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BREAST CANCER IN ART PAINTING

Abstract: Breast cancer is an emotive cancer. It is a disease that affects a visible sexual organ and it is the commonest single cause of death of women between 40 and 60 years of age. Nevertheless, this type of cancer was infrequently depicted in art paintings. In this article the themes from the breast cancer in famous art paintings are discussed.

Key words: breast cancer, art paintings, famous painters

1. INTRODUCTION

Science is a systematic knowledge of nature and the physical world, derived from observation and experimentation. Art, on the other hand is the free and creative way of making or doing things that have form and beauty and is based on perceptions and intuition. Artists used their talent in order to depict with the greatest detail possible the human anatomy and later the histology of tissues, helping scientists comprehend better the world and human nature. From the other side, scientific images coming from observation or experimentation can constitute art since they can have form and beauty (BONJER, BRUINING 1999; BALJET 2000; BATISTATOU, CHARALABOPOULOS 2005; KARKABI, CASTEL 2006).

Medicine and art have long had a close connection. In fact, the practice of medicine in previous centuries was mostly considered to be art. Conversely, the study of human anatomy in the Renaissance period was an essential component of

an artist's training, as exemplified by the likes of Leonardo Da Vinci (VAIDYA 2007a; EKMEKTZOGLOU *et al.* 2009).

Breasts had an intense symbolism for all women since ancient times. Breasts were considered the "seat for fertility", which can explain why multimammillary goddesses were created to epitomise fertility. The breasts had always been considered as a symbol of beauty in women and this is reflected in many works of painters, poets, etc (SAKORAFAS, SAFIOLEAS 2009).

Breast cancer has probably been prevalent since antiquity, but the search for historical evidence is difficult for lack of verifiable descriptions or graphic representations of the disease (DAHLGREN 2003).

From ancient Egypt until the present day, breast cancer has been a field of ongoing research. Breast cancer is an emotive cancer. It is a disease that affects a visible sexual organ and is the commonest single cause of death of women between 40 and 60 years of age. However, this type of cancer was infrequently depicted in historical art. In most of recorded history, cultural norms have dictated that the breast is unexposed to protect modesty. Therefore, only a doctor or an artist painting nude models would have had the opportunity to see any clinical signs of breast cancer. Nonetheless, in the few pieces of art in which breast cancer has inadvertently been the subject of artistic creation, interpretations have been controversial (VAIDYA 2007a; EKMEKTZOGLOU *et al.* 2009).

In our article we demonstrated the integration of art and science. We focused on how disease, specifically breast cancer, has influenced the art and vice versa.

2. BREAST ABNORMALITIES IN FAMOUS PAINTINGS

One of the most famous paintings that depict breast cancer is the oil-on-panel piece by Raphael Sanzio *La Fornarina* (Galleria Nazionale d'Arte Antica in Palazzo Barberini, Rome, Italy, oil on panel, 85x60 cm, circa 1516). The portrait is, perhaps the first, graphic evidence of breast cancer.

The woman in the portrait is thought to have been Raphael's lover, La Fornarina. Her name, according to an annotation in Giorgio Vasari's 16th century biography of Raphael, was Margherita. Her father was recorded in a Roman census

as Francesco Luti from Siena who lived at via del Governo Vecchio 48 (ESPINEL 2002; GROSS 2004).

Raphael Sanzio was the first to depict signs of breast cancer in his painting of *Fornarina*. Despite *La Fornarina*'s position, turned a quarter away from the viewer, her breasts can be compared. They differ from one another in appearance. The left breast is enlarged and deformed. There is a bulge in the breast that, beginning inward from the axilla and curving horizontally to the right, slopes gently toward the nipple. This bulge seems to be a mass, oval in shape, puckering just above the tip of *La Fornarina*'s index finger. Below this bulge, the breast has a wide retraction. The skin over the breast is discoloured. A blue hue and duskiness extends over the mass and the aureole and touches the nipple. Just inside the axilla, a slight protuberance suggests a fat pad, or perhaps a lymph node. *La Fornarina*'s left arm appears larger than would be expected for the perspective of her position. *La Fornarina* presents signs that not only are diagnostic but also allow staging of the malignancy (ESPINEL 2002; CZEIZEL 2003; GROSS 2004).

La Fornarina's deformation might be a depiction of five clinical signs: a mass, a retraction, skin discoloration, a possible lymph node and arm swelling. The discoloration suggests skin invasion, perhaps into the dermatic lymphatics and the arm swelling, lymphoedema. *La Fornarina*'s signs are compatible with the diagnosis of cancer of the left breast, at an advanced stage (ESPINEL 2002).

However, BAUM (2003) debated these claims, giving clear and plausible explanations for each of the characteristics described by ESPINEL: first, the position of the index finger is a classic pose that can easily create a dimple even in a normal breast and second, breast cancer never gives rise to a bluish tinge.

Another example of breast cancer visualization is 15th century fresco in the church of Santa Maria della Grazia in Milan, Italy, that houses Leonardo da Vinci's *Last Supper*. It presents a beautiful woman holding a child and she appears to have an ulcerating cancer in the upper outer quadrant of her right breast. This fresco is actually the depiction of *The Madonna Delivers Milan From the Plague* that was commissioned by the Dominicans and painted in 1631 by Il Cerano. However, the

tumour is clearly in the breast rather than the axilla so it could not have been a plague bubo (VAIDYA 2007b).

In Prado Museum in Madrid, Spain, several Ruben's paintings are shown. Among these pictures, *The Three Graces* (oil on canvas, 87x124 cm) is one of the most remarkable. The right-hand side Grace has a tumor in its external upper quadrant of the left breast which extends up to the left axilla (GRAU *et al.* 2001a; GROSS 2004).

The tumor between the left breast and the left axilla is exofitic, irregular, with redness of rounding skin suggesting inflammatory component. Such visual aspect which addresses us to breast cancer was painted in the external upper quadrant of the breast where this cancer most frequently appears (GRAU *et al.* 2001a; GRAU *et al.* 2001b).

There are two other paintings in the Museum of the Prado (Madrid) that also draw our attention. One of them is *Orpheus and Euridice* and the other one is *Diana and her nymphs pursued by satyrs*, they also show abnormalities suggesting the earlier stages of the breast cancer. In *Orpheus and Euridice* the female figure who represents Euridice, also shows an abnormality in its left breast. In this case, also in the external upper quadrant there is an in-depth into the skin surface, without breast retraction. In *Diana and her nymphs pursued by satyrs* there is a woman at the front of the picture, her hands up shows like in *The three Graces* a breast which was painted obliquely from the stand point of the observer. In this model it is evident that there is a dimpling of the skin in the external upper quadrant of the left breast, together with total retraction of the breast both outwards and upwards. Observing the above-mentioned images: firstly *Orpheus and Euridice*, secondly *Diana and her nymphs pursued by satyrs*, and thirdly *The three Graces*, we can find the typical evolution of a locally advanced breast cancer (GRAU *et al.* 2001a, 2001b; GROSS 2004).

In the Royal Library of Brussels, Belgium, there is a copy of an engraving performed by Lucas Vorsterman of a Ruben's painting after Titian which shows a young woman dressed in a fur coat and a hat. Belonging to the realism style, both Ruben and Titian painted things exactly as they saw them. This allows us to

recognise many aspects of the quotidian life style in the 16th and 17th centuries but also, to recognise many clinical signs that physicians nowadays can correlate with certain specific diseases (GRAU, ESTRACH 2008).

The woman appearing in the picture has two lumps in the upper external quadrant of her right breast. These superficial tumours caused bulges in the breast contour and retraction of overlaying skin, suggesting a direct extension of a deep tumour into the skin. The nipple and the entire breast show a retraction to the right axila. The lumps are there to call the attention of the viewer and this is when the woman has partially removed her fur in order to show the lumps. The position of the model suggests that the artist wants to draw our attention to the medical problem rather than to the beauty of the breast. It is not known either, the outcome and the cause of the death of the model. Nevertheless, the clinical aspect, especially the breast lumps with retraction to the axila, supports the diagnosis of breast cancer. Of course, we have to assume that both, Rubens and Vorsterman did not change the original aspect of the model's breast and that Titian painted a real model and not a virtual composition of different body parts of more than one model. As far as we know, Titian's painting was a portrait of the beautiful Venetian courtesan he painted during the 16th century. Rubens made different versions of Titian's composition but Titian's original is lost. One of these copies was engraved by Lucas Vorsterman, which not only allows us to enjoy the beauty of the model, but also to recognise a terrible tumour in her breast (BELKIN *et al.* 2004; GRAU, ESTRACH 2008).

Rembrandt Harmenszoon van Rijn was arguably without peer as a portrait artist, and ranks among the master painters of all time. Therefore it is not surprising that there was great and justifiable interest when it was suggested that Rembrandt's famous painting of *Bathsheba at her toilet* (Louvre, Paris, oil on canvas, 142x142 cm) showed clinical signs of advanced left breast carcinoma based upon skin discolouration, distortion, axillary fullness and peau d'orange appearance (GRECO 1970; BAITHWAITE, SHUGG, 1983; GROSS 2004; HAYAKAWA *et al.* 2005).

It is generally accepted that Bathsheba was painted in 1654 modeled by Hendrickje Stoffels. In 1654, Hendrickje was 28 years old. She was de facto Rembrandt's wife from 1649, and had a pregnancy in 1652. No records on health of

Hendrickje until her premature death on 21 July 1663 at the age of 37 (GRAU *et al.* 2001b; HAYAKAWA *et al.* 2005).

An alternative diagnosis was proposed of an infective process such as tuberculous mastitis or less likely chronic lactational breast abscess. If the body of model was Hendrickje, she could hardly have lived 9 years with advanced breast cancer without any effective treatment. Possibly she had a chronic inflammatory condition, either tuberculous mastitis or, less likely, lactational breast abscess (BOURNE 2000; HAYAKAWA *et al.* 2005).

Cancer was known as a disease since prehistoric times. Management of breast cancer evolved slowly through centuries in the ancient world up to the Renaissance. This period is marked by the absence of any scientifically verifiable understanding of the true nature of cancer and its natural history and consequently by a lack of effective treatment. Breast cancer was a huge problem among common people in the 16th century. As presented in our article breast cancer was clearly visible, people could see progressing, from a small lump to a large tumor and wreaking breast skin. It was also easy to link death with disease. Women used art to help them accept their diagnosis, treatment and prognosis. Therefore it is not surprising that the presentation of this tumor by painters was so common in the past. Nowadays, clinical photography is not only used to keep a record of certain diseases, prepare lecture and lessons, share information with colleagues, it is especially used to evaluate the response to chemotherapy or to new drugs in clinical trials.

3. REFERENCES

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