

Articoli/Articles

NOT ONLY A FEMALE ICON: THE BREAST IN SYMBOLISM
AND MEDICINE (FROM THE 14TH TO THE 17TH CENTURIES)

ESTHER DIANA

Fondazione Santa Maria Nuova, Onlus - Firenze, I

Corresponding Author:dianadionisio@tiscali.it

SUMMARY

*NOT JUST A FEMALE ICON: THE BREAST IN SYMBOLISM AND MEDICINE
(XIV-XVI CENTS.)*

For many centuries, the physician's interest in the female body and, consequently, in the diseases linked to the genitourinary system and the differences between the sexual organs, tended to concentrate on philosophical traditions whose origins were rooted in anthropological, religious, magical and superstitious notions, rather than actually making use of biological observations. Even when the great authors speak of 'woman's illnesses', they almost all refer to pregnancy and childbirth and thus celebrate their exclusive and recognised social role as 'breeders'. There was only one exception, in other words, when dealing with diseases that could affect the female breast and, in particular, tumour pathology. Precisely because the breast could be identified as a more immediate sexual attraction for men, this organ was considered their personal 'property', especially after having nourished them and subsequently fulfilling them sexually, and therefore great interest and special attention was paid to any diseases affecting it.

As a result, the breast wrote its own 'history', which followed two parallel and often overlapping paths in the 14th-16th centuries: the first pigeonholed it as "traditional knowledge", expressed in Recipes and Secret Advice dedicated exclusively to women; while the second took form in the production of treatises in the medical field, which exploited the progress in anatomic knowledge on physiology and pathology carried out on respectively healthy and sick organs.

Key words: Breast - Woman's illnesses - Breast cancer - Sexual organs - Recipes and secret advice

Introduction

It is well known how the History and Literature of the West encircle the feminine figure with general discredit, holding it inferior to masculine superiority; considering it even a “[...] great scourge to mortals” for its “shameless soul”¹, guilty of bringing suffering and pain to man.

This fundamentally misogynous concept of Aristotelian tradition has contributed to focus scientific interest of the female body on those areas found useful to man: pregnancy and birth, and related that the menstrual cycle as the preparatory phase to the primary end assigned to the mother with a single exception: that of breast pathologies, especially breast cancer. As the primary visual sex stimulant of man, the interest towards pathologies have found pointed interest, as masculine ‘property’, being the organ of primary nutrition and the first tie between Mother and son, and later of first sexual satisfaction.

It is in this context that the breast will write its ‘history’, which from the 14th to the 17th centuries will follow two parallel paths, often intertwining that of ‘official’ medical treatises, which multiply with the increasing knowledge of anatomy and the nature of disease. Parallel to this was the codification of traditional know how in recipe books or spell books and secret advice books often written by women.

The breast from woman’s perspective: physical identity and image

For women the breast is the first symbol of her being, of herself, of her social presence. It is the organ that more than any other gender difference immediately identifies her and through her breasts, she begins to know her own nature. More than the arrival of her menstrual cycle the girl feels the transition to puberty and womanhood with the development of her breasts. This is a physiological moment with important psychological repercussions which, in some cultures more than others, accentuates the subordination of the woman to the male sphere inducing her to set aside her habitual clothing for more

modest apparel 'hiding' herself from the eyes of the world until she be revealed to 'her' man.

In the West, it will be Christianity that conditions the visibility and meaning of the image. While the body becomes the tabernacle of the soul, thus a sacred place, the sanctity of the body is therefore to be protected from sin and lust, which would corrupt the elevated state of the 'gift' of God according to the doctrines preached. In the ambiguous relationship between the beauty of the body and the soul medieval religious beliefs will influence the image of women. If, on one hand, they preach physical beauty as expression of spiritual beauty (and woman is for her physical attributes considered the primary expression of beauty while the man is the expression of force and intelligence) on the other hand there is horror of beauty that is overly evident, especially when the result of study or alteration. In any case beauty must above all be discreet, never to distract thoughts of man in their elevation towards God. This concept bridled the female universe, which was locked into the ambiguous necessity of being beautiful enough to please 'her Lord' but not too evident. Women were forced to contain themselves with modesty, chastity, and obedience as expressed by Hildegard of Bingen (1098-1179) for whom beauty became 'appreciable and visible only when the soul shines in harmony with the body'².

This subtle balance could not interest the breasts whose physical presence was in contrast to the sacredness of the female image. Thus, in early images, the breast was entirely stripped of sexuality and exalted in its primary function of nutrition through the sublime image of the Madonna suckling baby Jesus. The 'Madonna nursing Jesus' belongs to the iconography of Egyptian Coptics³ and spread increasingly until it's apotheosis in the XIV century in Tuscany, Lombardy, and Northern Europe. The nursing Madonna or *Galactotrofusa*, o *Virgo Lactans* figures Maria with her breast uncovered while she nurses Jesus or is about to do so (Figg.1-2). The symbolism of this



Fig. 1. Andrea Pisano, attr., (1290-1348 o '49), Madonna nursing Jesus, 1343-'47, marble.

iconography entirely focuses on the message it is sending: on one hand the humanization of the Son of God, through the sacredness of nursing, on the other the exemplary figure of the maternity as the highest state of Womanhood. This representation will rise to a thaumaturgical status, which will have a stronger and more durable effect in the countryside, when appealed to in cases of lack of milk for the newborn.

However, these images did not continue long. The intimacy of Mary so openly revealed was reconsidered by the reformed church and judged inconvenient due to the intrinsic sensuous nature of the scene, deemed a distraction to the faithful from their prayers. Many nursing Madonnas were re-clothed, though occasionally the original image



Fig. 2. Tommaso Barisini detto da Modena (1325/'26-1379), *Madonna of the Carmelo and nursing Jesus*, 1345-'55, fresco detached.

crops up in the centuries that follow, notably in the canvas by Orazio Gentileschi (1563-1639) *Rest during the flight from Egypt* del 1625-'26 where the breast is, however, veiled with apparel (Fig.3).

Apart from its more or less sacred role, the breast, as the first symbol of the female, is also the first object of malevolence should the woman be tainted by treason or other serious accusations. The mutilation of the breast can be tantamount to a symbolic dishonorable loss of one's gender, and with this the respect that a man concedes to an honest woman. In the political and religious sphere, the practice was used as a form of martyrdom such as in the cases of Cristina, Apollonia, Agata, Ursula and others.



Fig. 3. Orazio Gentileschi (1593-1653), Riposo dalla fuga d'Egitto, 1620-'22, particular, oil painting on canvas.

The Scientific world; pathologies of the breast and medical treatises

For a long time a woman's ailments gained the attention of the medical world only when they concerned the reproductive system: the menstrual cycle, pregnancy, birth, and the nursing period, are the subjects to which medical study constantly returned, leaving the rest of the branch of gynecology to be developed in comparatively recent times.

During the XIV-XV centuries knowledge of the physiology and pathologies of women, at least concerning the genital system from puberty to the end of the fertile period derived principally from that left to us by the work of Hippocrates⁴, and Aristotele⁵. To this can be

added the works of Galeno, Sorano, and Celso, and the Arabian treatises (especially Avicenna), not forgetting the study in gynecology dating from the 1300's based on a Salernitan treatise of 1050. This is the *De passionibus mulierum ante in et post partum* attributed to Trotula de Ruggero (mid sec. XII-1097). The authorship of this work has not yet been determined definitively, an alternative hypothesis is that of a team of female doctors⁶. The treatise integrates the knowledge of the time with conclusions drawn from years of professional practice treating female genitalia and the procreative process. Perhaps the treatise attributed to Trotula is the only case in which the woman as a whole, and the pathologies that affect the entire body, not just the reproductive organs are considered.

Since the 'woman' that interests medicine, that which emerges from treatises following the anatomical and scientific revolution of the 16th century, is as stated above, the procreator, the job of the doctor is to preserve this function, to repair it and protect it from any irrational behavior which might jeopardize it. Medical texts regarded almost exclusively, that which a woman 'must not' do and 'must' do to ensure offspring, the reason for her creation. Anthropological and religious as well as magical-superstitious worldviews agreed that woman was irremediably imperfect.

Within this millennial belief, the medieval era medical consensus saw reason to consider the breast on three points, two of which are interconnected. Firstly, removal of cancer, which has been well known since ancient times and was accurately described by the Greeks; secondly as a telltale sign of the health and development of the fetus within the uterus, and related to this the third instance, which is lactation.

A) Breast Cancer

The most authoritative text, widely read in Universities until great progress made in anatomy during the 16th century, was the description in *Anathomia* by Raimondo (detto Mondino) de' Liuzzi

(1270 ca-1326) from Bologna, written in 1316. It was distributed throughout Europe in copied manuscripts, and continued to circulate afresh in published form in Padova (1475), and in Pavia (1478), followed by many editions. The ‘teats’ as they are called, are described thus: “They are shaped like a gourd and rounded because they must be full of blood which is converted into milk. And yet also because as Galen writes, they are the shield of the heart and they were made large so that reverberating, they will return to the heart the warmth which was given by the heart, and this is the more necessary because woman has less heat around the heart than man”⁷.

Tumors of the breast were explained as all other pathologies were, using the theory of humors, of which there were four, blood, phlegm, yellow bile, and black bile or “atrabile”⁸. The imbalance of any of the four led to all diseases. In this case, according to Greek tradition and later Galen, a breast tumor was the result of excess of black bile aggravated by a predominantly cold-wet temperament. This pairing of conditions was responsible for the beginning of the disease, the result of which was generally held to be inauspicious. According to the treatise *De tumoribus praeter natura* by Galen (post 130-post 210) it was thought that all tumors caused by a stagnation of that bile “[...] are colored blacker than products of phlegm and they are not warm. On these tumors, the veins are also more full and tensed than on tumors due to inflammation [...] due to the density of this humor cancer is incurable”⁹.

Ruggero Frugardo o Frugardi (second half XII century-1195) in the treatise *Practica Chirurgica* (1170) supports this conclusion and advises that, whenever the breast is “turgid and dark” you must “[...] leave it be since this is incurable unless the entire breast be scooped out to the root”¹⁰. If on the other hand it is soft at the base he advises treatment with a balm with mixed silver resin, lard and various herbs, or with a balm to ‘rupture’ or “affodilli powder” or ‘inflamm’ meaning to cauterize the lesion. Corrosive substances mixed with

emollients was the therapy most commonly used in treatment, or in alternative the mastectomy by pulling the breast to facilitate resection, a technique known since ancient times. Another method deriving from Galen was to incise with a clean cut all around the tumor allowing the blood to flow freely, causing pressure to increase the flow and with it the drain of congested black bile. Once the humors were squeezed out, the wound could be treated as usual¹¹.

Throughout the medieval era another theory of Galen prevailed which was that lighthearted women were less susceptible to tumors than sad or melancholy women. This was supported by Henry de Mondeville (1260-1320) in his treatise *Cyurgie* written between 1303-'20 and never completed.

The incurability of tumors and the prevailing conviction of the futility of intervention, if not for softening then flushing the humors, continued into the 16th century when surgery began to be developed and the physiology of the organ was considered leaving dogma more and more in the past.

It was the surgical treatises of the 16th century, which brought new therapies and operations to bear against breast tumors.

Ambroise Parè (1510-1590), a French barber - later chief doctor to the King - was contrary to the practice of the times, which was to press the breast until the bad humors were flushed. He advised setting a lead sheet covered with mercury powder to the affected area. Moreover, Parè proposed that pressing the breast would result in the spread of the tumor to the lymphatic glands of the underarm¹².

The awareness that breast cancer must always be treated with surgery even if 'benign' was proposed by the surgeon of the hospital Incurabili in Naples, Marco Aurelio Severino (1580-1656) in the treatise he wrote in 1632 *De Recondita Abscessum Natura*, published for the first time in Frankfort, 1643. This work focused on the study, description, and illustration of benign and malignant tumors¹³. Regarding the breast he affirms that the tumor is malignant when

Esther Diana



Fig. 4. Johannes Schultes /Scultetus), *Armamentarium Chirurgicum* , Ulm 1655, Tabula XXXVI: instruments for a mastectomy.

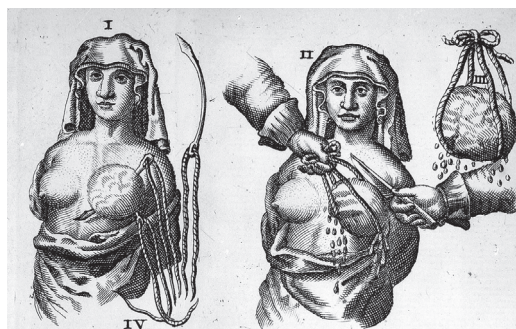


Fig. 5. Johannes Schultes /Scultetus), *Armamentarium Chirurgicum* , Ulm 1655 – tab. LXXXIIV: phases for mastectomy.

it adheres to the wall of the body rather than when it is malleable. However, Barthelemy Cabrol (1529-1603), a student of Paré, will be the first surgeon to perform a radical mastectomy with removal of the large muscle. Severino undertook various mastectomies both partial and radical removing even the lymph nodes underarm. The lesions were treated with ointments containing arsenic and zinc chloride. These were the first inroads on the old reigning theory of humors proposed by the Greeks and Romans, which considered the tumor to be a stagnation of malign humors. Now the approach was decidedly more scientific though it was yet a grisly procedure.

This is clear in the illustrations of the instruments for a mastectomy presented by Johannes Schultes (Scultetus o Sculteti, 1595-1645) in his *Armamentarium Chirurgicum* published at Ulm in 1655. There is a circle of hooks tied to cords with which the assistant harpooned the breast and pulled while the surgeon cut the base with a sharp razor (Figg.4-5). Traction was an important aspect of the operation and the instruments used became various: the fork for pronging and pulling invented by Govert Bidloo (1649-1713)¹⁴ (Figg.6-6a), to the guillotine designed by Louis Jacques Goussier *per l'Enciclopedia di Diderot-D'Alambert* (1722-1799) between 1751-1772. This is evidence that still in the 18th century hooks, harpoons, trowels and braces with sharpened rings were common instruments. (Figg. 7-7a).

Partial or radical mastectomy was not only extremely cruel with a high risk of death on the table, but there were other negative effects from the infection of the wounds, which compromised the result. Typical post-operative care in straightforward cases required three months of bed rest to avoid hemorrhage, with only cold wet food allowed.

Antonio Maria Valsalva (1666-1723) who operated at the Incurabili hospital in Bologna had occasion to try a new non surgical technique on a huge breast tumor, which had already ulcerated. Which

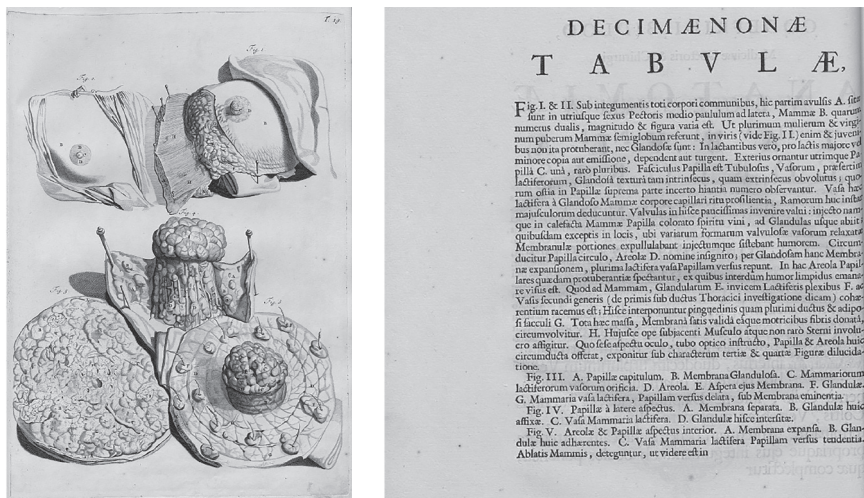


Fig. 6 - 6a. G. De Lairese, engraver, Breast anatomy, in Govert Bidloo, *Anatomia Humani Corporis*, Amsterdam, 1685, parte II, Tav. 19.

was deemed inoperable because of the prostrate state of the patient. He experimented with a method compressing the base of the breast with bands tighter and tighter such that “[...] the tissues surrounding the tumor were deprived of nutrients and began to die, you could cut with scissors all round without pain or loss of blood and the circumference became smaller and smaller”¹⁵. This continued for “[...] long enough to reduce the tumor to the size of a mole and could be removed without danger”¹⁶. The result, though happy at first was not a solution. Valsalva met the woman two years later when she returned to the hospital because another tumor had begun to grow. Having performed the mastectomy Valsalva hoped the tumor “would not recur especially in the uterus”¹⁷.

The non-invasive surgery performed by Valsalva did not have any great impact, but the idea that a breast tumor could spread to the lymph nodes gained much more ground urging mastectomy as a cure. This treatment found solid support in France with Jean Louis

The breast in symbolism and medicine

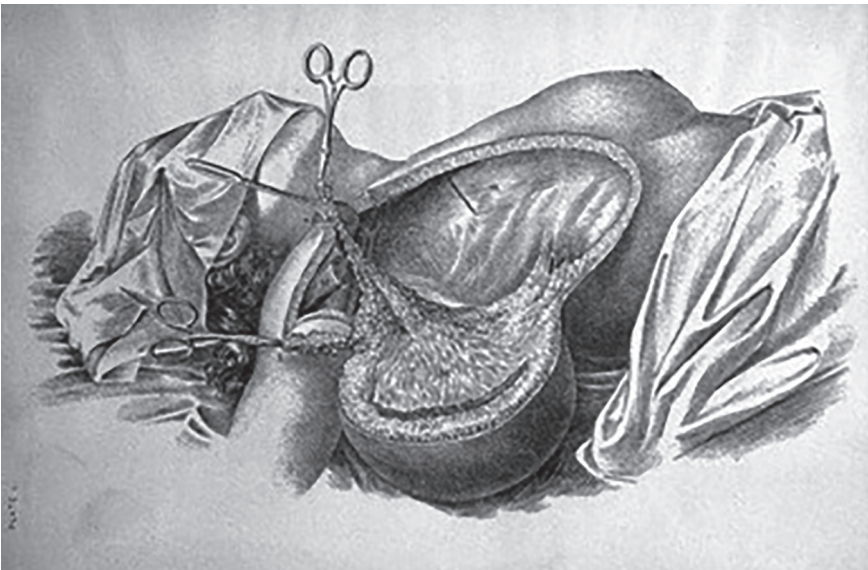


Fig. 7-7a. Louis Jaques Goussierur, engraver, Instruments for mastectomy, in D. Diderot, J.B. le Rond D'Alambwrt, *Encyclopédie, ou Dictionnaire raisonné des Sciences, des arts et des métiers*, 1751-'52, Tav. XXIX.

Petit (1674-1750) and Henry Francoise Le Drun (1685-1770) and in Great Britain with Benjamin Bell (1749-1806).

In Italy towards the mid-18th century several different therapies were common based on the type of tumor, identified as inflammatory tumors, scirrhous, and “evil tumors”, further divided into “occult forms”, “manifest forms”, and “ulcerated forms”. Angelo Nannoni (1715-1790), a surgeon active in Florence at the hospital Santa Maria Nuova published in 1746 his *Trattato sulle malattie delle mammelle*, in which after an excellent description of the organ he transcribes cases which had occurred during his career including the therapy and cures he used. He supported the old belief in pathologies due to stagnation of humors such as blood, milk and, lymph “[...] in blood, serous and lymphatic vessel”. His treatment varied accordingly and for an inflammatory tumor he recommended medication based on watered vinegar or with bread compresses soaked in milk and hot water to avoid fermentation of liquids, which would lead to an abscess or hardened scirrhous (meaning a mass of connective tissue)¹⁸. In these cases, surgery was indispensable because “the cancer was a result of the scirrhous”: a mastectomy is recommended in cases of “scirrhous and the connected integuments are large”. A “tumorctomia” (indicated today as a quadrantectomy or resection of the breast quarter) is indicated for a small scirrhous not adherent to the wall or lymphatic glands¹⁹.

B) The breast as an indication of fetal health and during lactation

Knowledge of the breasts during pregnancy as an indication of the health of the fetus derived from the Greek world, which believed the woman’s mouth was connected to the vagina by a channel where the uterus attached. The uterus as the location for physiological phenomena and pathologies was considered the source of all female pathologies since it was directly connected to the breast, and thus the latter was a good source of information on how the pregnancy

was proceeding²⁰. Hippocrates affirmed for example “If a pregnant woman’s breast become suddenly small she will abort”²¹. Even in the 14th century, when the reproductive system of the woman had been studied, the image of the breast as turgid, and topped with a large nipple of red brown hue shall be for the doctor or midwife a positive sign, perhaps not connected to the health of the fetus, but an indication of good lactation. Thus apart from the presence of tumors not directly connected to the pregnancy the infected tumors or inflamed nodes of varying consistencies (“posteme”) were produced by clotted milk were noted in treatises. The connection between the breasts and the uterus is indicated during the menstrual cycle, and more so during pregnancy during which the transformation of blood into milk occurs as a sort of cooking process while the blood is whitened while it circulates in the breast veins.

Ruggero Frugardi stated that “The menstrual blood flows to the breasts which, as spongy tissue soaks it up and converts it to milk” concluding that if the blood/milk did not find its natural course it hardened the breast and caused great pain²².

The doctor should first soften the breast with emollients containing malva and bear’s claw (“branca orsina”) and later make an incision and “squeeze to purify and apply a compress”²³. This compress was simply a piece of round or oval fabric fitted into the wound to absorb pus. Frugardi conjured the doctor to always remove the fabric, because if left inside would cause great pain, “[...] che si tagli e le predette taste se ne traggano”²⁴. Another emollient used for milk blockage was rose ointment²⁵.

The indented nipple was also the object of a doctor’s attention and considered an obstacle to lactation. For this, the doctor was to put “[...] a compress of cufa on the nipple which will then be drawn out”²⁶.

The breast is the organ to be observed in order to know the sex of the fetus. Along with other physical signs, such a bright color, or her skin clear of spots, the woman would certainly have a boy if “[...]”

the nipple on the right takes on a dark color, if it is higher rather than lower, and if the right breast is larger than the left”²⁷.

Due to the immense importance attributed to lactation²⁸, attention to the breasts was begun in puberty with advice concerning nutrition and exercise was given to ensure an optimal future in absolving her tasks. Thus she must strengthen her chest muscles by lifting weights, carrying basins, cleaning floors; using this excuse to highlight her domestic role.

Already in the 14th century, a wealthy woman who could afford to do as she wished, began to depend on a wet nurse since this duty interfered with her life of receptions, festivals and hunting parties. The medical world was decidedly against this approach, which, moreover, portrayed woman as, true to her cold, wet temperament, frivolous, greedy, idle, cowardly, and unable to keep herself from frolic²⁹. In 1596 the treatise *La Comare* was translated into the vulgar by Scipione Girolamo Mercurio (1540-1616). Who was a staunch supporter of Galen, and believed:

*[...] to give children to be raised by a wet nurse is to give birth against nature, imperfect and cowardly[...] because no one can nurture the babe like his Mother [...] she who sees him and knows him to be her child, with his cooing and his sighs she hears him ask for help, [...] does she banish him to exile happy just to have brought him into life and allow someone else to give him wellbeing as though God and nature had given you breasts to ornament your chest [...] and not to nurture your children*³⁰.

Three centuries later (1840), an obstetric surgeon, Vincenzo Balocchi (1818-1882) used even more severe terms:

*It is a very unnatural thing for the women of today not to nurse their children for frivolous reasons. A woman who can nurse her child, but who doesn't for love of pleasure, for laziness, or any other illegitimate reason is failing in her most sacred duty and does not merit the name Mother, she is not worthy to have children*³¹.

Popular literature: the patient and the image of the breast in prescriptions and advice

Above and beyond purely medical considerations, the breast can be found in the popular tradition of prescriptions and advice, part of medical knowledge handed down mixed with notions of pseudo magical belief often from the female sphere as the housewife and primary caregiver of the family among the non-elite. Popular science, predominantly homeopathic gathered from animals, plants and minerals, often brewed in the cauldron, and figured as potions obtained through witchery. From the hearth to the forest, she hides in dens with the animals held to be sacred to Satan, the cat, the bat, the snake, the scorpion and others. This is how the history of female medical tradition is painted. A tradition mixed with notions of cosmetics because the care of the body and its proper presentation to garner favor from men is a well-known element of contradiction in obtaining a husband.

On this subject Trotula must be remembered, in his *De ornatu mulierum* (sec. XIII) which was perhaps the most well-known text examining the care of the body, hygiene, and female cosmetics. It probably references the treatises of Henri de Mondeville (1260-1320, *Chirurgie*, (in which the distinction is made between therapy for skin disease and beauty treatment) and that of Guy de Chauliac (1300-1368) *Chirurgia Magna* written about 1360 and printed in Venice in 1498, which discusses cosmetics as well as specifically surgical notions³².

In this sort of literature, which is more popular and more often from the hand of women, the breast is seen in its duality of object of beauty and useful organ, two views which have not altered over the centuries, certainly not until the late 19th century. Many prescriptions remained unaltered over time and were evidently based on needs strongly felt by patients through the centuries. The primary wish is that of having small turgid breasts as was the fashion, and because



Fig. 8. Lorenzo di Credi (1459-'60- 1537) attr., *The Lady of the gelsomini*, supposed portrait of Caterina Sforza, 1485-'90, oil painting on canvas.

large ones cover the baby's nose, however not too small since they would not have enough milk³³.

Another desire was that the breast should have clear white smooth skin. For this there is a multitude of prescriptions and advice concerning compacts and solvents. Caterina Sforza (1436-1509)³⁴, is one of the woman doctors of greatest fame from the late 15th century, so great, that her son Giovanni had his attendant Lucantonio di Isidoro Cuppano da Montefalco³⁵ transcribe her 'secrets' after her death.

For the breast, Caterina advised repeated rinsing with hemlock water or sow's milk, especially during lactation so that the skin will return 'marvelously tonic and elastic'³⁶. To reduce the size of the breast her advice was to make a compound of ingredients such as "[...]

gall, mint, figs, roses, unripe wild pears, unripe prunes, medlars, mountain ash, resin, and other small plants. [...] well mashed and boiled in vinegar then mixed with flour of broad bean or rye and frequently applied to the breast warm³⁷. Another treatment to reduce the breast is to empty the Citron fruit of its pulp and soak it in milk of the bitch with her first litter. Boil this under the ashes of the fire until it forma a paste that can be applied to the breast, bound up until dry. This is best done in the morning and the evening of a waning moon³⁸. A third ardent wish was to have enough milk to nurse for two years. This desire was treated by diet, which was to eat meat of the lamb of goat, gelding, chicken, and fish with scales, borage and lettuce. Never eat onion, rue, mustard, garlic, mint, or basil³⁹. For those wishing to use a wet nurse she should have milk as of a month or two that is pure white and sweet, rather than green, red, or black. It should be not too thick or clear⁴⁰.

It is important to remark that though female physiology is described increasingly well in treatises, of surgery and anatomy, produced by a prevalently male hand, there is no guarantee that these men (physicians and surgeons) had practical knowledge of their subject. The success of a treatise such as *De passionibus mulierum* by Trotula sprang from the fact that what he reported was first-hand experience. The relationship between a patient affected with a reproductive disorder or in the course of a pregnancy and the doctor was carried out by intermediaries such as the neighbor who described the complaint to the doctor who then provided therapy without seeing or touching his patient. Female modesty created distrust, which led the woman to consult traditional rather than professional advice. Even for serious conditions such as infected abscesses or cancer of the breast the doctor was the last step, often consulted when there was nothing left to be done. In 1742 Nannoni laments this tendency in *Trattato* recording many cases in which the inflammation of breast cancer was so advanced that he was obliged to cut away over half the organ, which had been under promise of cure with

watered rinses of vinegar advised by a twenty-two year old youth⁴¹. The advice to cure cracked nipples especially during pregnancy was to apply pomades of fat from the sides of the pig unsalted and made to boil in white wine with cinnamon, nutmeg and cloves⁴². Obviously, though the mixture was boiled, the container and the conditions did not guarantee sterilization and an infection frequently followed.

Scientific progress and knowledge of sepsis and especially antiseptics will determine treatment, and create the basis of the relationship between doctor and patient, pathology and surgical procedure that will lead to new progress and the development of basic concepts in the 19th century.

BIBLIOGRAPHY AND NOTES

1. Cantarella E, *L'ambiguo malanno. La donna nell'antichità greco-romana*. Milano: Feltrinelli; 2013.
2. Urso C, *La bellezza femminile nel Medioevo: un dono o una condanna?* *Annali della Facoltà di Scienze della Formazione, Università di Catania* 2008;7:25-51, p. 26.
3. The cult originated in the images of the goddess Isis nursing his son Horus whose symbol will be taken up by the Christianity between 6th and 7th centuries.
4. In *Corpus Hippocraticum: De morbis mulierum, De sterilitate, De genitura, De natura pueri, De natura muliebri, De superfetazione, De partu septimestri, De partu octimestri, De excisione foetus e De eis quae ad virgines spectant*. In: Levi MG. Venezia: Aldine Press; 1838.
5. For example, from *Historia animalium* and principally from *De generatione animalium*.
6. Concerning authorship of the text and its English translation please see Green M, *The Trotula. A medieval compendium of women's medicine*. Philadelphia: Philadelphia University Press; 2001; for the Italian translation Boggi Cavallo P, *Trotula de Ruggero. Sulle malattie della donna*. Palermo: La Luna Editore; 1994; Soraci T, *Trotula de'Ruggiero. (1035?-1097) Una medica delle donne per le donne*. Perugia: Edizioni Era Nuova; 2016.

7. Mondino De Liuzzi, *Anatomia*, volgarizzata da Sebastiano Manlio. Venezia, 1494. In: Firpo L (ed.), *Medicina medievale*. Torino: Utet; 1972. p.186.
8. As it was known, blood comes from the heart (warm- wet temperament), phlem from the brain (cold-wet temperament), yellow bile from the liver (warm-dry temperament) and black bile from the spleen (cold-dry temperament).
9. Lund FB, Hippocratic surgery. *Ann. Surgery*, 1935;102:531-547.
10. We have used the text found in: Zamuner I, The Tuscan vulgar of the practice of Ruggero Frugardo in the codice 2163 from the Biblioteca Riccardiana of Florence. *Bollettino dell'Opera del Vocabolario Italiano* 2012;XVII: 312.
11. Ibid.
12. Steven I, Hajdu MD, A note from history: landmarks in history od cancer. *Cancer* 2011;5:2811-2820.
13. The distinction between tumor and cancer is relatively contemporary. In history the terms varied in use according to the degree of malignity: malignant tumor or cancer are used for the first time by Jean Fernel (1497- 1558): “[...] he was able to differentiate carcinomas and sarcomas with his naked eye because carcinomas were firm and irregular and sarcomas were soft and fleshy. But he cautioned that consistency and form of tumors may vary from organ to organ”, Steven I, Hajdu MD, ref. 12. p. 2812.
14. His treatise *Anatomia Humani Corporis*, illustrated by Gérard de Lairesse (1641-1711).
15. The case is reported in: Morgagni GB, *Delle sedi e cause delle malattie*. Firenze: Sansone Coen Editore; 1841, vol. III, p. 100.
16. Ibid.
17. Ibid.
18. Parigino G, Angelo Nannoni, *Trattato sulle malattie delle mammelle*. Firenze: Le Lettere; 1995. pp. 40-51.
19. Ivi, p. 81.
20. As per the breast and uterus connections the milk was recognized as a product of cooking (“cozione”) and whitening through circulation within blood vessels.
21. Ref. 4, Aforismi, V, 37.
22. Zamuner I, ref. 10. p. 312.
23. Ivi, p. 313.
24. Ibid.
25. As was common in the Florentine hospital Bonifazio, Biblioteca Nazionale Centrale di Firenze, Magliabechiano, XV,142, *Annotazioni chirurgiche di Giovan Battista Nardi, cerusico a Bonifatio*, 1582.

26. Ibid. The plant 'cufea' or in the vulgar 'cufa' was a variety of willow noted for its emetic and purgatory properties due to its resinous and bitter characteristics.
27. Thus wrote the physician from Modena Giovanni Marinello in his treatise *Le medicine partendenti alle infermità delle donne* printed in vulgar for the first time at Venice in 1563 and cited by Altieri Biagi ML, Mazzotta C, Chiantera A, Altieri P, *Medicina per le donne nel Cinquecento*. Torino: Utet; 1992. p. 55.
28. The idea that milk is modified blood was originated by Hippocrates. The quantity of milk derived from the flow of blood to the breast. In the 17th Century an hypothesis began to gain credence that the process involved cycle and the arteries which transported it with the nervous fluids. This hypothesis did not override the older belief, and only in the 19th century did (1849) Arnold Adolph Berthold, a physiologist from Gottinga (1803-1861), provide a demonstration that milk is secreted by the mammary glands.
29. Altieri Biagi ML, Mazzotta C, Chiantera A, Altieri P, ref. 27. p. 32.
30. Mercurio SG, *La commare o raccogliatrice*. Venice: Gio. Battista Ciotti; 1596 reported by Altieri Biagi ML, Mazzotta C, Chiantera A, Altieri P, ref. 27. p. 35.
31. Balocchi V, *Manuale completo di Ostetricia*. Firenze: Steininger; 1840. vol. I, p. 53.
32. Urso C, ref. 2, p. 29, for the bibliography, especially, Palmero G, *Il corpo femminile tra idea di bellezza e igiene. Cosmetici, balsami e profumi alla fine del Medioevo*. <http://www.retimedievali.it/biblioteca>, 2002. pp. 1-17. Moulonnier Brogi L, *Esthétique et soins du corps dans les traités médicaux latins à la fin du Moyen Age*. *Medieval* 2004;46:55-72.
33. Biblioteca Nazionale Centrale of Florence, Magliabechiano, XV, 9, Anonymous, *Ricette diverse*, 1460.
34. The daughter of Galeazzo Sforza she had her first marriage to Girolamo Riario Lord of Imola and Forlì. At the death (Fig. 8) of her husband she married Giovanni di Pierfrancesco de' Medici and was the Mother of Giovanni dalle Bande Nere, who was to be the father of Cosimo I. An adventurous life saw her prisoner of Cesare Borgia who held her in Castel Sant' Angelo for 16 months. Returning to Florence she retreated to villa di Castello where she wrote her 'Recipes' conclusions she had drawn from her alchemical, medical and cosmetic experiments.
35. Biblioteca Nazionale Centrale of Florence, Magliabechiano, XV, 58, Lucantonio di Isidoro Cuppano da Montefalco, *servitore di Giovanni de Medici, Vari segreti copiatu dai libri di Madonna Catharina da Forlì, sec. XVI*.

The breast in symbolism and medicine

36. Diana E, Una 'medicha' e massaia del Cinquecento. *Toscana medica* 1995;10:42-48; Palmero M, Pratica cosmetica e ricerca della bellezza nelle produzioni scritte di ambito privato, tra basso Medioevo e primo Cinquecento. In: Treccani E, Zaccarello M (eds), *Pratiche mediche, cosmetiche e culinarie attraverso i testi (secc.XIV-XVI)*. Verona: Cierre edizioni; 2012. pp. 49-76, also for the bibliography.
37. Palmero M, ref. 36. p. 69.
38. Ibid.
39. Biblioteca Nazionale Centrale of Florence, Magliabechiano, XV, 9, Anonymous, ref. 33.
40. Ibid.
41. Nannoni A, ref. 18. pp. 49-50
42. Diana E, ref. 36. p. 42.

Revised: 17.01.2019

Accepted: 30.11.2020

