

# Sarah's Infertility: A Diagnosable Case?

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Given the limited descriptions the Torah presents regarding Sarah Imenu's infertility, one may assume that there have not been many attempts made to diagnose Sarah. This, however, could not be further from the truth.

There have been numerous descriptions of Sarah Imenu's infertility, and many efforts have been made to determine the underlying cause of her barrenness. The book of Genesis first describes, "Sarai was barren; she had no child" (Genesis 11:30), and "it had ceased to be with Sarah after the manner of women" (Genesis 18:11). Commentaries such as Rashi, Radak, and S'forno take the latter pasuk to mean that Sarah is postmenopausal [1]. The rabbis of the Talmud give many possible explanations. They include the possibilities that Sarah was an aylonit, a tumtum, or missing a beit valad, and they reference a pasuk in Sefer Yeshayahu that hints to Sarah's clinical problem (Yebamot 64b).

An aylonit, by Rashi's description, is a woman who is missing certain female characteristics and thereby is rendered infertile. An aylonit may also have a deepened voice (Arba'a Turim, Eben Ha'ezer, 172:4). A tumtum is a person born with ambiguous genitalia [2].

The Ralbag, a 12<sup>th</sup> century rabbi and physician from France, speculates that Sarah was obese. Obesity decreases the chances for a woman to naturally conceive. Therefore, she told her husband Abraham to marry their maid to provoke animosity, which would help Sarah lose weight and conceive [3].

In a provocative article, Joshua Backon, professor at the Hebrew University Faculty of Medicine and editorial secretary of the journal Jewish Bible Quarterly, puts together some of these sources to produce a more detailed diagnosis for Sarah. Polycystic ovarian syndrome (PCOS) is recognized as one of the most prevalent endocrine disorders in women of reproductive age, affecting approximately 1 in 15 women [4]. The syndrome was first discovered by Drs. Stein and Leventhal in 1935 and was previously called Stein-Leventhal Syndrome. The symptoms of PCOS include ovulatory and menstrual dysfunction, androgen excess, and infertility [5]. According to Backon, the Torah provided this clinical description thousands of years earlier.

The redundancy in the pasuk, "Sarai was barren (akarah); she had no child (ein la valad)" is the key to Backon's explanation. If the Torah noted that Sarah is akarah, why does it need to say she has no valad? The Talmud explains that the redundancy is there to teach us that Sarah was lacking a beit valad, a housing for the fetus - i.e. a uterus (Yebamot 64b). Genesis 18:11 noted that the way of women "ceased to be with Sarah," which connotes that she had formerly menstruated but ceased to do so. If Sarah had once menstruated, then she did in fact have a uterus and ovaries, thus invalidating the Talmud's claim that the meaning of valad is beit valad.

Backon speculates that the redundancy in the pasuk must have a different meaning. Some commentaries write that the use of the words "ein la" show that Sarah does not have a valad at that moment, but that she will have one later. The Radak notes that Sarah has a valad in Ur Kasdim, but does not have one in Canaan. Based on these descriptions, valad cannot mean child. Backon also suggests that, perhaps in this pasuk, akarah does not mean barren but rather "unattached" or "uprooted," the word's literal meaning. Finally, Backon makes the connection that valad means dominant follicle. Here, the pasuk is teaching us that Sarah was infertile due to immature follicles [6].

A normal menstrual cycle is regulated by hormones that promote the growth and development of egg follicles within the ovaries. Each follicle holds an egg, and, in any given cycle, there will be one dominant follicle from which the egg will be released for ovulation. It is from this egg that the woman can conceive. As the egg is released from the follicle, it must be swept into the fimbriae of the uterine tube to be in the proper location for fertilization. However, in PCOS, the follicles fail to develop normally because the hormones are not properly balanced. Therefore, there is no dominant follicle and there is no ovulation. Instead, the ovaries are filled with many undeveloped follicles that resemble cysts on an ultrasound, hence the name "polycystic ovaries" [7]. If the meaning of the pasuk is that the egg follicles were persistently immature, the consequence could have been that Sarah was not ovulating.

Due to the absence of ovulation, menstrual periods can be very infrequent, or there may be no menstruation at all. This would explain why Sarah ceased to have menstrual periods, and anovulation would explain her infertility. Another characteristic of women with PCOS is androgen excess, as these undeveloped follicles can produce excess male hormone [7]. This may be the reason the Talmud designates Sarah an aylonit. Androgen excess in a female can cause a deepened voice and lack of breast development, which are some criteria of an aylonit. Furthermore, women suffering from PCOS are more likely to be overweight or obese, which would support the Ralbag's commentary that Sarah was obese.

Of course, Backon's theory is just speculation of Sarah's problem. A criticism of the PCOS diagnosis is that the meaning of aylonit is not exactly clear-cut, so there is no legitimate basis to the claim. Although the laws of an aylonit are described in Eben Ha'ezer, it is not known exactly what the Talmud means when Sarah is called an aylonit. In other places, the Talmud describes Sarah as a beautiful woman (Baba Batra 58a), so it is possible that when the Talmud terms her an aylonit, it does not mean that she was a woman lacking secondary sexual characteristics and with a deepened voice. Another point that should not be overlooked is that the Talmud explains the pasuk "ein la valad" as Sarah was lacking a beit valad. If it is true that Sarah did not have a uterus, the possibility of PCOS is com-

pletely eliminated. What the Talmud seems to be leaning towards is that Sarah had some sort of anatomical abnormality, as she was missing a *beit valad* and was described as a *tumtum* (as well as the hint in *Yeshayahu*). A diagnosis based on these ideas found in the Talmud certainly is one to consider.

A possible conclusion based on the description of absent or inadequate reproductive organs is Müllerian agenesis. Müllerian agenesis, or MRKH, is an anatomical abnormality that affects approximately 1 in 4,000 women. In Müllerian agenesis, ovaries can still be present, and women are able to experience monthly ovulation, although not bleeding [8]. Therefore, the *pasuk* “it had ceased to be with Sarah after the manner of women” (Genesis 18:11) can be taken to describe that Sarah’s ovulatory cycle ceased; this explanation brings back the validity of Rashi, Radak, and S’forno, who explain that Sarah was postmenopausal. In this case, Sarah would have been a postmenopausal woman lacking reproductive organs capable of gestating a child, so one would fully be able to appreciate the miracle that occurred for her to get pregnant.

Lastly, it is possible that Sarah and Abraham had a form of unexplained infertility. If Sarah Imenu, along with her husband Abraham, were to walk into a modern day doctor’s office complaining

of infertility, it is not definite that doctors would be able to give them a cause for their infertility. As much as we would like to think that doctors have an explanation for all ailments, they do not always have an answer. Approximately 15% of couples with infertility have unexplained infertility, meaning that doctors do not know why the couple is struggling to have a baby even after rigorous testing procedures [9].

Whether or not Sarah Imenu indeed had any of these forms of infertility is, of course, a matter of conjecture. As our sages explain, “there are 70 faces to the Torah,” and there certainly are many acceptable explanations to Sarah’s barrenness. It is unfortunate that we will never be sure of the true cause of Sarah and Abraham’s struggle to have a baby for many years. What is known for sure, however, is that when a present-day couple is struggling with any sort of infertility (whether the woman is postmenopausal, obese, diagnosed with PCOS, Müllerian agenesis, unexplained infertility, etc.), assisted reproductive technologies are able to help most of them conceive. Nevertheless, prior to these modern technologies, the only cure for most types of infertility would be to wait for a miracle. Undoubtedly, Sarah and Abraham were *zocheh* to have this miracle transpire for them.

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