

Archaeology and anatomy

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Etruscan heart

Etruscan clay artifacts representing parts of the human body (internal or external organs), are declared to have been in existence in central Italy since the VI-V century B.C. (1). These objects have often been believed to be religious offerings made to the divinity for the purpose of warding off illnesses (1). Since the end of the nineteenth century, and throughout the subsequent century, an effort has been made to discover if an Etruscan medical school did really exist, from which the great Hippocratic school could have obtained experience, knowledge, and useful methods for the foundation of the new western medical thought (2, 3).

We discovered some clay hearts (III century B.C.) among the evidence deposited in the archaeological warehouse of Tarquinia (Viterbo), found between 1963 and 1965 in the votive offerings of "Ara della Regina" (4). The coronary arteries were painted in a reddish color on the surface of one of these hearts. This anatomical *ex-voto* is conic, its height is 6 centimeters, the diameter of its base is 4,5 centimeters. On the sides of the artefact there are two small auricles. We can reasonably infer that this object is one of the first models of the human heart representing both the right and left coronary arteries, the anterior descending ramus (with the circumflex ramus) of the left coronary artery, and the posterior descending ramus of the right coronary (Figures 1-4). This model is a precise depiction of the heart irrigation.

If we consider the knowledge of the Etruscans regarding the physiology of the uterus (3) and their ability to manufacture and use dental prostheses (5), we can assume that this clay artifact could be valid evidence that Etruscan medicine did actually exist.



Figure 1 - Anterior descending ramus of the left coronary.

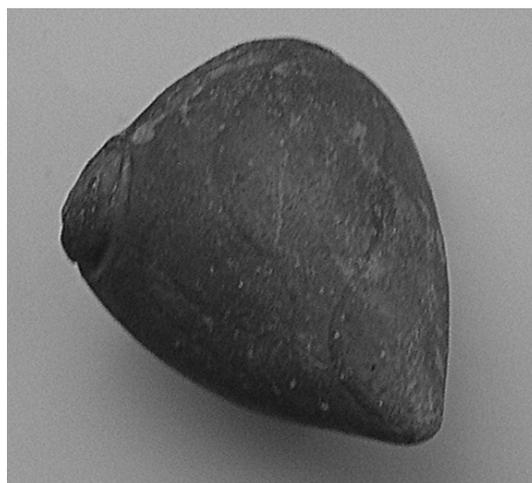


Figure 2 - Posterior descending ramus of the right coronary.

¹ "Museo Nazionale di Storia dell'Arte Sanitaria", Roma, Italy; "Museo delle Civiltà", Roma, Italy

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Figure 3 - Ramus of the left coronary.



Figure 4 - Ramus of the right coronary.

Note: The ancient sources do not give us any particular description of the anatomical and physiological parts of the heart. The most important physicians and philosophers who studied the heart were Alcmeone, (VI century), Ippocrate (IV century) who illustrated the *Peri Kardies*, atria, ventricles and the valves, Aristotele and Platone (III century), Erophiilus and Erasistratus (III century), Galenus (II-III century). None of these Authors mentions the coronary arteries.

We find the first representation of arteries and coronary veins through the study of animal hearts by the genius Leonardo (1452-1519).

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