

*On Leprosy in the Bible

H. P. LIE.

Of all human afflictions leprosy has inspired much terror, dread and constant fear through the thousands of years recorded by man and in all probability even in pre-historic days. A proof of this lies in the fact that the term "leprous" not only has been confined to the constitutional disease itself, but has also been applied in moral ethics to express the most loathsome of all human misery. Consequently a great number of names and terms have been adapted for this disease and these have in turn passed from land to land, and race to race, and from language to language. These names and terms have not only been altered in form, but also in meaning, partly on account of pure misunderstanding and partly on account of the difficulty of finding adequate and correct equivalents in translation.

These difficulties have in course of time been greatly augmented by the fact that many chronic, incurable and terrible diseases have been confused with leprosy, although they have had nothing in common with it. It will readily be understood, therefore, how the task has been made exceedingly difficult—in many instances impossible—to discern if these numerous names and descriptions, which have come down to us from antiquity, appertain to our modern concept of leprosy or not.

It is a general opinion that some of the most ancient records of leprosy are to be found in the Bible in the description of diseases embraced by the Hebrew word *saraath*. Several authors have lately expressed certain doubts about the accuracy of this opinion. Other authors have gone so far as to deny that the diseases embraced by *saraath* have anything whatsoever to do with leprosy.

Zaraath is mentioned in the Old Testament in several places, but especially in Leviticus, chapters 13 and 14. The characteristic feature of *saraath* is white spots situated slightly below the level of the surrounding skin, and where the hair has turned white. These spots increase in size and spread often within one or two weeks. The question arises whether or not there exist symptoms corresponding to this characteristic form in our modern cases of leprosy. We are familiar with such symptoms in certain varieties of

*First half of Article reprinted with permission from *Acta Dermato-Venerologia*, Vol. XVIII, No. 4.

leprosy. In the maculo-anaesthetic variety, white or light spots may occur, but the hair on these spots does not become abnormally white. These white spots are of a somewhat different nature since they appear in more or less pigmented skin among different races. In the white race they are the residuum or the result of healed leprosy processes in the skin. For this reason they do not spread, but, on the contrary, remain unchanged for long periods, perhaps in most instances throughout life. Even if the skin atrophies in these cases, it is in such a slight degree that these white spots do not lie noticeably below the level of the surrounding skin. It is evident, therefore, that these spots cannot be identical with *saraath* since the latter spreads and is situated slightly below the level of the surrounding skin. Likewise the white hair which characterizes white spots in *saraath* is by no means a striking feature in the leprosy which is known to us. The spots, which occur in lepers of the white race, certainly spread during the active leprosy processes, but spreading takes place very slowly, and at the onset the colour is not white at all, but more or less of a vivid reddish hue. The red colour fades somewhat with time and becomes a hue of more or less pronounced brownish colour. This reddish-brown colour remains in the peripheral parts for a long time, and often throughout life, while the central parts become white and free from pigment.

If this discolouration extends to the peripheral parts, then the whole spot becomes more or less white and the result is the permanent white spots described above, which are the residuum of active leprosy processes in the skin. As long as the process is active we may say that this corresponds most often to the presence of pigment in the spots and the affected skin is more or less thickened, so that the level of these parts lie *above* and not *below* the level of the surrounding skin, in the manner characteristic of *saraath*. Among coloured individuals the leprosy spots differ somewhat in appearance from those described above, since it is known that the red colour which appears in the inflammatory process in the white race, very often gives the appearance of being more or less white in the coloured races. The leprosy spots in the coloured race can, therefore, contrary to what happens in the white race, also appear as being white during the active leprosy process. The leprosy process in the skin is, however, very often of a most severe character and the infiltration of the skin may even result in considerable scale formation with desquamation of the skin's surface. Under such circumstances the spots will always rise so much above

the level of the surrounding skin that it would be out of question to designate them as lying below the level of the surrounding skin, in the manner of the descriptions in the Bible of *saraath*. In modern leprosy there occurs one type of white spots which are situated below the level of the surrounding skin. This type is represented by the slightly scarred spots resulting from *pemphigus leprosus*. This is very rare, but white scars caused by burns are frequently encountered in old cases of maculo-anaesthetic leprosy, on account of greatly reduced sensation. As a rule these spots are hairless and only in rare cases are they covered with a sparse crop of thin and fine hair, faintly coloured or white. These spots are stable, however, and do not spread at all. They are the most likely to correspond to the spots mentioned in Leviticus, chapter 13, verse 23. It is unlikely that these spots were considered leprous in origin since the individuals afflicted with them were pronounced to be "clean". In Leviticus, chapter 13, verses 24 and 25, we find description of spots which the priest pronounced as "unclean". These spots were generally of a reddish colour, but might also be of a white variety. In this instance one might perhaps consider the possibility of these spots being identical with our present day leprous spots. But the affliction described in these two verses must rather be looked upon, however, as granulations produced in burned parts rather than authentic leprous spots.

There is one condition which is of great importance for determining the true nature of *saraath* in our attempt to decide if this disease is related to modern leprosy or not. In Leviticus, chapter 13, verse 30, etc., it is stated that *saraath* appeared in the hairy part of the head, as well as in the beard. It should be borne in mind that the original Hebrew text employs two words for these diseases. The first affliction *naethaeq* is derived from *nathaq*, to shake off, or to tear loose. It is apparent that this derivation refers to diseases with crusts, dried exudate on the skin or desquamations. In the Norwegian translation of the Bible this word is interpreted by "*skurv*" (Norwegian translation of the English scurf). Then the original text continues: "It is *saraath* on the head or in the beard. . . ." (verse 30). In chapter 14, verse 54, on the other hand, the words *naethaeq* and *saraath* are apparently employed to describe two different diseases. "This is the law for all manner of plague of leprosy (*naeqa saraath*) and scale (*naethaeq*). . . ." In modern leprosy it is a fact that neither the hair of the head, nor of the beard is affected in the maculo-anaesthetic variety

of the disease. It is only this variety which might be considered in the elucidation of *saraath*. On the other hand, the nodular variety of our modern leprosy (*lepra tuberosa*) very often attacks the scalp and almost invariably the roots of the beard when the disease has lasted a long time. This affection is characterized by a considerable leprous infiltration about the hair follicles which deprives the hair of nourishment and results in the falling out of the hair. The shedding of the eyebrows is known to constitute one of the first symptoms of nodular leprosy. This form of leprosy only rarely and protractedly leads to ulceration in the affected parts and as above mentioned most rarely in the scalp. On the other hand, no desquamation or crust formation occurs if there are no concurrent non-leprous affections such as seborrhea, pityriasis, psoriasis, or on rare occasions trichophytia of various kinds, or possibly favus. It is quite probable, therefore, that the description in Leviticus, chapter 14, verse 54, refers to these or similar affections rather than to leprosy.

The oldest and best descriptions of leprosy fail to make mention of affections in the hair and beard, or at any rate refer to it but casually. ARETAEUS (ca. A.D. 100), merely states the following: "The hair dies off completely: it becomes scarce on the hands, thighs, legs, the groins and the chin. The hair on the head becomes thin and gray hair appears prematurely and there is much baldness. The groins and the chin become completely devoid of hair within a short time and if some few hair do remain, they merely cause disfiguration."

BERNHARD GORDON (Montpellier, A.D. 1305) makes no mention whatsoever of affections of the hair and beard. In the statutes regarding the examination of suspected cases of leprosy, which were decreed during the Middle Ages, it is only mentioned in the section referring to the face. It reads: "one must examine if bran-like (pityroid) scales appear when the head is scraped." When leprosy had disappeared from Europe, HENSLER, at the end of the 18th century, collected with extreme diligence most of the extant literature on leprosy. Likewise, he drew up a list of many skin affections with crusts and scale-formation which he considered as precursors or the primary stages of "fully developed" leprosy. Among these figured *naethaeq* in the Bible, and baldness, *alopecia*, *mentagra* and *sycosis*. It must be borne in mind, however, that HENSLER had only seen one single leper, namely a German who had become affected in

the Danish West Indies, which represented a typical case of *lepra tuberosa*. One could scarcely expect, therefore, that HENSLER could render expert judgment of the value of what he had read or collected. We are fully justified, therefore, in believing that the leprologists in the Middle Ages, on account of their considerable practical knowledge of leprosy, did not confound so great a number of skin affection with leprosy as HENSLER has done.

It has already been stated that the word *saraath* unquestionably could deal only with the maculo-anaesthetic variety of leprosy. This contention necessitates still further proof since several words in connection with *saraath* characterize the disease, such as *seeth*, *sappachath* and *bahereth* in Leviticus, chapter 13, verse 2. What do these words mean? It is my opinion that we must revert to the oldest translations of the Hebrew Bible in order to discover their meaning. There are chiefly two of these translations which carry great significance, namely the Greek translation of the Septuagint from about the middle of the 3rd century B.C., which reads as follow :

Ἀνθρώπω εἰάν τινι γένηται ἐν δέρματι χροτός αὐτοῦ οὐλή
σημασίας ἢ τηλανγῆς καί γένηται ἐν δέρματι αὐτοῦ ἀφή λέπρας.

The other is the Vulgate Latin version of the Bible from the 4th century A.D. which reads as follow : ‘ *Homo in cujus cute et carne ortus fuerit diversus color sive pustula, aut quasi lucens quispiam id est plaga lepra. . .*’

A third old Latin translation reads : ‘ *Homo cum fuerit in cute carnis ejus tumor (seeth) vel inhaerentia (sappachath) vel candor (bahereth) et fuerit in cute carnis ejus tactum leprae (nega saraath). . .*’

From this it is apparent that there is no particular agreement between these translations and hence it is not an easy matter to obtain a clear picture of the condition. It appears that the general interpretation of *seeth* is that it means a swelling, or an elevated part of the skin. One Latin translator has interpreted it thus, and such is the case in the Norwegian translation of the Bible. It is noted that the Vulgate translates the word with *diversus color*, and another translator makes use of *color albus*. Verse 10 mentions *seeth* also, but in connection with *lebana* = white. Whether this is added to explain that *seeth* always means white, or whether this is a special form of *seeth* is not an easy matter to determine. But in verse 2, as well as in verse 10 in the Norwegian translation of the Bible, *seeth* is rendered as

similar to leprosy. It seems more reasonable to assume, therefore, that *seeth* mentioned in verse 2 also is white *seeth*, inasmuch as we cannot have two sorts of *seeth* to characterize leprosy. A Latin translation of verse 2 seems likewise to point in the same direction and it reads: "*Cumque color albus in cute fuerite.*" But we know that nodules in leprosy are not white, but always more or less reddish or brownish in colour and occasionally even very darkly pigmented. White hair is not characteristic of leprous nodules and yet such are especially mentioned in verse 10. As far as *sappachath* is concerned, it will be seen that it is partly translated with *pustula* and again with *inhaerentia*. The latter is considered to be formation of scales (JEANSELME) and neither of these belongs to the picture of leprosy. What οὐλή σημασία (the scar in the sign) is intended to mean, I dare not say, but it seems out of the question that it should prove the existence of leprosy among the ancient Jews. The Norwegian translation of the Bible renders this as "scabies" and I am inclined to believe that this assumption is a fairly correct one. We shall return to this later. Finally, with regard to *bahereth* there exists a general agreement that it must mean bright, or a shiny affection of the skin. It is my opinion, however, that this cannot be associated with the clinical picture of our present day leprosy. Rather it suggests psoriasis, which in the course of time quite frequently has been confused with leprosy.

There remains still another Hebrew word, viz. *mispachath*, in chapter 13, which needs must be discussed further in this connection. Judging from verse 6, *mispachath* must have been a comparatively innocent complaint, at any rate at the onset, since the sufferer merely needed to "wash his clothes" and he was made "clean." The assumption for this was that the affection had not spread, and if it had spread the patient concerned should be placed under new observation (verse 7). Should *mispachath* spread over the skin, then the patient shall be declared "unclean," the disease is *saraath*. The Greek translation of the word is σημασία and the Latin is *scabies*. The old Norwegian translation has adopted the Latin one and gives ' *skabb*,' (scabies). The new Norwegian translation, on the other hand, renders it as ' *meinlaust utbrot* ' (harmless rash). GESENIUS and LUTHER translate it with " *Schorf-gutartig*," and " *Grind* " respectively, and this means approximately the same as *scurf*. One gets according to this the impression that *saraath* means the latter, or the more severely developed stage of a disease which in itself is not malignant, at least not at an early stage.

We have endeavoured to prove that the biblical description of *zaraath* has nothing whatsoever in common with the nodular form of leprosy, *lepra tuberosa*. This is all the more striking since this form of the disease has at all times and among all races left behind the most gruesome and most indelible impression on all who came into contact with it. That only the maculo-anaesthetic variety of leprosy should have occurred among the Hebrews is obviously an erroneous notion since the various forms of the disease are met with among all races affected by the disease. This has been the case since the most ancient records presented us with positive knowledge of the disease.

HENSLER who assumes that *zaraath* is leprosy, namely the so-called white leprosy, has also been aware of the fact that the nodular form is not described by Moses. He states that this is naturally explained by the fact that Moses wrote a book of statutes and not a "medical system." All other forms of leprosy, and in particular the nodular form, betrayed themselves sufficiently by their appearance. The white leprosy could, however, be mistaken for other diseases. These patients were consequently kept under observation. HENSLER'S arguments strike me as being quite weak. The intention in the Mosaic Law must have been to separate all the "unclean" from the "clean." If the less severe and gruesome maculo-anaesthetic form was looked upon as "unclean," then the nodular form must have been even more so. It seems rather strange, therefore, that this form is not mentioned at all, nor even surmised, provided that it existed at that time. If we assume, however, that *zaraath* is maculo-anaesthetic leprosy, or *lepra nervorum* in the more modern nomenclature, then we are left completely in the dark about the cardinal symptoms of unsensitiveness and paralysis which appear quite early in the disease and which are so characteristic during the later stages. Neither are the great trophic changes causing mutilations on hands and feet, which are no rare occurrence in this form of the disease, so much as mentioned.

(To be continued.)