large number of other ingredients, originally designed as an antidote against snake venom but eventually used as a preventative panacea, see M. Ullmann, Die Medizin im Islam (Handbuch der Orientalistik I, Ergänzungsband VI, 1), Leiden/Köln: Brill, 1970, p. 321; L. Richter-Bernburg, Eine arabisch Version der pseudo-germanischen Schrift De Theriaca ad Pisonem (Diss.), Göttingen 1969, pp. 115–117; I. Fellmann, Das Aqharbāḏān al-Qalāšī. Quellenkritische und begriffsanalytische Untersuchungen zur arabisch-pharmazeutischen Literatur (Beiträge Texte und Studien, Bd. 35) Beirat (In Kommission bei Franz Steiner Verlag, Wiesbaden) 1986, pp. 274–278.

47 One ounce is 33.85 g.; cf. Kahl, Sübür ibn Sahl, p. 226; Hinz, Islamische Masse und Gewichte umgerechnet ins metrische System, p. 35 (the ounce of Baghdad). For different weights see ibid.

48 I.e., a desiccated excretion of the glands of the Castor fiber L.
on [the neck] while it is burning hot, and then put new cotton on it which should actually be hot [as well].

5. [A remedy] that has been neglected very much by the other physicians but which I have tried personally is to take boiled meat of a hare and to put it on the diseased spot, and unlike what is generally assumed, it is good if one puts it on both sides of the head and on the spot of the origin of the nerves. According to the physicians a proven and beneficial [remedy] is to take juice of the plant [called] "ādān al-fa‘r" (lit. "mouse ears"), i.e. myosotis or anagallis and to drip it regularly into the nose on an empty stomach. Also beneficial [according to them] is to take good-quality ginger (Zingiber officinalis Roscoe) and root of sweet reed (Acorus calamus), knead this with honey and eat a dose of one nut of it in the morning and evening. They also said that if someone suffering from facial paresis takes two drams of the Hermes’ hiera for a whole month it will be very beneficial for him.

6. If diarrhea weakens him too much, he should take [this medicine] less frequently or [take it] in a smaller dose or both, i.e. a [less frequent] ingestion and a [smaller] dose. It is good to take the pounded root of sweet reed regularly every morning and evening, for there is nothing better than this [remedy] for strengthening the nerves. [The patient] should always keep nutmeg (Myristica fragrans HOUTT.) in his mouth, while the diseased parts should be fumigated at bedtime every evening or at least three times a week [with the fumigation] that is composed as follows: two ounces of myrrh (Commiphora myrrha), three drams of frankincense (gum resin of Olibanum tree), one dram each of Indian nard (Nardostachys jatamansi DC) and clove; pulverize these ingredients and apply them as a fumigation.

7. Composition of a small sack to be put on the head to strengthen the head and the brain so that they can resist the humors [that cause the disease]: half an ounce each of mace, clove and roses; two drams each of sweet marjoram (Origanum majorana), rosemary (Rosmarinus officinalis) and grana tintorum; pulverize these ingredients and put them in a red cloth or red SYNDRZT(?) with the shape of a small sack. This [remedy] is very reliable against the humors [that cause the disease].

8. In the spring it is good to bleed the vein from the whole body because of the earlier cause and one of the veins that is under the tongue because of the [present cause?]. The application of cupping-glasses on the spinal vertebrae without scarification,
washing the head and combing [its hair] is good for [the patient] who persists in fasting. Sometimes it is good [for the patient] when he is fasting to wash the face with vinegar. It is even better if it is mixed with mustard. Also very good [for the patient] after the evacuation [of bodily residues] is to take regularly in two seasons of the year, namely spring and winter, on every day that he fasts for some consecutive days one dram of pulverized lavender with a quarter of a small cup of rosemary honey. If he eats regularly with every meal one spoonful of rosemary honey with a little bit of bread heated on the fire, it is very good for moderately warming and strengthening the nerves. It is also beneficial to shift to a dessert of pine seeds and pistachio, or almonds when these two [ingredients] are missing.

9. Sometimes it is good to accustom oneself to drink honey water one or two days a week once or twice at the beginning of the meal. And since not everyone can stand completely giving up drinking wine for a long time, he should drink old fragrant wine mixed with water in which [red-hot] iron has been cooled down during the meal since this [drink] has great strength to strengthen the nerves. And if salvia is boiled in it, it is even better. [Also] beneficial is a [remedy]\(^{58}\) of hydromel. Its composition is: one handful\(^ {59}\) of sweet reed, two handfuls each of hyssop and salvia; half an ounce each of nutmeg and ginger (Zingiber officinale); one and a half drams of white pepper\(^ {60}\) and galangal (Alpinia galanga); two liters of honey of rosemary; one liter of water; make hydromel [of these ingredients] just like oxymel. Drink one glass in the morning and evening, in the morning on an empty stomach and in the evening one or two hours before the meal.

10. Gargles are also beneficial amongst the things that eliminate and repel the [bad] humors. It is also good to wash the mouth in the morning and evening with burning hot water. But the healing that is [truly] good comes from God, of blessed memory, Amen.

Glossary

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<th>Arabic</th>
<th>English</th>
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| אבק בפריזה | 4
| אבקא | 4,6,7
| אריסמון | 1
| אפרסייןיד | 4
| אבקאצרפאב | 9
| אבקאצ'ו | 9
| אבקאצ'ו | 9
| אלמנ | 6
| אלייבי | 4
| אבקאצ'ו,אבקאצ'ו | 1
| אבקאצ'ו | 1
| אבקאצ'ו | 1

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58 Lit. “smell”.
59 For ḥa-ra-qaṭeim in the sense of “handful” cf. Saladino di Ascoli, Sefer ha-qaṭeim, ed. S. Munther, Tel Aviv 1953, p. 67: המה שיאמר אברך אברך שיאמר שיאמר מלה לה כלקו בית.
60 What is commonly called “white pepper” is nothing else than black pepper (Piper nigrum) blanched by steeping it in water and then gently rubbing off the dark outer coat (M. Levey, The Medical Formulary or Agrabábahin of al-Kindi. Translated with a Study of its Materia Medica. Madison, Milwaukee and London, 1966, no. 221, following W. Ainslie, Materia Medica, 2 vols. London 1826, vol. 1, p. 304).
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### Footnotes

1. Fußnoten: ידועים וידואים

2. הDigiti: ידועים וידואים

3. שנ.: ידועים וידואים

4. ונ.: ידועים וידואים

5. ונ.: ידועים וידואים

6. ונ.: ידועים וידואים

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8. ונ.: ידועים וידואים

9. ונ.: ידועים וידואים