

Bold Statements on Hairy Hearts

TÜYLÜ KALPLER HAKKINDA ÇARPICI İFADELER

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Summary

The paper studies a particular aspect of the history of pericarditis, namely, the expression «hairy heart» used by many Ancient and Medieval Greek authors, and its interpretation in the current medico-historical literature. A modern historian, D. Spodick, in an article in the American Journal of Cardiology, considers it to be the first report of adhesive pericarditis. In the present paper we have critically compared twenty two original Greek medical and other codices related to the subject, dated from the 8th C. B.C. to the 12th C. A.D. Based on these data we conclude that the expression «hairy heart» has been misunderstood. It has nothing to do with pericarditis, but it is a mere metaphor meaning «brave man».

This paper also refutes in passing, a parallel misinterpretation found in the modern history of pericarditis, namely, the theory that the expression «a heart's circumcision» traced in the Dead Sea Scrolls refers to pericardiectomy, as it has been claimed by some writers, the real meaning being «soul's purification».

We conclude that there is a need of a thorough knowledge of the original classical languages in order to interpret ancient texts in modern medical terms.

Key Words: History, Cardiology, Pericarditis

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Özet

Bu makale, ilk ve ortaçağ Yunan yazarları tarafından kullanılan perikard iltihabı tarihinin özel bir kavramını, yani tüylü bir kalp ifadesini ve tıp tarihi literatüründeki yorumunu inceleyen. Modern bir tarihçi olan Dr.Spottick Amerikan Kardiyoloji Dergisi'ndeki bir makalede, bunu, adheziv perikard iltihabı hakkında ilk bilgi olarak verir. Bu bildiriye, M.Ö.8. yüzyıldan M.S.12. yüzyıla kadar olan dönemde konuyla ilgili 22 orijinal Yunan tıp kitabı ve diğer kodeksleri kıyasladık. Bu bilgilere dayanarak tüylü kalp ifadesinin yanlış anlaşıldığı sonucuna vardık.

Bu bildiri, modern perikard iltihabı tarihindeki paralel bir yanlış anlamayı çürütür. Çünkü bazı yazarlar, bunun gerçek anlamının ruhun temizlenmesi olduğunu belirtirler. Böylece eski metinleri modern tıp terimleriyle yorumlamak için orijinal klasik diller hakkında bir bilgimizin olması gerektiği sonucu elde edilmektedir.

Anahtar Kelimeler: Tarih, Kardiyoloji, Perikard iltihabı

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The history of pericarditis attracted the interest of medical historians long ago. In this paper we present some more information regarding pericarditis, gleaned from the Ancient and Medieval Greek literature.

The first use of the word “*pericardium*” is reputedly encountered in the writings of Kritias and Empedocles (5th century B.C.) but not in its anatomical sense, i.e. as a membrane covering the heart, but as the locus of the affect, for, according to some ancient philosophers, the blood and, even more its temperature was the carrier of moods, an

opinion that survived through the centuries: “*Because blood, they say, is the pericardial spirit of humans*” (1), «*for mood is the boiling of the pericardial blood*» (2).

In a medical sense, the pericardium was first described by Rufus from Ephesus (1st century A.D.), and later Galen (1-2nd C. A.D.) elaborated on its usefulness and its appearance both in health and disease, as well as on the treatment of its afflictions. These are well known facts covered more or less satisfactorily by most historians. However, there is another side-line of references, that has

been uncovered by researchers, but erroneously interpreted. Namely, there are reports in Ancient and Medieval Greek sources concerning the autopsy findings of “hairy hearts”, which have been considered the equivalent to adhesive pericarditis.

The Misinterpreted Expression

The heart as an internal organ is described for the first time in Greek literature in Homer’s “Iliad” (8th C. B.C.) almost three thousand years ago. There we find the expression “lasion khr” (laseon ker) which in verbatim translation means “hairy heart” (3). The same expression is found depicting the heart of a Messenian general, Aristomenes, (625-600 B.C.) who, according to the historian Plutarch (1st -2nd C. A.D.), after death was dissected and found to have a «hairy heart» (“kardia daseia”): “*Andania: from there came Aristomenes, a great general. The Lacedaemonians admired him because he defeated them many times, and after they defeated the Messenians they dissected him to see if he had something different from the others, and found his viscera transformed and his heart hairy, as told by Herodotus and Plutarch and Rianus*” (4). We found a similar report concerning Hermogenes the Sophist in Hesychius of Alexandria (5th C. A.D.) texts. He wrote: «*Hermogenes the rhetorician was dissected after dying, and his heart was found with hair and a lot bigger than what is natural for humans*» (5a). The notion was repeated in Suida Lexicon (10th C. A.D.): “*So he (Hermogenes) died very old and deserted, as he seemed like one amongst the many; because he was condemned after giving up his art. And it is also said by some that after he died he was dissected and found to have his heart covered with hair and a lot bigger than what is usual for a human, and these are the things that are said about him.*” (6).

Such reports can also be found in Latin texts. Valerius Maximus (1st C. A.D.) gives the following description: “*Oculis eius admirabilius Aristomenis Messeni cor, quod Athenienses ob eximiam calliditatem exectum pilis refertum inuenerunt, cum eum aliquotiens captum et astutia elapsam cepissent.*” (“Aristomenes the Messenian’s heart was more admirable than his eyes, for after the Athenians

dissected him ... found his heart stuffed with hair”). And Pliny the Eldest (1st C. A.D.) used about Aristomenes the expression: “*hirsutumque cor*” (“Hairy heart”).

The use of similar «hairy heart» expressions is encountered as late as the 16th century e.g. Muretti’s «*cor hirsutum*» (“Hairy heart”) and Antonio Benivieni’s «*cor pilis refertum*» (“Heart full with hair”) where these two doctors clearly describe adhesive pericarditis (7). It is not certain, however, if they had read the expression “hairy heart” before or they were using it for the first time, ignoring its history. In an article by D. Spodick in Am. J. Cardiology there is an extended reference on the expression «hairy heart», used by Ancient Greeks, which, according to its author, could be the first report of adhesive pericarditis. The description of Hesychius of Alexandria was interpreted by Spodick, and probably others before him, as being the first report on the pathology of the pericardium, and specifically a “hairy” pericardium, which could be explained as the first reports of adhesive pericarditis (7). Spodick considers this report very important since Hermogenes was a “rhetorician”, not a warrior or a general. So it would be logical to assume that indeed Hermogenes suffered from pericarditis. The same article ends with a reference to the expression «circumcision of the foreskin of the heart», which, according to the author, could be the first report of pericardiectomy: «*I shall close with a «revelation» that bears the stamp, almost, of scriptural authority, found quite accidentally in the Dead Sea Scrolls and, therefore, dating from about 1 A.D. It is in the Habbakuk Commentary (Habbakuk 2:16) which describes the «cast of characters» involved in the struggles of the sect that produced the Scrolls. These struggles mirrored the more abstract conflict between good and evil, and the principal dramatic characters were the Teacher of Righteousness and the Wicked Priest. The Teacher of Righteousness was a Christ-like figure who was ultimately crucified on the orders of a Roman puppet. That [the Roman puppet] was presumably Alexander Jannaius, identified in the Scrolls as the*

Wicked Priest himself and characterized by the following startling passage:

... this Priest who ... walked in the ways of drunkenness, ... whose ignominy was greater than his glory, because he did not circumcise the fore-skin of his heart. ...

You may interpret this as you wish, but in the light of the hairy hearts and other foibles, fables and caprices, perhaps this is the earliest known reference to pericardiectomy.» (7).

A More Logical Interpretation

We believe that all these “hairy heart” reports have nothing to do with pericarditis. They are rather metaphorical expressions, highlighting the power, mental and physical, of the heroes that possessed them. The “hairy heart” expression probably derived from the hairy chests of the heroes, something very common in the Mediterranean people, that covered beneath it a brave heart. Even nowadays the meaning of a heart is not only anatomical but also symbolical. It is also very difficult to support the adhesive pericarditis theory since it is impossible to imagine that a hero who shines in battle, fighting for many hours carrying heavy weapons like shields, swords and spears could suffer from such a disease. Medieval writers offered an array of similar illustrious examples. Like Johannes Lydi (6th C. A.D.): “[...] Aristides says that during the Persian (war) Leonidas the general seeing the army of Persians in Thermopiles rushed against the warriors and although he was hit by numerous spears, reached Xerxes and died after tearing his clothes. The Persian dissected him and found his heart hairy due to the inborn warmth.” (8) and Photius (9th C. A.D.): “[...] About Ptolemy’s dog: and as it fought by his master, after it was killed it was dissected and found to have a hairy heart; and it was a mastiff named Vriares.”, “[...] Like Stihios the Aetolian who was a friend of Hercules, was dissected and found having a hairy heart; and he was killed by Hercules himself when he [Hercules] got mad and even killed his own children” (9). As for the case of Aristomenes we traced a different option in other historical sources according to which he died very old in Rhodes and was probably never dissected (10).

Hesychius of Alexandria, in the passage exactly before the description of Hermogenes dissection and his hairy heart, describes something else: «*Epimenides the Cretan’s words could come out like his soul, whenever he wanted and for as long as he wanted, and then returned. After he died his skin was found written all over with letters*» (5b). We cannot, based on this reference, claim that this is the first report of dermatographism in history. It just seems that Hesychius in his work was describing certain paradoxical stories about the “*Wise men that shined in education*”. Just like with warriors, wise men also intrigued people who then create tales of admiration about them.

It is also interesting to see what Aristotle (4th – 3rd C. B.C.) wrote about the hairy people associating the hair with, say, testosterone levels:

“The ones with dense hair and hairy and broad chests desire coition more ... the ones with thin hair and narrow chests are aggrieved easily by the coitions.” (11).

However the most realistic explanation of the “Hairy heart” is found in Galen’s writings (1st-2nd C. A.D.): “*As for the heart’s constitution (krasis) I shall speak from now on, but I will remind you first that each and every part that is warmer or colder or drier or wetter it becomes so by itself and we don’t compare it with other parts but to itself. For example, if the heart would become colder it would still be much warmer than the warmest brain. So, the signs of a warmer heart are those that are coherent to it and some even inseparable like the volume of breathing and the rhythm and density of pulse and daring and tirelessness. And if it becomes yet warmer there is irascibility and fury and impudence. And the chest is hairy and the sternum even more hairy ... and with a colder heart the pulses are weaker than usual if not slower or sparser. And breathing, if the thorax is proportionately small, like the heart is cold, then it is proportionate to the pulses. But if it is big (the thorax) in proportion to the quantity of coldness, not only it is smaller (breathing) but also weaker and sparser; and they are cowards and lazy and their chests have only thin and sparse hair.” (12).*

And in his work “On temperaments” book III, he associates the heart with warmth and the warmth with the mild or temperate climate. And since the temperate climate favors the growth of dense bushes, in the same manner the heart favors the growth of dense hair over it: “...*So the warm and dry constitution (krasis) is dense and hairy ... but not totally dry ... for one can say that as the land that is hot and dry cannot bear any flora or feed it or grow it, the same stands for the skin and the hair ... and if the thorax is hairy it is not necessary for the whole body to be warm and dry; for warm is the heart; and from there derives the braveness...*” (13). In Eustathius’s work (Byzantine scholar and bishop, 12th C. A.D.) “Comments on Homer’s Iliad” we read: “*That Achilles’ chest was covered with dense hair as it is said, is obvious that, since many hot-blooded men have dense hair, ..., means metaphorically the prudent. For hairy is dense and dense is prudent according to many, so as if the chest is hairy the decisions coming from the heart beneath it are hairy, meaning dense, as Aeschylus said: “from where the prudent decisions grow.” And for the same reason Patroclus says: “Achilles’ hairy heart” meaning the same. Not that the heart has to be hairy, although some hearts appeared hairy in dissection according to old stories such as Lysandrus’s heart and the heart of Alexander’s dog. Physiognostists say that except for the prudent, the vulpine men also have hairy chests.*” (14) In fact, the knowledge that the hairy chest had to do with the personality of the people was so well consolidated in the thought of the Ancients that it was merged in more popular forms of knowledge like the following poem by the Byzantine historian Michael Psellus (11th C. A.D.):

*«And the heart’s constitution learn like this:
big volume of breath or swift rate of pulse,
daring and impudence to the sufferings,
and the chest with dense hair and the sternum hairy,
mostly distinctive of a warm heart»* (15).

And in another work by Psellus we read the grammatical explanation of the prosody, i.e. double meaning (16) using an analogue example:

«Prosody: so heart means the soul; and Agamemnon has the war in his heart; that is Agamemnon has the war in his soul.» (17).

Apparently the Ancients believed that there was a close relationship between the body’s hair and the type of personality of each person. It was only natural to metaphorically associate first hairy chests and later «hairy hearts» with heroes. Otherwise, if we were to interpret such reports as pathological findings we should also interpret the case of Richard the Lionhearted as the first case of a heart xeno-transplantation (from a lion to a human) or the blue-blooded, Royals with methaemoglobinemia or mutated blue haemoglobin.

The same applies to the other misunderstood expression in D. Spodick’s article. First of all the expression «circumcision of the foreskin of the heart» can not be the earliest known reference to pericardiectomy since it describes that it was NOT performed: «... *because he did not circumcise the foreskin of his heart. ...*». Second, if we interpret this sentence verbatim we come to conclude that pericardiectomy was a very popular operation of that time, and it was a disgrace not to have one! And last but not least the Dead Sea Scrolls are only one of the many references that exist on this form of «pericardiectomy», the most common being that of the Bible (from Paul’s Epistle to the Romans):

«For he is not a Jew, which is one outwardly, either is that circumcision, which is outward in the flesh: but he is a Jew, which is one inwardly and circumcision is that of the heart, in the spirit, and not in the letter; whose praise is not of men but of God.» (18). We also read in Origenes’s writings (2nd – 3rd C. A.D.) that: “*You must see if someone is not circumcised in his heart; if someone is not circumcised with the circumcisions the word explains; and which are these? Those who have not circumcised their ears; and those who have not circumcised their hearing are impure...*” (19). There are several similar references regarding «circumcision of the heart» in other sources: (20) (21) (22) (23).

Conclusions

We witness the same mistake made twice: The misinterpretation of a metaphor. The «hairy hearts» and the «circumcision of the foreskin of the heart» have nothing to do with the pericardium and its diseases and treatments. In medical history, as in medical practice, only a thorough investigation of all the available data, and an adequate knowledge of the trade's jargon, may help to avoid expressing bold, but erroneous, statements.

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