“MY REINS ADMONISH ME AT NIGHT” (PSALM 16:7):
THE KIDNEYS IN ANCIENT AND MEDIEVAL JEWISH SOURCES

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SUMMARY

David Macht already stated that in several ancient languages the same term is used for kidneys and testes. “Preparation or elaboration of the semen was considered to be one of the functions of the kidneys in man”.1 In the Bible, however, this confusion does not exist, at least not on the anatomical level. Together with the heart, the kidneys are paradigmatic of the innermost organs, wherefrom result their metaphoric association in being the seat of emotions and of wisdom. Some of these aspects will be delineated in the present study, briefly in Bible and Talmud, while stressing medieval Jewish sources, including the works of Shabtai Donnolo, Judah Halevi, Shem-Tov Falaquera, and Meir ibn Aldabi.

Let us begin with a rather strange statement of the Rabbis in the Mishnah (Hullin 3:2): “An animal which has lost its kidneys (kelayot) is fit for consumption (kasher).” This implies that these authorities apparently believed that such an animal could live for a whole year without kidneys. This is more than strange, it is difficult to believe that the Sages were unaware of the vital function of the kidneys. Katzenelson therefore proposed to amend the text and read “An animal which has lost a (i.e., one) kidney etc.”2 He also remarked that all references to the kidney in the Talmud are in singular form.

Key words: Kidneys – Talmud – Bible – History of Nephrology
If someone would attack him as attempting to change rabbinical law, Katzenelsohn remarked that anyway no beast whose kidneys had both been removed would ever be the subject of rabbinical expertise!\(^3\) Preuss, however, tries to explain the mishnaic statement, considering “the paucity of knowledge throughout antiquity of the function of the kidneys”\(^4\). Galen indeed criticizes in his *De Naturalibus Facultatibus* I, 13 [Kühn ed. II, 32-36], the opinion of Asclepiades and his followers who denied any relationship between the kidneys and the bladder. Asclepiades considered the bladder as a kind of sponge; the liquid we drink is dissolved into vapors which are carried directly through pores into the bladder, where they revert to water\(^5\). Daniel Le Clerc, one of the early historians of medicine, tried to reconcile Asclepiades with Galen, arguing that Asclepiades might have deviced his theory besides, or in addition to the role of the kidneys (which he does not mention)\(^6\). We have obviously no idea whether the Sages who produced this statement in the Mishnah drew their information from a follower of Asclepiades of Bithynia. But we read, on the other hand, that the Sages ruled that illnesses of one kidney may render the animal unfit for consumption (*terefa*). Without going into detail, putrefaction inside one kidney\(^7\), or a pierced kidney render the animal unfit. The same occurs with very small kidneys. One verse of the Book of Job has caused some problems to the talmudic Sages. It says [Job. 16:13]:

*His archers compass me round about, he cleaves my reins asunder, and does not spare; he pours out my gall upon the ground.*

Nevertheless, Job recovered! His case, however, was miraculous: the Lord had allowed Job’s trial and suffering, on condition that his life be spared\(^8\). Therefore this verse cannot be considered as an objection to the ruling of the Sages about pierced kidneys.
The innermost organ

Referring again to the Book of Job, which is replete with anatomical references, we single out another verse in which the kidneys are mentioned. Job is in utter despair, he feels rejected even by his own family and household. He awaits a manifestation of the Lord [Job. 19:27]:

What I discern by myself; what my eyes see, and none else:
My kidneys are destroyed within my inside⁹.

Only the Lord knows what is going on in the depth of the human frame. This is nicely stated in Psalm 139. The Lord sees everything: for Him darkness and light are all alike [v. 12].

[13] For you have formed my reins; you have knit me together in my mother’s womb
[15] My frame was not hidden from you, when I was made in secret, and knit in the deepest [parts of the] earth¹⁰.

The kidneys are the only organs mentioned in this embryological excursus, which indeed deserves being mentioned. I have given elsewhere some details on the commentary of the medieval exegete Abraham ibn Ezra on this particular verse¹¹.

Kidneys: One – Two – Three

Speaking of the guilt offering (Hebr. qorban h)atat), the Scriptural text states that the priest will offer “the two kidneys, and the fat that is on them, which is by the flanks” [Lev. 7: 4]. This implies, according to a Talmudic authority, “That an animal with one kidney or with three kidneys [is not offered up].”

On the other hand there is another verse where it says “He shall remove it”, which seems to mean that an animal possessing only one kidney is fit for the altar. We read further:
Now, all [authorities] hold that no living being is created with one kidney only, so there must have been in this case the loss of a kidney …

Here comes the statement of Rabbi Hiyya bar Joseph:

All [authorities] agree that a living being can be created with only one kidney and … this is considered a defect.

Although Rabbi Yohanan disagrees, it is clearly stated that the two opinions were hold at that time.

We have an illustration, in this anatomical discussion about the kidneys, of the fact that the Talmudists had adequate information on the one hand, but adopted unlikely physio-pathological theories on the other side, without any critical controversy.

Kidneys and the Sexual Organs

When Job describes the mythic animal Behemoth (identified by some scholars with hypopotamus), he asserts [Job 40:16-17]:

[16] His might is in his loins, and his force in the muscles of his belly.
[17] He stiffens his tail like a cedar, the sinews of his thighs are like a network.

His ‘thighs’ [Hebr. pahadav] is a hapax in the Bible. The commentator R’ Solomon Itzhaki (Rashi) understands ‘testicles’ [Hebr. betsim]. Abraham ibn Ezra as well, referring to the Targum (Onkelos) on Lev. 21:20. The Hebrew meroah ashek (crushed testicles) is translated into Aramaic meras pahdin. However the Targum of Jerusalem understands de-hasar kulyya, lit. “a kidney is lacking”. Another example can be found in Targum [Ps.-] Jonathan on Lev. 22:23. It seems that there was some confusion, at least among the Aramaic translators, between kidneys and testicles. Or else, that the usual term for kidneys (Hebr. kilyah, Aram. kolya, kolyita) could also designate the testicles.
The book of Job is decidedly a rich philological source in the history of nephrology. In the famous theophany toward the end of the book, the Lord exclaims [Job 38:36-37]:

[36] Who has put wisdom in the inward parts? Or, who has given understanding to the birds?
[37] Who can number the clouds by wisdom…

The ‘inward parts’ [Hebr. tuhοt] is another hapax. Most commentators understand that tuhοt are the kidneys.

We have considered so far kidneys and generation; kidneys and wisdom; and finally let us consider kidneys as advisers, or as counsellors to the heart.

The Kidney admonish, or: “Conscientious Nephrology”

The heart and the kidneys are often associated in scriptural metaphorical language. In Ecclesiastes 10:2 we read:

A wise man’s heart [inclines him] to the right hand,  
but a fool’s heart to his left.

A Talmudic commentary adds:

There are two kidneys in man; one inclines him toward the good, the other toward evil. And logically the good (one) is on the right (side) and the evil (one) on the left.

We obviously know that left (Latin sinister, sinistra) has a bad connotation in the Western tradition, although not ubiquitously. The kidneys appear in the above excursus as the informants of the heart. Another biblical source considers that the kidneys give only positive advices. We read [Psalm 16: 7-9]:

[7] I bless the Lord who gives me counsel. My reins also admonish me at night;  
[8] I have set the Lord always in front of me, at my right hand and I shall not move;  
[9] Therefore my heart rejoices … and my flesh dwells secure.
Again, the kidneys and the heart are mentioned in close relationship. At night, explains Abraham ibn Ezra, the heart is free from any alien business, and the kidneys represent the forces of generation [Hebr. *toladah*] which are hidden as the kidneys are concealed. The kidneys are the concealed seat of thought and desire. The Lord “tries the reins and the heart” But He also infuses in the kidneys “Law and wisdom”, as stated in a Midrash trying to explain how our father Abraham had been granted knowledge of the Law. Talmudic sages were obviously aware that the source of “water” (i.e., urine) in the body is functioning even at night, just as the heart is. Thus the hidden, mysterious kidneys are considered (together with the heart) as inspirers, or advisers, of the human mind.

**Astrological – Mystical Nephrology**

In the *Sefer Yetsirah* (the Book of Creation) which may be considered as the earliest existent work of this kind in Hebrew literature, the kidneys are mentioned among the twelve “directors of the soul” (*manhigim ba-nefesh*). There are twelve ‘simple’ letters, corresponding to the 12 signs of the zodiac, the 12 months and the 12 chief limbs of the body: the two hands, the two feet, the two kidneys, the spleen, liver, bile (gland), the stomach (etc.). According to the short version, the right kidney is associated to the letter *ט* (*tet*), to the month *Av* and to the sign *Aries* (Lion), whereas the left kidney is related to the letter *י* (*yod*), to the month of *Elul* and to the sign *Virgo* (Virgin). According to the longer version, the right kidney is connected to the letter *ז* (*zayin*) and the left one to the letter *ט* (*tet*).

Among the commentaries, we shall first consider two early ones, both from the 9th-10th centuries C.E. Sa’adīa Gaon (882-942), born in Egypt, a leader of Babylonian Jewry in the geonic period, remarks: “The warmth of the kidneys arouses the desire for sexual intercourse [Hebr. *mishkav dodim*].”
Shabtai Donnolo (913-ca. 982), born in Southern Italy, a physician who left a “Book of Remedies” considered as the first Hebrew medical work in the West, wrote a commentary to Sefer Yetzirah called Sefer Hakemoni. In the first part of his commentary, Donnolo writes:

He [the Lord] made the two kidneys, right and left, in order to warm the lower belly, to enliven and strengthen it and to (help) expelling the wastes and the urine out of the body [p. 125].

This sounds like matter-of-fact medical language. Later in the same part we read:

Just as He made smooth stones sunk in the deep between which water gushes out, He made two kidneys with the seed issuing between them to the testicles and to the genitals [p. 128].

This excursus expresses the Neo-Platonistic analogy Micro-Macrocosmos, quite current in medieval philosophical and theological literature.

The third passage is taken from the fifth chapter of the second part:

From the heart and the two kidneys stem meditation and thought, and from the kidneys counsel and rejoicing. [...] From the kidneys comes talk with the voice, and stirring toward intercourse. They cause the whitening of the semen which was originally red like blood and whitens through the (effect of the) heat of the kidneys. Then the semen passes from their ‘sinews’ (those of the kidneys) to the sinews of the testicles and genitals. Castration is related to the kidneys, for if someone suffers burns from the outside to both kidneys, he becomes a castrate [p. 145].

Here, Donnolo combines Aristotelian physiology with Talmudic exegesis (cf. counsel and rejoicing). The haematogenous model of spermatogenesis is here adopted. The seed is a product of blood, as milk was considered to be, and both fluids are ‘whitened’ and transformed by this process.
Thus, it appears that in Donnolo’s approach, the kidneys are active in two aspects of the sexual sphere: they stir toward sexual intercourse and they transform blood into sperm. All this stands in addition to their role in warming up the lower belly and expelling the urine from the body. This is miles away from the *Sefer Yetsirah*. It places Donnolo as an eclectic, well versed in both rational and mystical (including astrological) lore, but remaining – in his study of the microcosm – close to his biological expertise.

Another, later commentator of *Sefer Yetsirah* was Judah Halevi. *Judah Halevi*, a famous Spanish poet and philosopher who wrote in Arabic and Hebrew, lived through the first half of the 12th century. His philosophical work generally known as *Sefer ha-Kuzari* was originally written in Arabic. It was soon translated into Hebrew by Judah ibn Tibbon and first printed in Fano in 1506. In the fourth part (*ma’amar revi‘i*) 32, Judah Halevi quotes and comments on the *Sefer Yetsirah*, attributed to the Patriarch Abraham 33. There are organs, which have (according to Hebrew tradition) additional faculties (i.e., additional to the accepted physiological ones),

> Such as: kidneys give advice, the spleen [induces] laughter and the stomach [brings] sleep. And it should not seem strange that the kidneys have the power to give counselling, for we observe similar effects from the testes: castrates’ minds are inferior to those of women, from the absence of testicles (betsim) result the absence of a beard and of adequate counselling [IV, 25].

The commentator Judah Moscato (ca. 1530-ca. 1593), a well-educated rabbi and preacher, mainly active in Mantua, Italy, 35 explains that the kidneys display some association with the brain, several organs being thus associated to the functions of the soul. This statement, however, was not developed into more detail.

*Aldabi and Falaquera: Medieval Galenic Nephrology*

*Meir ben Isaac Aldabi* (ca. 1310-ca. 1360) was apparently no practicing physician, but was a well-trained scholar. Born in Toledo, he later moved
to Jerusalem where he completed his great work Shevilei Emunah (“The Paths of Faith”) sometime around 1360. The work was first published in Riva di Trento in 1518. The fourth “path” (among ten) deals with embryology, anatomy and physiology. In his excursus on the kidneys, the quoted sources are Hippocrates, Galen and Ibn Rushd (Averroes). Without going into detail, let us just remark that Aldabi stresses (as did Donnolo) that the kidneys are “ablaze like fire”, if not, the body would be unable to endure the cold of the bladder [p. 89].

While speaking about the male genitals, Aldabi states that the testicles are related to the kidneys by a number of sinews (or vessels, Hebr. gidim). Together they mature the seed. The desire for intercourse comes from the kidneys (others say, from the liver). Obviously, the state of the art had progressed very little from the 10th to the 14th century [pp. 98-99].

Shem Tov ben Joseph Falaquera (ca. 1225-1295) spent most of his life in Northern Spain, in the town of Tudela, then under Christian rule. Falaquera was well versed in philosophy and displays some expertise in medicine, although we do not know whether he ever practised medicine. He wrote a number of works, only one of medical content.

The work considered in our present study is the Book of the Seeker (Sefer Ha-mevaqesh) which pertains to the maqama literature.

We used the translation into English by M. Herschel Levine (1976), which includes a detailed introduction on the context, the sources, related literature and Falaquera’s other works. The inquiring youth (the “Seeker”) first meets a wealthy man, then a mighty warrior, later a craftsman and then a physician, to whom he addresses twelve challenging questions.

The Seeker’s sixth question was “Why do stones develop in the kidneys of children, but in the bladder of adults?”

The Physician replied: “Adults are stronger by nature, therefore their greater warmth dissolves the thick humors which then descend to the bladder through the tubes of the kidney” [p. 51].

Children, being weaker, retain the thick humors in the kidneys, where they harden till they become like stones [ibid.].
Here again, according to Galenic medicine, the humors play the central role, whereas the kidneys are the source of natural heat at the lower level, just as the heart is at the upper level. Ending up with a satirical statement, typical of the *maqama*-literature (which can be found in Zabara’s *Book of Delights*):⁴⁰

* Fate has said to the fool: “Become a doctor!”
* For you can slay your patients, and even prosper from their death!
* You shall have more advantage than the Angel of Death,
* For he killeth men, but attaineth no wealth!

A statement that our kidneys will no doubt admonish us (as serious physicians) to forget – the sooner the better!

**BIBLIOGRAPHY AND NOTES**

This paper is personally addressed to the noted historian of medicine and devoted editor of *Medicina nei Secoli* Prof. Luciana Rita Angeletti, with best wishes for the future.


2. See KATZENELSOHN I.L., *Talmud und Medizin*. Berlin, Hayyim, 1928, pp. 105-106 [Hebr.]. This statement, unlike most others mentioned in the Mishnah and Talmud, was evidently not based on practical experience, so Katzenelsohn.

3. Because within one or two days it would be dead and obviously unfit for consumption according to Jewish law.

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7. See Job 1: 12 and B.T. *Hullin* 55a-b: … “Provided the infection extended up to the hilum (Hebr. hărît).” On the same folio we read: “If the kidney is diminished in size, down to a bean (small cattle) or to a medium sized grape (large cattle), it is terefa (unfit).”

8. See Job 1: 12 and B.T. *Hullin* 43a. A modern critic would argue that the Book of Job is a poetical piece, which may hardly be taken literally.

9. My own translation. The meaning seems to be that there is no way for anybody but myself to discern what is “destroyed” deep in my inside.


11. Ibn Ezra sees 3 possible explanations: 1) The kidneys are placed deep into the body, in a secret place. –2) Astrological authorities consider that the reins are created first. –3) The kidneys are the seat of sexual desire (referring to Psalm 84:3). See my paper “The kidneys give advice” – Some Thoughts on Nephrology in the Talmud and Midrash. Korot 1993-1994; 10:44-53 [p. 50].


13. The fact that the erroneous assertion that an animal whose two kidneys had been lost could survive had no bearing on jurisprudence (as Katzenelsohn remarked), may explain the fact that this item was not discussed by later generations of Talmudists. We might add here that Aristotle seems also to have had some doubts about the vital importance of the kidneys. We read [De Part. Animal. III, 7, 670b23-26]: “The kidneys, when they are present […] are suited to serve in the excretion of the fluid which collects in the bladder”.

14. “Like a network” is my own rendering. The Koren Bible has [the sinews] “are knit together”, which does not make much sense.

15. RASHI (ad loc.) quotes the Targum and refers to the quotation in the Book of Job (40:17) just mentioned.
16. The terms *saru’a ve-kalut* are translated *yatir kulya o de-h*–*asir kulya*: an additional kidney or one kidney lacking. Two verses down the page (22:24), the testicles are again called *pahadoi*.


18. Not exactly a *hapax*: see also Psalm 51:8: “Behold, you wished for truth in the inward parts [Hebr. *ba-tuhot*] and you will teach me wisdom in the hidden [parts]: *Tuhot* may be derived from *tuah*, to cover, to plaster, and thus to conceal.

19. See B.T. *Berakhot* 61a. The text further states: “The kidneys give advice, the heart comprehend, the tongue articulates, the mouth realizes”. See my study “The kidneys give advice” (KOTTEK S., ref. 11, p. 11), pp. 45-47.

20. In Greek lore the left side was indeed considered dangerous, but the Romans considered it in some cases favorably. See f.i. PLAUTUS, *Epidicus* 183; PLINIUS (the younger), *Panegyricus Traiano* 5,3.

21. This verse is interpreted (RASHI) as meaning: I have set the fear of the Lord always in front of me, for he is always at my right hand to assist me, lest I stumble.

22. *Toladah* means indeed generation etymologically, but is often used for ‘nature’ more generally.


24. See *Midrash Rabba Genesis* 61, 1; also *Tanhuma, Vayiggash* 11. More on these aspects in my paper “The kidneys give advice” (KOTTEK S., ref. 11), pp. 45-49.

25. The *Sefer Yetsirah* was written sometime between the 3rd and 6th century C.E. It exists in two versions, a short one and a longer one, both were the subject of commentary since the ninth century.

26. See *Sefer Yetsirah* 5, 2 for the short version, and 5, 7-8 for the longer one.


29. This is a Talmudic quote (cf. b.T. *Hagiga* 12a) referring to Isaiah 34:11. The context in the Talmud has no connection whatsoever with the kidneys.

31. Judah Halevi (ca. 1075-1141), born in Tudela, travelled through Muslim Spain. He practiced for some time medicine in Toledo, but was also engaged in trade. He was in very friendly terms with Abraham ibn Ezra, they even travelled together. Toward the end of his life he decided to travel to the Holy Land, he reached Alexandria but seemingly never his goal: Jerusalem.

32. The work comprises 5 parts and Halevi’s aim was to compare the teachings of Judaism with those of Christianity, Islam and the philosophy of Aristotle. In the fourth part ("dissertation"), Halevi discusses prophecy, and the excellence of Judaism in knowledge and science.

33. Abraham is quoted at the very end of *Sefer Yetsirah* (6,7), as the one who first grasped the scheme of Creation, he was therefore considered in the Middle Ages as the author of the work. Others ascribed the authorship to R. Aqiba (1st cent.).

34. The kidneys are cited again by J. Halevi while giving some details on the medical knowledge displayed by the Talmudists (IV, 31). We used the Warsaw edition of the Kusari, I. Goldmann pr., 1880 (repr. 1959) [Hebr.].

35. Judah Moscato was first preacher, later chief rabbi of the community of Mantua, one of the main Jewish centers in Renaissance Italy. Moscato was familiar with classical and medieval philosophy and with cabbalistic literature as well. His commentary on *Sefer Yetsirah*, called *Qol Yehudah*, was first published in Venice in 1594 (posthumously).

36. We have used the edition published in Warsaw (A. Wolden) in 1887. The work was written in excellent Hebrew, and is divided into 10 “paths”, i.e., chapters. It has been argued that Aldabi had mainly used another encyclopedic work, *Sefer Sha’ar Ha-shamayim*, written some 100 years earlier by Gershon b. Salomon of Arles (first printed Venice 1547). Gershon’s brief excursion on kidneys (9th chapter, ed. ROEDELHEIM 1801, p. 64b) is merely anatomical, according to Galen.

37. This medical work is entitled *Regimen of a Healthy Body*, edited by S. MUNTNER in 1950.

38. A *maqama* is a narrative in rhymed prose, a literary genre initiated by the Arabic author al-Hamdhani (10th cent.) and illustrated in Hebrew by al-Harizi and ibn Zabara.

40. See *Sefer Shaashuim, The Book of Delight, a Book of Mediaeval Lore*, I.
    DAVIDSON (ed.). New York, The Jewish Theological Seminary of America,
    1914 [X, p. 123]. In this tenth chapter Joseph ibn Zabara discusses twelve
    medical questions, just like Falaquera. See my paper *Joseph b. Meir ibn
    Zabara of Barcelona: His Place in the History of Medicine*. In *Proceedings,
    1981; 8[1-2]:21*-26* [Engl.] and 11-30 [Hebr.].

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