

Historical Relationship between Cardia and Heart

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The anatomic naming of body organs is considered one of the most important study fields in the history of medicine. The cognition of the roots of organs predictions and their development routes can be useful in this field.

Cardia in Greek denotes the heart, and in English, Cardiac is synonymous with the heart, and Cardia is considered as a part of the distal esophagus at the esophagogastric junction [1].

Historical studies in medical sciences, based on conducting the historical usage of medical terms, can illustrate the antiquity of the relationship between two terms, Cardia and Heart. Old texts that remain from ancient times can reflect the importance of the heart since ancient times, among which are the Egyptian papyruses written circa 3500 years ago [2]. Years later, in Greek Homeric texts from about 1000 B.C., which contain some basic medical anatomic concepts, the heart is considered by the word of Cardia [3].

But are there any reasons for the similarity between the words “cardia” as the heart in Greek and “Cardia” as a part of esophago-gaster?

Cardia and *Cradii* with the root of *Crd* and *Cred* are two writing forms in Greek. This term was used by ancient Greeks during the Homeric times as depicted in Homer’s poems (circa 900 BC) with the character of *καρδιη* more than *καρδια* [3] (Figure 1). We found that, some studies indicate a further synonym of cardia, as a part of stomach placed near the esophageal orifice and applied as equivalent to the stomach mouth in the ancient Greek language, whether from

etymology [1] or medical aspects [4,5]. The question is whether in ancient Greek anatomic theories, heart and the stomach cavity was related to each other, or whether they found out some contributions between these two organs through their dissections but they did not describe this connection precisely; or according to some beliefs, this double meaning of the word Cardia is because of the lack of anatomic knowledge in ancient times?

Today, we believe in a relationship between human body organs, which can be due to homeostasis in the body [6]. There is historical background on the body organs’ interactions, indicating the vital role of the heart in the health of the body.

Meanwhile, the organ mentioned as closely related to the heart is the stomach, especially in the case of the pain area of them [7]. There are several records of chest pain due to gastric disorders [8].

To gain a historical background and better understand the concept above, we refer to some other civilizations’ views.

According to a confirmed theory in Persian Medicine (PM), in the book of “*Tabiaat*” or “The Nature”, which is based on the concepts of Canon of Avicenna (a famous textbook of PM), organs that work cooperatively, are described as *Aza-e-Mohazi*, where *Aza* means organs and *Mohazi* denotes an encounter of two things [9]. Persian physicians concluded a kind of disease, namely, *Vaja-ul-Foaad* (*Vaja* means pain, and *Foaad* means the space where the heart is posited in the body), which is severe pain in the stomach cavi-

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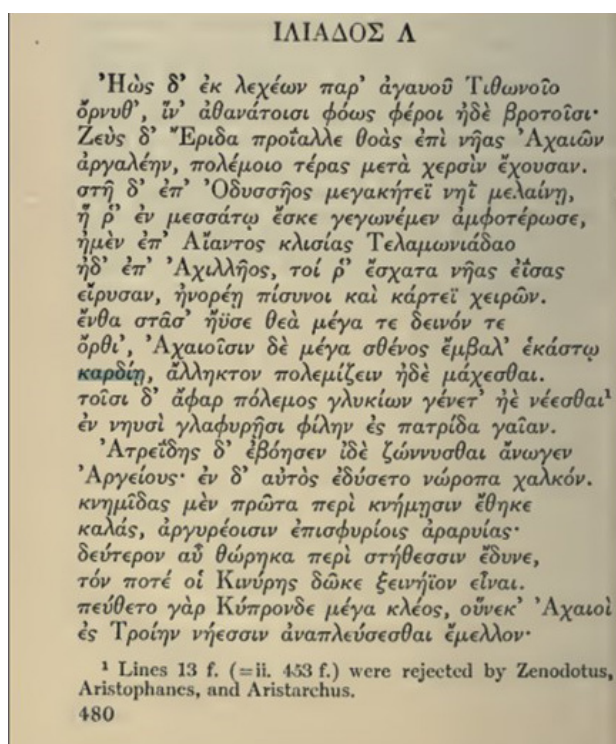


Figure 1. Homer's poems with the character of *καρδίη*

ty and since the stomach cavity is very close to the heart artery, every injury that occurs in the stomach cavity, the heart would be quickly affected by it so that it was hard for physicians to distinguish whether the pain is in the stomach cavity or the heart [10]. Therefore, using these documents from the PM viewpoint, and also the similarity in using the term cardia as the heart in Greek, and as a part of esophago-gaster in English, it prompts us to understand that the recent consideration about the abnormalities relationship between the two organs, heart and a part of the body in the stomach cavity, has been men-

tioned by ancient Greek physicians and also other civilizations such as Persia. Still, there is no reliable reason to present this similarity in these two words. Although recent studies show the relationship between the heart and the stomach, the most probability of the resemblance in the use of cardia as the heart and the upper orifices of the stomach is the symmetry in the pain area. Mostly, a disorder refers to pain in the stomach cavity and can be confused with heart pain.

Common pain area through body organs and similarity in anatomic terminology is a noticeable point which should be considered in medical jargon. More studies in this field with the same result, may due to a new concept in medical jargon as related pain area can cause a similar anatomic naming.

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