

# INTERNATIONAL JOURNAL OF LEPROSY

VOL. 3

JULY-SEPTEMBER, 1935

No. 3

## ORIGINAL ARTICLES

### A CONTRIBUTION TO THE EARLIEST HISTORY OF LEPROSY

BY DR. B. EBBELL

*County Medical Officer, Stavanger, Norway*  
*Lately Physician at the Leper Asylum of the Norwegian*  
*Missionary Society in Madagascar*

In discussions of the history of leprosy mention is often made of supposed allusions to it in the well-known Ebers papyrus, written about 1550 B. C. Most authors have thought that the frequently appearing name *uchedu* is the designation for leprosy. This is wrong, however. As I shall point out elsewhere, *uchedu* must surely be a general pathologic concept; it is the designation for a condition which produces pus, or is attended with pus. I therefore propose to translate this as "pus-disease," or the like.

On the other hand, in the surgical section of the papyrus there are to be found two descriptions of a disease which, in my opinion, surely refer to leprosy.

#### I.

The first of these is in 108,17—109,2 and reads in translation as follows:

#### "RECOGNITION OF CHONS'<sup>1</sup> SWELLING"

"If you examine Chons' big swelling on any limb of a person, it is horrible when it has developed numerous tumors, and there

<sup>1</sup>Chons is the name of one of the Egyptian Gods.

arises in him something as if there were air therein; it causes destruction of the swelling; it is notified in your presence; it is not as those [previously mentioned] swellings; it is motley-colored and produces carvings (?), and all limbs that it may affect are heavy; then you shall say about it: it is Chons' swelling. You shall not do anything with it."

The word which here is translated as "swelling" is connected with the adjective "big," consequently it plainly means something big, something which is too big. It is often used in the surgical section of this papyrus as a designation for the different kinds of tumors and swellings, such as hernia, ascites, abscess, aneurysm and the like. But the Egyptians also used this word in cases where we would not speak of "tumor" at all; in the large medical Berliner papyrus we find the term "one day's swellings," which undoubtedly refers to urticaria.

When reading the part translated here one necessarily gets the impression that the disease described must be an uncommonly bad and horrid one. It is mentioned as Chons' "big" swelling, consequently something really serious; it is said that it is "horrible" (or terrible), and that "it is not as those swellings" (i.e., the other tumors which are mentioned in the surgical section). By this it must surely be meant that it is much worse than they. It is certainly called "Chons' swelling" (singular), but it is pointed out at the same time that it can form "numerous swellings" and that it can occur "on any limb."

The foregoing does not fit in with any surgical disease, but it does lead to thoughts of nodular leprosy. It can scarcely be anything else, as everything in the description points to that. In nodular leprosy there occur numerous tumors or nodules on the different parts of the body, and the appearance of the sick person is horrible—to that everyone must agree. The expression "there arises on him something, as if there were air therein" is not clear. This may perhaps refer to the fact that the nodules, especially on the face and on the ears, look as if they have been blown up with air. "Destruction of the swelling" occurs in leprosy, as the nodules may soften and form ulcers. I am not quite sure as to the translation of the words that follow these, but the meaning must be that the appearance of such a sick person shows that his disease is much worse than the other tumors which are mentioned in the surgical section. Further,

it is said that "it is motley-colored" (i.e., of different colors); the tubercles of leprosy can be partly of normal color and partly darker, reddish or bluish-red, but when in addition to this there are sores and scars the whole picture will be motley-colored. The meaning of the word expressed as "carvings" has not been definitely decided, but probably my translation is fairly correct; this expression may for instance refer to the nodular masses on the face, which often are marked by deep furrows so that they look like carvings.

We then see that the whole description in the Ebers papyrus agrees perfectly with nodular leprosy, and the same must be said to be the case with the treatment described, namely that one "shall not do anything with it." In this disease we cannot, as is known, expect much results from therapeusis, at least in cases as advanced as those described.

It will perhaps be thought strange that leprosy should be mentioned in the surgical section of the papyrus; the condition seems not to lend itself to surgical treatment. However, it may be recalled that Galen mentioned nodular leprosy (*elephantiasis graecorum*) in his writings "De tumoribus praeter naturam" (chapter 14), and compared it with the common swellings, showing that he believed they should be mentioned together.

## II

The second description of a condition which seems to refer to leprosy is mentioned in 109,18—110,9 and reads in translation as follows:

### "RECOGNITION OF *ĀNUT* OF CHONS' CUTTINGS"

"If you examine *ānut* of Chons' cuttings (mutilations) on any limb of a person, and you find that *tep-s seped kefa-s maā*, that his eyes are bright reddish and the flesh besides is burning or fighting; if on the one hand you find color [i.e., change of pigment] on his shoulder [i.e., the part over the shoulder blades], on his arms, on his loin and on his thighs, then you cannot do anything with it; but if on the other hand you find something like a discharge from an ulcer or a blow upon the chest, nipples, or upon any limb, and that this [discharge] goes and comes, feeling moist and producing an upward discharge, then you shall say: it is in the hand [i.e., it can be treated]. You shall prepare for him a healing medicine: fly's discharge, wheat powder, soda, *pesen*-bread, meal, beans, stibium

and fat are to be mixed together with *āmau*, without adding water; the medicine is applied until healing."

The condition in question must undoubtedly be of quite another nature than the other one mentioned in the surgical section. It is not called "swelling," and there is nothing to show that there should be any swelling or anything like a tumor. Instead, there is mentioned *ānut*, the meaning of which unfortunately is unknown, but which certainly covers the symptoms of disease mentioned below. As we there hear of two different kinds of exanthema I have come to the conclusion that *anut* most likely means "cutaneous eruption," or the like.

What is described in the preceding are the symptoms of "Chons' cutting." We have seen that nodular leprosy was called "Chons' swelling," and when the disease here discussed is also called after the god Chons it is an obvious conclusion that it probably must be a form of leprosy. And, too, when it is described as Chons' "cutting," or "cutting off," or "cutting asunder," it necessarily brings to mind *lepra mutilans*, in which the fingers and the toes little by little undergo necrosis and disappear so that it looks as if they had been amputated. In this description we do not see anything about mutilation of hands and feet, but the skin symptoms mentioned are just those which may be found in maculo-anesthetic leprosy.

The description commences with some words (*tep-s seped kefa-s maā*, which I do not understand. Thereafter follows "his eyes are bright reddish," which may refer to a conjunctivitis, but it may just as well refer to the red mucous membrane which is turned inside out on account of a leprosy paralysis of the orbicularis oculi muscle. The further statement that "his flesh is burning or is fighting" may not unreasonably be interpreted as referring to the neuralgic pains which are often very severe in nerve leprosy.

Then we have the skin manifestations, of which there are two kinds. The one kind consists in "color," which must surely mean pigment or change of pigment. This pigment change appears on the shoulders (i.e., over the shoulder blades), on the arms, loin and thighs, just those parts which are the seats of predilection for the spots of maculo-anesthetic leprosy.

The other kind of skin affection appears as a "discharge," and in this connection one may think of the discharge which appears after a leprosy bulla has burst. Nothing has been said about bullae, but

this is easy to explain because the bullous stage is of quite short duration and is often not observed, whereas the discharge continues for a long time. This discharge is compared with that which appears from an ulcer or after a blow, and it is said that it "goes and comes;" this may perhaps refer to the fact that the one bulla succeeds another, and like the eruption of pemphigus can last for a long time.

The fact that these two skin affections occur in a disease named "Chons' cutting" is of so characteristic a coincidence that there can scarcely be any doubt that we here have a description of maculo-anesthetic leprosy.

With regard to the treatment, it is said that one cannot do anything with the pigment spots; they were certainly refractory to the Egyptian medicines. For the discharge, however, there is described an ointment; this was certainly considered only symptomatic treatment to aid the healing of the ulcer.

It is undeniably strange that this smooth (non-nodular) form of leprosy should be included in the surgical section of the papyrus. The only explanation apparent is that it was done for the sake of completeness, as the nodular form had been previously mentioned; but it is placed at the end, as a sort of appendix.

### III

As previously mentioned, in the Ebers papyrus here considered it is advanced that one can do nothing with Chons' tumor. However, in a later writing, the large medical Berliner papyrus (5,1—4), one finds the following prescription for this disease:

"Medicine to remove Chons' tumor or any swelling (?) which arises on a person: fresh onion, and *iritiu*, and *nebit* are to be mixed finely together; wax [is to be put] on top of it [i.e., the swelling or the tumor]; bind up therewith until it is overthrown [i.e., has been destroyed]; but then you shall anoint it with fat rubbed up with alum; but then you shall treat it with fat and honey until it is healed."

The meaning of the word which is here translated as "swelling" is not quite clear. It probably is related to a verb whose primary signification is "to step forward," and which among other things is applied to fish which emerge from the water, to plants which shoot up from the field, to water which springs out of the ground, and the like. Consequently it must mean something shooting forth, a tumor

or swelling or the like, so it should be nearly synonymous with the word which is here translated as "tumor."

The treatment is intended to "destroy" the Chons' tumor (i.e., the leprous nodules) and the swelling. The verb which is translated as "destroy" is used, among other ways, to denote breaking down a wall, pulling down a building and the like; and in this case it must certainly signify destroying the tumor, producing ulceration and finally destruction of the whole.

This is accomplished by using different irritating or corroding substances on the tumor. The first mentioned is onion (*Allium cepa*) which, as is known, contains a strong essential oil. Then comes *iritiu*. For various reasons which I cannot go into here I have come to the conclusion that it probably signifies *Calotropis procera*, a tree which grows in Egypt and which contains certain active substances. Which part of the tree should be used is not mentioned; perhaps it is the bark or the milk sap, both of which in the course of time have been used as medicines. The third substance, *nebit*, is entirely unknown to me.

These three ingredients should "be mixed finely," and it was of course the intention that they should be applied to the tumor or swelling. After that one should place "wax on top of it," the intention being clearly to keep the effective medicines fixed over the swelling; when melted wax is spread in a thin layer it has an effect nearly like collodion.

After the swelling was "overthrown" (i.e., destroyed), one was to use an alum ointment; though what one might gain specially by that I do not know. Finally, it was necessary to get the ulcer that had been produced healed over, and for this "fat and honey" were used. In old Egypt this was the most frequently used medicine for sores, and it is mentioned numbers of times in the surgical Edwin Smith papyrus and in the Ebers papyrus. Honey was probably used to draw the discharge from the ulcer and thereby effect a cleansing of the sore.

We thus see that the Egyptians tried to heal Chons' swelling by means of substances which would destroy the nodules. It is peculiar that exactly the same method was used much later; in Danielssen and Boeck's "Traité de la spedalskhed" (page 171) it is stated: "Pour détruire les tubercules, on s'est servi, en outre, de

médicaments acres et corrosifs.” As the first of these medicines onion is mentioned,<sup>2</sup> but nothing is said as to where or when this treatment had been used. I can, however, state that the natives in Madagascar have also tried to heal leprosy by destroying the nodules, and one could see large scars on the face and elsewhere resulting from this treatment; but what medicines they used I do not know.

The treatment described here is indeed quite peculiar, and nothing corresponding to it occurs elsewhere in the medical papyri. This special treatment, which also has been used elsewhere for leprosy, constitutes a strong argument that “Chons’ tumor” really must be the designation of nodular leprosy.

We therefore come to the conclusion that in the Ebers papyrus we have a description of leprosy. This must surely be the earliest existing mention of the disease, for this papyrus was written about 1550 B. C. The large Berliner papyrus is of a later date, about 1250 B. C. Of course, leprosy must have occurred in Egypt long before that time, but as to whether the valley of the Nile must be reckoned as the original home of the disease I dare not offer an opinion.

<sup>2</sup>In this connection it may be mentioned that according to Danielssen and Boeck (page 164) *Calotropis (Asclepias) gigantea* has also been much used in leprosy as an internal medicament.