

# Were Our Predecessors Lepers?

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**M**any teachers in Jewish schools instruct their students that the modern day counterpart to Biblical *tzaraat* is leprosy. I remember learning in kindergarten that Miriam suffered from leprosy, a disease which turned her skin snowy white. However, after a detailed analysis of leprosy, also known as Hansen's Disease, one can definitely conclude that biblical *tzaraat* is not the ailment that we now refer to as leprosy. This has been confirmed by *Chazal*, modern rabbinical authorities, and gentile biblical scholars. The two diseases have different symptoms, physiological mechanisms, and effects on their victims. *Chazal* have taught (*Arachin* 16a and various *midrashim*) that *tzaraat* was a punishment for the sins of bloodshed, false oaths, sexual immorality, pride, robbery, and selfishness. They emphasized that *tzaraat* was not a typical bodily disease, but rather a physical manifestation of a spiritual malaise. It was a spiritual affliction with a physical component that was designed to prompt the sinner to mend his ways. Even those who define *tzaraat* as a physical disease still do not equate it with leprosy. *Sforno*, a renowned biblical commentator and doctor, remarked that

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there were major differences between the symptoms of *tzaraat* and those of leprosy. Samson Rafael Hirsch, in his commentary on *Tazria* wrote, "the symptoms described in our chapter (referring to *tzaraat*) have nothing at all in common with the diseases which are described in books of medical science on skin diseases under the heading of 'Lepra', leprosy."<sup>1</sup> Why do most translations, both Jewish and non-Jewish, equate *tzaraat* with leprosy? This erroneous translation of *tzaraat* dates back to the Greeks, apparently because of a misinterpretation of language. When the Hebrew Torah was translated into the Greek Septuagint, the word '*tzaraat*' was translated as 'lepra'. The Greek text was later translated into Latin, and finally into English. The word 'lepra' was eventually translated into 'leprosy'.<sup>2</sup>

In addition to much rabbinical and scholarly evidence, there is a profundity of medical literature proving that biblical *tzaraat* is not leprosy. The medical and biological proofs differentiating the two diseases are tangible and convincing. The causative agent of leprosy is the bacterium, *Mycobacterium leprae*, an obligate parasite found only in tissues of humans and other warm-blooded animals. Although most known for producing lesions on the skin, leprosy also causes lesions in the peripheral nerves, eyes, nose, larynx, mouth, organs of the reticuloendothelial system, and internal organs,

such as the testes, adrenal glands, and kidneys. Of all its targets, leprosy primarily afflicts peripheral nerves. Bacteria accumulate in the nerve bundle causing inflammation and infiltration of phagocytes. The nerve swells and enlarges, resulting in damage to the neurons. This damage may cause loss of sensory and motor function, paralysis, and anesthesia of all affected areas.<sup>3</sup>

*M. leprae* has a low degree of virulence, a long generation time, and grows at low optimum temperatures. Due to its low optimum temperature, leprosy tends to affect the cooler regions of the body, including the skin, face, hands, and feet. Leprosy cannot grow on inanimate objects. It is not highly contagious and does not easily invade tissues or secrete any serious toxins. Transmission of the disease requires prolonged and intimate contact. Once leprosy afflicts individuals, it causes a slowly progressive chronic infection, with adverse health changes seen over a period of years.

The thirteenth chapter of Leviticus opens with a general announcement of cutaneous signs that would require inspection by the high priest. A person afflicted with *tzaraat* must report to the high priest. Many believe that *tzaraat* was a biblical disease which presented itself in four different ways: lesions on previously normal glabrous skin; lesions on previously abnormal skin; lesions in areas of diffuse alopecia; and localized alopecia, or baldness.

Lesions on previously normal glabrous skin included the primary lesions, *baberet* and *se'et*. *Baberet* was a depigmented patch and *se'et* was a hypopigmented patch. Both grew on skin which previously was normal. At mini-

mum, the hypopigmented patch was the color of a hen's eggshell. The patch may have been slightly erythematous, and to be considered *tzaraat* it had to be at least the size of a lentil bean. Secondary changes to these lesions included the presence of at least two white hairs growing in the lesion, erosion situated within the lesion, and an increased lesion size.

Lesions on previously abnormal skin included *shechin* and *michyah*. Normal skin that experienced any inflammatory process involving erythema, vesicle formation, crusting, weeping or erosions was classified as abnormal skin. Burns, traumatic injuries, or eczematous dermatitis of any etiology caused abnormal skin. *Shechin* was a hypopigmented patch on

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such skin. *Michyah* was a hypopigmented patch on the site of a healing burn. The secondary changes of these lesions included the existence of white hairs or an increase in lesion size.

Lesions in the areas of diffuse alopecia occurred on the scalp. *Baberet* was a condition describing alopecia of the entire posterior half of the scalp. *Gabachat* described alopecia of the entire anterior half. The lesions had to exist within either of the bald areas. Secondary changes to these hypopigmented or depigmented patches in the bald areas included erosions and enlargements of the lesions.

Localized alopecia lesions were the only kind of *tzaraat* that did not involve a color change of the skin. The primary lesion was a localized patch of alopecia

which occurred on the scalp or beard area. Secondary changes included enlargements of the lesion or the presence of two new golden hairs in the lesion.<sup>4</sup>

During its various stages of disease progression, symptoms of modern day leprosy can include hypopigmented lesions, atrophy, inflammatory changes, ulcerations, and alopecia. At first glance, these are similar to the signs noted in biblical *tzaraat*. However, it is highly unlikely that all the necessary signs of *tzaraat* would exist together in any form of leprosy. Not only do the physical signs of leprosy and *tzaraat* differ, but so does the progression of the two diseases. Examination of the patient by the priest was carried out every seven days. *Tzaraat* progressed from primary lesions to

secondary forms in a short period of time. However, leprosy is slowly progressive with changes seen over a period of years, not weeks. The extent of dermatopathology would not have changed from one priestly examination to the next. Thus,

the leprosy of today is obviously not the biblical *tzaraat*. The biblical description of *tzaraat* did not include any reference to the severe mutilation that leprosy often causes. The strongest proof is the fastidiousness of *M. leprae*. This bacterium has never been cultured with any artificial microbiological medium or with any living cell culture system. Yet, the Torah describes houses and clothing afflicted with *tzaraat*. Since leprosy cannot affect inanimate objects, it cannot be *tzaraat*.

It seems strange that *tzaraat* is not a modern-day disease. Apparently, as a spiritual affliction it only affected individuals on an already high spiritual level. It is quite possible that in today's exiled generation, people are "unworthy" of this spiritual affliction. **DH**

## NOTES:

1. The Pentateuch, Volume 3. *Leviticus*. Translated and explained by Samson Raphael Hirsch.
2. Kaplan, David L. "Biblical Leprosy: An Anachronism Whose Time Has Come". *Journal of the American Academy of Dermatology*. March 1993. Pp. 507-510.
3. Eichman, Phillip. "The History, Biology, and Medical Aspects of Leprosy". *The American Biology Teacher*, Volume 61, No. 7, September 1999.
4. Freilich, Abraham R. "*Tzaraat*—Biblical Leprosy". *Journal of the American Academy of Dermatology*, Volume 6, No. 1. January, 1982. Pp. 131-134.