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“DOG-LIKE” WOMEN: THE ORIGIN OF THE RHYTHM METHOD

Summary: Hippocrates, Aristotle, and Soranus all mention that women are most likely to fall pregnant during menstruation or the days following it. They correctly realised the connection between the menstrual cycle and conception, but they committed a serious mistake concerning the time of conception and they did not rectify this error for seven centuries. The mistake probably comes from the observation of bitches being in heat as these ancient scholars linked the two phenomena – being on heat and menses – in the wrong way.

Key words: Soranus, Hippocrates, Aristotle, menses, contraception, gynaecology, bitches.

Very little is known about Soranus of Ephesus, this outstanding figure of ancient gynaecology, and that little is full of contradictions. The *Suda* mentions not one,¹ but two Sorani, both happened to be gynaecologists, and both were from Ephesus.¹ All this goes back to an ancient method of biography where, if the biographer found contradictions in the sources, he doubled the personality portrayed instead of solving the problem. Thus, as Ann Ellis Hanson states, it is probable that the two Sorani are actually a single person. Soranus probably completed his studies in Alexandria and later lived in Rome under Trajan and Hadrian, that is between 98 and 138 A.D. He alludes to the latter fact in his works, when he compares the child-care customs of Greek and Roman women.² Caelius Aurelianus also agrees that Soranus lived in Rome.³ His renown is well illustrated by the fact that a little more than a hundred years later he is quoted by Galen a number of times. Though Soranus was of Greek descent, his name is of Latin origin (its meaning is: an inhabitant of Sora), the reason being that Quintus Marcius Barea Soranus, proconsul of Asia between 61, and 63, was a benefactor of Ephesus, and Soranus' parents, Menander and Phoebe named their son after this benefactor. This suggests that Soranus came from the Ephesian aristocracy and was not an emancipated slave. The *Suda* mentions at least twenty works

¹ *Suda* Σ 851 and 852. Cf. HANSON, Ann Ellis–GREEN, Monica H.: Soranus of Ephesus: *Methodorum princeps*. In: *Aufstieg und Niedergang der Römischen Welt*. 37. 2. Berlin–New York, 1994, 981.

² Soranus: *Gynaikeia*. 2. 6.

³ HANSON, Ann Ellis–GREEN, Monica H. 983.

written by Soranus, but only three are preserved in whole or in part, among them the Gynecology (*Gynaikēia*).

Ancient physicians, Soranus and his predecessors, used various mixtures to avoid conception or pregnancy, to propagate menses or to initiate an abortion. Most of these mixtures were made up of medicinal plants and herbs, fruits, cereals, and materials containing ferrous sulphate, but internal organs of animals where also used on rare occasions. The medicaments made of such ingredients were applied orally or vaginally. The ingredients of oral medicaments were often mixed with wine or honey and water before consumption. Vaginal medicaments were applied in a pessary or were rolled in wool (or, in the case of liquids, wool was soaked in them), a tampon-like shape was formed and applied. We, however, shall not discuss these methods here. We shall also not consider such ancient methods of contraception as coitus interruptus, protraction of the breast-feeding period, anal coitus and marrying at a later age. Abortion of the pregnancy was also known of course, just as abandoning the born child, but the latter cannot be considered a medical method of contraception.

It is intriguing though, that Soranus and his predecessors described a method of contraception, nowadays called the rhythm method. This seems surprising, because the method of Knaus and Onigo was elaborated at a strikingly late date, in the 1930s. Ancient physicians also noticed that there were periods in the functioning of the female body when there was less chance of conception. The only problem in the ancient theory was, that in contrast with modern scientific knowledge, they placed ovulation at a different point in the cycle. We shall present this difference through texts of various authors:

A) "... ἐπὴν ἀποκαθαρθέωσιν αἱ γυναικεῖς, μάλιστα ἐν γαστρὶ λαμβάνουσιν ἰμερωθῆσα, καὶ ἡ γονή σφισι ρώννυται, ἥν ὅτε χρὴ μιγέωσι, καὶ ἡ τοῦ ἀνδρὸς ρήγδίως μίσγεται, καὶ ἥν ἐπικρατήσῃ, τῷδε ηδέλφισται.

2 τότε γὰρ μάλιστα τὸ στόμα τῶν μητρέων κέχηνε, καὶ τετανὸν ἔστι, καὶ μετὰ τὰς καθάρσιας καὶ αἱ φλέβες τὴν γονήν σπῶσιν. ἐν δὲ τῷ πρὸν χρόνῳ τό τε στόμα τῶν μητρέων μέμυκε, καὶ μᾶλλον αἱ φλέβες πλεῖαι αἴματος ἔοῦσαι οὐχ ὁμοίως σπῶσι τὴν γονήν."

"When the menstruation stops women are most fit to fall pregnant if they desire it and their ovum is in good condition. If they mate in the best time it is mixed easily with the man's semen and if that of the man is stronger (the child) will resemble him.

2 The orifice of the uterus is most open and most tense at this time after menstruation and the veins suck the semen in. In the time preceding this the orifice of the uterus is closed and the veins are more filled with blood and they cannot suck the semen in a similar fashion."

Hippocrates: *De mulieribus* C 62, 19, 24.⁴

⁴ Hippokratische Gynäkologie. Die gynäkologischen Texte des Autors C nach den pseudohippokratischen Schriften *De muliebris I, II und De sterilibus*. Hrsg. und übersetzt von H. GRENSEMANN. Wiesbaden 1982, 114.

B) “Φύσει μὲν οὖν ἡ σύλληψις γίνεται μετὰ τὴν τούτων ἀπαλλαγὴν ταῖς γυναιξίν· καὶ ὅσαις μὴ γίνεται ταῦτα, ὡς ἐπὶ τὸ πολὺ ἄτεκνοι διατελοῦσιν ... ὑστερον δ' οὐ συλλαμβάνουσιν, ὅσαις εὐθὺς μετὰ τὴν κάθαρσιν αἱ ὑστέραι συμμένουσιν.”

“Now by nature conception takes place in women after this discharge is completed; and those that do not have the discharge, remain childless as a rule ... but conception does not occur later in those whose uterus closes up immediately after the purgation.”⁵

Aristotle: *Historia animalium* VII, 582b

C) “Οσαι δὲ μὴ γιγνομένων τῶν καταμηνίων συλλαμβάνουσιν, ἡ μεταξὺ γιγνομένων ὕστερον δὲ μῆ, αἴτιον ὅτι ταῖς μὲν τοσαύτῃ γίνεται ἵκμὰς ὅση μετὰ τὴν κάθαρσιν ὑπολείπεται ταῖς γονίμοις, πλειόν δ' οὐ γίγνεται περίτωσις ὥστε καὶ θύραζε ἀπελθεῖν, ταῖς δὲ μετὰ τὴν κάθαρσιν συμμένει τῷ στόμα τῶν ὕστερῶν.”

“There are instances of women who conceive without the occurrence of menstrual discharge; others conceive during its occurrence but not after it. The reasons are these. The former produce only just so much liquid as remains in fertile individuals after the evacuation is over, and there is no surplus residue to be discharged externally; in the latter the mouth of the uterus closes up after the evacuation is over.”⁶

Aristotle: *De generatione animalium* I, XIX, 727b

D) “Αριστος συνουσίας καιρὸς πρὸς σύλληψιν ὁ πανομένης τε [καὶ] παρακμαζούσης τῆς καθάρσεως, ὄρμῆς καὶ ὄρέξεως πρὸς συμπλοκὴν ὑπαρχούσης, καὶ τοῦ σώματος μήτ' ἐνδεοῦς ἐντος μήτ' ἄγαν πλήρους καὶ βαρέος ἐκ μέθης καὶ ἀπεψίας, καὶ ὁ μετὰ τὴν ἀποθεραπείαν τοῦ σώματος ἐμβρωματίου λημφθέντος ὀλίγου καὶ κατὰ πᾶν εὐναρέστου τοῦ καταστήματος ὑπάρχοντος; Μόνος οὖν καιρὸς ἐπιτήδειος ὁ κατὰ τὴν ἀπόληξιν τῆς καθάρσεως; κεκούφισται μὲν γὰρ ἡ μήτρα καὶ σύμμετρος παρέπεται θερμασία καὶ ὑγρασία.”

“The best time for fruitful intercourse is when menstruation is ending and abating, when urge and appetite for coitus are present, when the body is neither in want nor too congested and heavy from drunkenness and indigestion, and after the body has been rubbed down and a little food been eaten and when a pleasant state exists in every respect. ... Consequently, the only suitable time is at the waning of menses, for the uterus has been lightened and warmth and moisture are imparted in right measure.”

Soranus: *Gynaeciorum libri* 1. 12. 36⁷

Hippocrates of Kos wrote in the 5th century B.C., Aristotle of Stageira in the 4th century B.C. and Soranus of Ephesus in the 2nd century A.D. Ancient physicians were clearly of very similar views even though they lived and worked in very different times and territories. According to Hippocrates (A), conception happens immedi-

⁵ English translation from: ARISTOTLE: *History of Animals. Books VII–X.* Ed. and translated by D. M. Balme. Cambridge (Mass.) 1991. (Loeb Classical Library)

⁶ English translation from: ARISTOTLE: *Generation of Animals.* Translated by A. L. Peck. Cambridge (Mass.) 1942. (Loeb Classical Library)

⁷ English translation from: Soranus' *Gynecology.* Translated by O. TEMKIN. Baltimore 1956. 34–35.

ately after menstruation, supposing the woman desires intercourse. Aristotle supposed that conception is most probable after (B) or during (C) menstruation. Soranus (D) in concord with Aristotle's (C) view believes that the time best for conception is when menstruation is ending or abating, but he includes the condition known from Hippocrates (A): the woman must desire intercourse. Thus according to these concepts the period of time immediately following the end of menstruation, or menses itself is best for becoming pregnant.

These ideas of ancient medical writers differ fundamentally from the views of modern medicine. On the basis of modern scientific observation it can be stated, that "because of the permanent length of the luteal phase, ovulation usually happens 14 days prior to the first day of the next menses. Coitus should be avoided 2–3 days before and after this day. This method can only be used in the case of a regular cycle, and then also with a very high rate of error reaching 35%"⁸ Thus, based on modern medical knowledge, we may state that ancient physicians placed the time of conception in the worst possible period of the cycle. True, their goal was not contraception, but to help conception that could all but happen at the time they wanted conception to be. Anyhow, this pseudo-discovery could have been used in contraception as well: every day that was not during or immediately before or after menstruation could have been called safe as far as the risk of becoming pregnant is concerned. The result was however, that whoever wanted to avoid conception had intercourse almost certainly at the time of ovulation. So, one would think, the uselessness of the method was quickly realised, if not otherwise, then because of the complaints brought forward by discontent mothers. In spite of this not even the 700 years between Hippocrates and Soranus were sufficient for the renowned writers to rectify their error. What is even more intriguing is that "the correlation between the time of ovulation and menstruation was realised relatively late by the Japanese gynaecologist Ogino."⁹ The question arises: where does the wrong idea of Hippocrates (and physicians after him) have its origins and why could this risky error, probably revealed by women quite often, be repeated in medical works for centuries? The answer lies probably in a factor that surely remained unchanged or changed very little over the centuries: the often quite simple views of men (and physicians were indeed men) concerning women.

Ancient authors starting right from Homer compare women (and even goddesses) remarkably often to various animals. Epithets like "cow-eyed Hera", "owl-eyed Pallas Athena" are frequent. These epithets might have preserved something from an era when Greeks imagined their gods (and not only goddesses) in a not absolutely human form. The animal mentioned most often in comparisons, however, is the dog and it is improbable that this would be proof of some kind of theriomorphic prejudice in the case of mortal women. Helen for example applies the following to herself:

“Δᾶερ ἐμεῖο, κυνὸς κακομηχάνου, ὄκρυοέσσης,
ὅς μὸ δόφελὸ ἡματι τῷ, ὅτε με πρῶτον τέκε μῆτηρ,

⁸ PAPP, Zoltán: *Szülészet – nőgyógyászat (Obstetrics – Gynaecology)*. Budapest 1998. 183.

⁹ PAPP, Zoltán 132.

οἴχεσθαι προφέρουσα κακή ἀνέμοιο θύελλαῃ
δᾶερ, ἐπεί σε μάλιστα πόνος φρένας ἀμφιβέβηκεν
εἶνεκὸς ἐμεῖος κυνὸς καὶ Ἀλεξάνδρου ἔνεκὸς ἄτης”

“O Brother of me that am a dog, a contriver of mischief and abhorred of all, I would that on the day when first my mother gave me birth an evil storm-wind had borne me away ... my brother, since above all others has trouble encompassed thy heart because of me, the dog and the folly of Alexander”,¹⁰

Homer: *Iliad* 6, 344–346; 355–356.

Iris warns Hera thus, when she revolts against her husband:

“ἀλλὰ σύγ’, αἰνοτάτη, κύον ἀδεές, εἰ ἐτεόν γε
τολμήσεις Διός ἄντα πελώριον ἔγχος ἀεῖραι.”

“But most dread art thou, thou bold and dog-like thing, if in good sooth thou wilt dare to raise thy mighty spear against Zeus.”¹⁰

Homer: *Iliad* 8, 423–424.

Zeus also addresses similar words to his wife, Hera:

“οὐδὸς ἐν ἐνθ’ ἀφίκηαι ἀλωμίνη, οὐ σεῦ ἔγωγε
σκυζομένης ἀλέγω, ἐπεὶ οὐ σέο κύντερον ἄλλο.”

“Though thou shouldst fare even thither in thy wanderings, yet reck I not of thy wrath, seeing there is naught more dog-like than thou.”¹⁰

Homer: *Iliad* 8, 482–483.

More examples could be brought forward, but it is apparent already, that the poet compared women to dogs primarily because of their quarrelsome nature and their disputes (“thy wrath”). The author of a 3rd-century B.C. Egyptian magic papyrus was driven by completely different motives:

“Πρὸς μῆτρας ἀναδρομῆν: »έξορκίζω σε, μήτραν κατὰ τοῦ κατασταθέντος ἐπὶ τῆς ἀβύσσου πρὶν γενέσθαι οὐρανόν ἡ γῆν ἡ θάλασσαν ἡ φῶς ἡ σκίτος, τὸν κτίσαντα ἀγγέλους, ὃν πρῶτος Αμιχαμχου καὶ χουχαω χηρωει ουειαχω οδου προσειογγης, καὶ ἐπὶ χερουβιν καθήμενον, βαστάζοντα τὸν θρόνον τὸν ἴδιον· ἀποκατασταθῆναι ἐν τῇ ἔδρᾳ μηδὲ κλιθῆναι εἰς τὸ δεξιὸν πλευράῶψιν μέρος μηδὲ εἰς τὸ ἀριστερὸν πλευρὸν μέρος μηδὲ ἀποδήξης εἰς τὴν καρδίαν ὡς κύων, ἀλλὰ ἐτάθητι καὶ μένοις ἐν χώροις ιδίοις, μηδὲν μεμασημάζΥνη, ἔστε ἔξορκίζω σε τὸν ἀρχῆ ποιήσαντα τὸν οὐρανὸν καὶ τὸν γῆν καὶ πάντα τὰ ἐν αὐτῇ. ἀλληλουια, ἀμήν.« γράφε ἐν λεπίδι κασσιτερίνη καὶ ἔνδυνε ἐν χρώμα εἰς Ζ’.”

“Against the rising of the womb: »I swear you, womb by him that stands firmly above the abyss, before the sky or the earth, or light or shadow would come to be, him, the creator of angels, the first of whom is Amichamchu and Chuchaô Chêrôei Ueiachô Odu Proseiongê and who sits on that cherub, which bears his throne to return to your place and turn not either towards the right ribs or towards the left ones and proceed not towards the heart as a dog, but stop and stay in your place. Attack nothing until I swear you by the one who created heaven and earth and everything

¹⁰ English translation slightly modified from: HOMER: *The Iliad*. Translated by A.T. Murray. Cambridge (Mass.)–London 1924. (Loeb Classical Library)

there is upon it in the beginning. Halleluia, amen.« Write this on a lead tablet and tie it (to your waist) with a seven-coloured (string).”

Preisendanz, K.: *Papyri Graecae Magicae*. Stuttgart 1974². VII 260–271.

This spell quotes another widely known superstition, namely, that the womb sometimes starts to wander around in the body causing a number of gynaecological diseases and it intends to serve as a cure for such an illness. It is more important for us to note that the woman and her uterus is similar to a dog because according to ancient views the uterus desires love as wildly as a bitch. So, the basis of this comparison is intense sexual appetite. As we have seen, Hippocrates, Aristotle, and Soranus agreed that conception is not possible without desire, but the desire of bitches (and according to Greek physicians that of women) is usually so strong that its lack is not very probable. According to Helen King, one of the best experts in ancient gynaecological writers, the comparison to a dog “recalls the Greco-Roman ideas of the insatiable sexual appetites of dogs – and women.”¹¹ Helen King called the attention to the fact how important this sexual aspect is in comparing women to dogs.¹² Another important correlation is that the word for ‘dog’ in Greek is *kuōn*, while the verb ‘to be pregnant’ is *kuein*.¹³

If we continue to think along the lines of Helen King’s observation we, might suppose that the linking of the dog with women and sex might bring us nearer the solution of the problem discussed here. In the ancient world, as it is well known, people tried to explain a lot of things based on experience and observation. The animal best known to and most often mentioned by ancient authors, was the dog. Aristotle emphasises (*Historia animalium* 574a-b) that the bitch’s genital organs grow when she is in heat and that one cycle lasts 14 days. He does not recommend mating in the first seven days, during menstruation, but he thinks that the 14th and last day of the cycle is ideal for that purpose. If Aristotle compared the human woman’s menstrual cycle (which is not 14 days long) with that of the dog he might have reached the conclusion that was so often advocated by ancient physicians: the time of abating or ceasing of menstruation is best for conception. Even though in the case of human females the 14th day would have meant the middle of the cycle, that is ovulation, there is no sign of such a conclusion in ancient literature (or indeed anywhere before the 19th century). Thus, the basis of comparison was not the dog’s 7-day menstruation but its 14-day cycle. Dogs are in heat twice (sometimes only once) a year, whereas the cycle of human females is completely different. “The bitch will only mate and may become pregnant when she is in heat, as the ovum only becomes detached in these periods. The male is ready for mating all year round ... The changes in the genital organs of the bitch are apparent when she is in heat: the external genital organs swell and a bloody discharge comes from them. Mucus production is increased on the surface of the womb and the vagina, the orifice of the uterus more or less opens ... A number of external and internal factors influence the time a bitch is in

¹¹ KING, Helen: *Hippocrates’ Woman. Reading the Female Body in Ancient Greece*. London–New York 1998. 234.

¹² KING, Helen 25.

¹³ KING, Helen 24.

heat: the personality of dogs is quite varied, too; it is generally 20–25 days long ... A normal bitch will not allow the male to approach her until the 7th–9th day of her being in heat, she bites him. From the ninth to the thirteenth day she exhibits her readiness to mate by her characteristic behaviour. In this period ova become mature and are detached. Bloody discharge abates and becomes lighter in colour, more watery. Bitches are usually most fit for mating in this period, between days 11 and 13.”¹⁴ For the eyes of ancient observers the pregnancy of dogs was in some ways connected to their cycle of being in heat and they might have compared the menstruation of women to this. The frequent (and quite negative) dog motif in ancient literature might have thus served as a basis of a biological impossibility, which apparently could not be refuted even in seven centuries.

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¹⁴ SZINÁK, János–VERESS, István–SÁRKÁNY, Pál: *Nagy kutya lexikon (Great Canine Encyclopaedia)*. Budapest 2000. 186. I thank Helen King for her valuable comments.