

Research Article - History of Anatomy and Embryology

Clinical anatomy and medical education. The role of hellenistic terracotta figurines of Smyrna

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Abstract

There has been a great controversy whether the terracotta figurines representing figures with the characteristics of disease found in Smyrna and dated at the Hellenistic period were used as models of clinical anatomy in the nearby famous in the antiquity medical school or were grotesque representations. In order to answer this problem we propose the examination of these figurines using special criteria. Every figurine should be examined separately to decide if it was a medical model, an apotropaic symbol or a portrait.

Key words

Clinical anatomy, hellenistic period, terracotta figurines, Smyrna medical school.

Introduction

The representation of a human figure with the characteristics of a corporal disease was a special theme in iconography of ancient Greek art (Laios, 2015). The great number of these representations consists of terracotta figurines dated at the Hellenistic period (Higgins, 1967). Although this type of figurines were found all around the ancient Greek and Roman world, many of them were found in the area of Smyrna (Leyenaar-Plaiser, 1984). The terracotta figurines representing disease found in Smyrna raised a heated debate whether these representations can be linked to the famous in antiquity medical school of the area (Strabo *Geographica* 12.8.20.3-7: Meineke, 1877), which was found ca. 130 BC by the Erasistrateian physician Hikesios and was a prestigious medical school until the 6th century AD (Dumper and Stanley, 2007).

Earlier approaches to the theme

Regnault (1900) was the first one who expressed the idea that many grotesque representations reproduced ill men who visited this medical school but the production of these figurines had no direct link to the medical school of Smyrna, rather believing that these figures had a religious value as apotropaic symbols in order the represented disease to not appear again. Regnault accepted that the artists who constructed these figurines were influenced by the medical school only in learning about the characteristics of the diseases, in order to form these artistic creations.

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Laumonier (1946) refused the apotropaic role of these figurines and the indirect connection to the medical school pointing that in other places there were also medical schools in the antiquity but similar figurines were not found. According to his point of view a koroplast's atelier was attached to the medical school, in order to produce figurines which were used as models of clinical anatomy by the students of this school. He believed that this interpretation complies with the experimental and researching character of ancient Greek intellectual spirit.

Higgins (1967), Stevenson (1975) and Giuliani (1987) did not support the link to the medical school. Higgins (1967) thought that these figures were found in a huge depositor, but due to the fact these figurines were brought to light by illegal trade of antiquities and not by a scientific archaeological method, it is very difficult to reach a conclusion about their role. In addition, Stevenson (1975) was reluctant to accept a medical role for these figurines believing that this theory can not be proved and supporting the idea that these figures were grotesque creations. Giuliani (1987) pointed that it was impossible that so many figurines (about three hundred) with the characteristics of a disease were to be used in the medical education of the school.

On the other hand, Besques (1971-1972), Leyenaar-Plaiser (1984) and Uhlenbrock (1990) underlined that one should not overlook the existence of a so famous medical school nearby, believing that this school offered artists the opportunity to observe a great number of diseases which could inspire their creations, while a number of them could be used by the school for educational purposes.

Discussion

Apart from the medical books the use of medical images is indispensable in the education of a future physician. In times when technology did not offer the possibility of accessing easily medical images, this need was covered by medical drawings and wax models as they were used especially in the 19th and early 20th century (Greeff, 1909). Except of the medical drawings which probably excited in antiquity (Laios et al., 2013), could we believe that the medical teachers of the time did not take advantage of ancient art to use it for their needs?

The discovery of many terracotta figurines with the characteristics of a disease near a medical school should not be just a coincidence. Nevertheless, we should not accept that all these figurines were used as medical models, because a number of them is related to grotesque style which was very popular as artistic movement in Hellenistic and Roman period, while some others probably were used as natural portraits representing the exact characteristics of the represented person (Pollit, 1986).

The main question is which criteria should we use in order to identify the figurines with the characteristics of a disease, which probably were used as medical models. According to our point of view, as medical models should be considered only the figurines which represent in an absolutely natural way the characteristics of a disease and simultaneously their attributes do not allow another interpretation. Therefore, every figurine should be examined separately.

The above mentioned criteria could be applied to the following terracotta figurines. The figurine representing a young man with the characteristics of Klippel-Feil Syndrome (Paris, Louvre: D 1178; Grmek and Gourevitch, 1998), the figurine repre-

senting a boy with elongated forehead which resembles the head deformities due to thalassemia (Paris, Louvre: E/D 1904; Besques, 1971-1972), the two-sided figurine which in one side represents an emaciated male torso and the other an emaciated female one, which can be identified as representations of pulmonary tuberculosis (Leiden, Rijksmuseum van Oudheden: LKA 1176; Leyenaar-Plaiser, 1979), the other three figurines representing emaciated male torsos (Paris, Louvre: D 1211, D 1212, Collection Gaudin) which also can be interpreted as representations of pulmonary tuberculosis (Laios, 2015), the male figurine with angular kyphosis similar to Pott's disease (Paris, Collection Gaudin; Winter, 1903) and the male figurine with a huge hydrocele (Paris, Louvre: D 1203; Besques, 1971-1972) have as their only theme the representation in a very physiocratic way of the disease which they depict, therefore they can be interpreted as medical models. On the other hand, the numerous figurines representing male figures with protruding ears, gibbus nose or both these deformities (Laios, 2015) and the numerous terracotta figurines representing dwarfs as warriors, actors, rhetors and boxers, probably are grotesque representations rather than medical ones (Stevenson, 1975).

Conclusion

The discovery of many terracotta figurines near a medical school should not be considered as a coincidence. Although in Hellenistic period realistic portraits and grotesque figures were very popular (Himmelman, 1983), the detailed representation of a disease in some of the figures found in Smyrna points to a link to the medical school of the area (Phillips, 1987). It is highly probable that in the medical education in the antiquity terracotta figurines with the characteristics of a disease were used as models of clinical anatomy, because they were cheap and easy to make and had the role of a copy of a corporal disease. Furthermore, we should have in mind that the physicians in the antiquity travelled a lot to offer their medical services (Huihua, 2005), so such a figurine created in a workshop near a medical school not only was easy to be carried, but also could be used as a reminder of a diseases and could give the opportunity for an exhibition or for a teaching to other physicians in the visited places.

Conflict of interest

All the authors declare that they have no conflict of interest.

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