

Body preservation in the Middle Ages: Natural and Artificial Mummies

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Abstract

This research focuses on cases of natural and artificial mummification from the Early to Late Middle Ages in Italy and Europe. Particular attention is placed on the bodies of saints, popes and kings which – for devotional or practical purposes, such as the public exposure of the bodies – required embalming. Natural mummies are primarily represented by the bodies of saints. Relics – parts of the mummified bodies – also were researched. The phenomena of burial site expansion, as well as heart tombs, were studied in depth. These showed changes in funerary ceremonial practices (double funerals, funerary effigies) and methods of cadaver treatment (dismemberment, boiling, heart exeresis). The policy of the Papacy in response to the distribution of these practices – as exemplified in the Bull Detestandae feritatis abusum of Bonifacio VIII (1299) – is further analyzed. Finally, a note of interest: the role of the mummia in the pharmacopoeia of the Middle Ages and subsequent centuries

The study of anthropological remains in medieval burial sites has brought to light numerous cases of mummification and embalming involving bodies that either were conserved by virtue of particularly favorable climactic conditions or as a result of preferential treatments reserved for well-known public figures. In this case the tradition is very ancient: from Genesis we know that Jacob and Joseph were embalmed according to the Egyptian manner. Even the bodies of Lazzarus and Jesus were wrapped in bundles of cloth and treated with aromas and myrrh. Similar treatments were reserved for the most important members of the Christian communities in the first centuries A.D.: the martyrs, the Saints, and the Bishops. Tertullian of Carthage in the 3rd century, the

priest Prudenzius of Spain in the 4th and Rufino, the monk of Aquileia in the 5th century confirm the use of aromas on the corpses of these figures in order to honor them. Just as Africa, Spain and Italy were known for their use of balms, even in France and among the Germanic tribes these were not unknown. (Pigeon, 1894)

The historical sources are numerous and often highlight the presence of sweet perfumes emanating from the bodies of the Saints during the reconnaissance and transfer of the latter; Gregorio of Tours, in the 6th century AD, confirmed the use of aromas and balms even for members of the Merovingian aristocracy and a significant number of archaeological excavations, including the body of Queen Arnegonda in Saint-Denis, serve as further proof. (Alexandre-Bidon and Treffort, 1993)

During the Carolingian period and the centuries that followed, embalming no longer served the function of honoring an important public figure, but was designed to protect a body from putrefaction during transportation of the latter for short or long periods of time. The literary sources support this: in the Chanson de Roland, Charlemagne, at the death of Rolande and Oliviero and the Archbishop Turpino, orders their bodies to be prepared for burial. The bodies are initially opened in order to collect the hearts in a shroud of silk; the corpses were then washed with aromas and wine and successively sealed in deerskin in order to facilitate their transport (Grilletto, 1996). It appears that the technical knowledge of the past had been lost and that empirical techniques offering little guarantee were being used.

It is not known whether the abandonment of the ancient method was caused by the repulsion of people in the Middle Ages towards the use of procedures that were considered invasive or if the traditions were lost as in other realms. In order to transport the body over great distances it was necessary to eliminate the most potentially putrefactive parts by means of evisceration: in the Germanic Empire, the most frequent cases occurred when long distances separated the site of death from the burial site.

Ottone I, for example, died in 973 in Mersebourg and his body was brought to Magdeburgo after being embalmed – a distance of about ten kilometers. Another example of evisceration which is known to us is the one conducted on the body of Folco Nerra, Count of Anjou, who died in 1040

in Metz (northeastern France), a territory of the Empire. The count had insisted on being buried in the abbey that he had founded in his county in Beaulieu. Several physicians performed the intervention and the visceral contents were buried in Metz.

Beginning with the second half of the 11th century AD, examples become more frequent, but there is still uncertainty as to how to perform the embalming: both aromas as well as salt and wine are used as anti-septics, as was done with Folco Nerra (Erlande-Brandenburg, 1975). The impossibility of transporting a body over great distances – often due to high temperatures which occasionally accelerated the decomposition process – contributed to the introduction of dismemberment, together with embalming, as a technique.

Between 1095 and 1291, many important members of the nobility (including the King of France, Saint Louis IX, Jean Tristan, Isabella of Aragona and many others) died in the Holy Lands and their bodies were dismembered: the soft tissues were separated from the bones and the viscera were removed; the bones, boiled and dried, were then transported to their native lands while the remains were buried at the site of death.

Similar to these were the fragmentation of the bodies of Saints in order to create relics and the dissective practices aimed at anatomical research and description; however, in both of these cases the Church always maintained a somewhat ambiguous attitude: at times dissent, for ethical-anthropological reasons (*crudelitas*, *inhumanitas*, *foeditas*) as well as theological reasons (the unsurmountability of that which God meant to hide from the eyes of men), but also acceptance since this was not a method that had permeated the highest ecclesiastical and aristocratic spheres.

The diffusion of the dismemberment and boiling practices of corpses – also known as *mos teutonicus* since the first cases were major prelates and Germanic emperors – resulted in Pope Bonifacius VIII decreeing his 1299 Papal Bull *Detestandae feritatis abusum*: all Christians were not allowed to treat human bodies in such a fashion. It is important to consider, however, the fact that there were numerous excuses made for many rulers: hearts and viscera, removed in a simple manner, were allowed (Brown, 1981).

In the case that public exposition of the corpse was necessary (as in the case of Kings, Popes and Saints), evisceration was not supposed to overly change the external image of the body. Even if the information derived from surgery texts is lacking in technical detail, the *modus operandi* can be imagined.

In Medieval embalming of internal type, in which the viscera are removed, only the method used for the exeresis of the cerebral mass is perfectly defined since it leaves obvious signs on the skeleton, due to the fact that skull is sawed along its edge, even cutting the scalp (Fig. 1). As far as the viscera and in particular the heart are concerned, no study has revealed which was the preferred method of access.

The position of the heart – known for its symbolic



Fig. 1 - Exeresis of the brain.

importance – does not offer an obvious access point: the surgeon could choose whether to extract it from the abdomen with a laparotomy, used to remove the digestive organs, or through a thoracotomy. Important examples of craniotomy and laparotomy are seen in the artificial

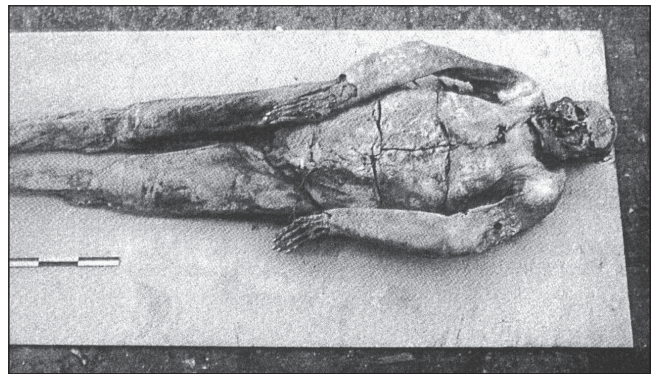


Fig. 2 - The artificial mummy of Maria d'Aragona.

mummies of the church of San Domenico M. of Naples. (Fornaciari, 1983) (Fig. 2).

Henry de Mondeville, the surgeon of Philipp the Beautiful, King of France (XIIIth century), suggests opening the corpse in the anterior part of the body with a long central incision, then extracting the viscera, spreading a powder of spices, salt and cum across the insides, and then filling it up with fragrant herbs in order to restore the original body volume. The cardica exeresis was done by crushing the diaphragm and eliminating the lungs. It is possible to see the result of this cut through the abdomen by examining the tomb of Louis XII and Anna of Brittany in Saint-Denis (beginning XVI century): the two adjacent statues bear the signs left by the ablation of the viscera – including the heart – through the belly (Georges, 2003).

The thoracotomy aims instead to treat this organ with greater attention: at the end of the XIII century many causes pushed the kings and princes to choose separate burial sites; while the body must reach the dynastic necropolis, they were free to choose the sanctuary that would receive their heart. The fractioning of burial sites also multiplied the efficacy of the prayers for the salvation

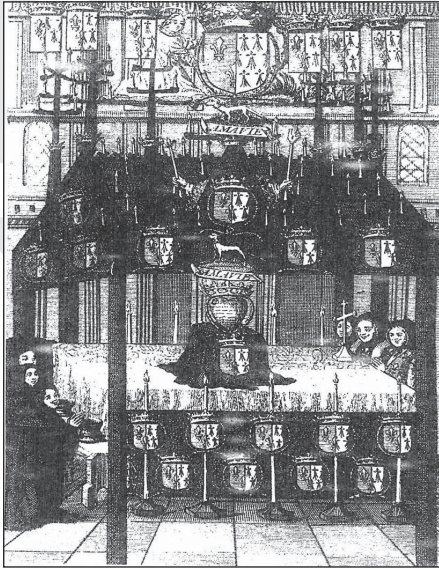


Fig. 3 - Funeral chamber of the heart of Anna of Brittany in Nantes.

of the soul. The sumptuous funerals for the heart of Anna of Brittany (1514) are an example of this. (Ricci, 1998) (Fig. 3). Beginning with the death of Edward II (1317), whose embalmed body was not in a condition for public exposition, a new element in royal funerals emerges: the effigy, a *ad similitudinem regis* figure which showed the distinctive signs of the ruler and which served as a substitute for the latter's physical and political body. In a fashion similar to that of the secular rulers, even the Popes were embalmed in order to facilitate the transport and public exposition of the bodies. The most ancient testimony dates back to 1118, but the brevity with which the subject is discussed seems to imply this was an old custom. Only at the end of the 1300's is there a precise treatise on the method used for embalming Popes: it was an external method, where first the body was washed with wine heated with aromatic herbs and later it was oiled down with balms. Towards the end of the 1400's a new document appears in which the embalming method including the ablation of the brain and the viscera is described (Paravicini Bagliani, 1994).

The information regarding the Saints is much broader. Of these, often only the skeletons remain, but starting in the 4th century AD and during the Middle Ages there are cases of mummified remains. According to the most recent research, in Italy there are at least 315 remains of Saints and Martyrs that are well conserved, including 25 whole mummified bodies.

We know that mummification is a natural process caused by environmental conditions favoring dehydration and which block or considerably slow autolysis and putrefaction: in the convent of the Cappuccini of Palermo, corpses were dried on draining boards already from the 11th century; in Toulouse, the Franciscans exposed the bodies of their brethren in a well ventilated hall of the bell tower. In addition, during the Middle Ages there were frequent cases of saintly anorexia, i.e. the impossibility of eating anything other than the Eucharistic Host; starting in the Carolingian period and increasingly up until the 1200's there are hagiographies which describe young women who

died after refusing food and who were successively sanctified: their body was found intact, naturally mummified due to the state of exhaustion which took place in the last months of life; (the incorruptability of the corpse was also one of the reasons for sanctification).

However, some Saints received artificial treatments, including evisceration, so that their bodies could be conserved long enough for the religious faithful to pay homage: Santa Margherita of Cortona (1297), Santa Chiara of Montefalco (1308), Beata Margherita Vergine of Città di Castello (1320), Santa Caterina of Siena (1380), San Bernardino of Siena (1444) and Santa Rita of Cascia (1447), were cases concentrated in a particular period, from 1297 to 1447, and their geographical distribution is strictly limited to Umbria and Tuscany; finally, with the exception of San Bernardino of Siena, all the artificial mummies are females. It can therefore be deduced that the embalming practice was limited to specific religious realms and primarily to convents that hosted women conducting a mystical life. The sisters of the convent were entrusted with the opening of the body and its evisceration in order for the body to conserve itself perfectly, up until the time of Universal Judgement, just as their souls had been perfectly preserved in life (Fulcheri, 1996).

Finally, a curious note: in addition to the common definition

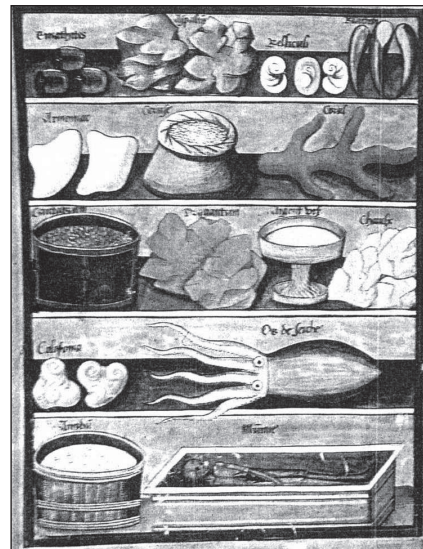


Fig. 4 - The mummia in the medieval pharmacopoeia.

of naturally or artificially preserved body, the term *mummy* was also used for an important drug (Fig. 4); in Persian, mummy means bitumen, and it was believed to have great healing properties. According to the Romans, it could cure leprosy, gout, toothache and wounds in general. Avicenna (the great physician of the XI century) used it for fractures, abscesses and gastro-intestinal problems.

The embalmed bodies of the Egyptians were confused with the precious mineral and medicinal substance when, in a medical text of the 12th century, the *mummy* was described as a "substance found in the area where the bodies were buried with aloe, which when mixed with the liquids of the dead becomes transformed and is similar to a marine pitch". It was therefore considered a substance derived from the liquids of the embalmed bodies. Faith in

the therapeutic mummy was so strong that in the XVI and XVII centuries Francesco I of France (1494-1547), who loved horseriding but feared falling, always carried a bag containing a powder of Egyptian *mummy* mixed with rhubarb. The request for mummy was so high that its research in Egyptian tombs took on enormous proportions.

In order to cover the ever growing demand, "fresh" cadavers were also used: the authorities of Cairo in 1424, for example, imprisoned two men for having stolen some bodies, and then boiled them to collect the oil in them in order to then have it sent to Europe, where it was measured at the price of gold.

Another method for obtaining a good mummy, even if not original, is suggested in the more ancient Italian testimony, the *Dioscoride* (1548) of Pietro Andrea Mattioli: given the difficulties in obtaining good mummies from Soria (Siria), filling the bodies of the poor which died in hospices was suggested. In another testimony of the XVI century, Oswald Crollius describes the mummy as "not the liquid material that is found in Egyptian burials" but as the "flesh of a man deceased by violent means". Extractions were made from the thighs and the buttocks of the body of the criminal that was hanged. After washing in wine and exposing these extractions to sun and moonlight for seven days while mixed with myrrh, aloe and saffron, they could be used to heal various diseases (Camille, 1999).

Three types of *mummy* can be distinguished: the most sought after was the Egyptian, taken from the burial sites of nobles; the most common was that taken from the cadavers of common people, embalmed in a cheaper fashion; and the most artificial was that prepared with the cadavers of Europeans.

There was also a *mummy liquor*, relatively popular in the XVI and XVII century, and its prodigious derivative, The Balsamic Oil of Christ.

These were medications that had become traditional, even to the point that at the end of the 1700's a medical reference book still cited liquid *mummy* (mummy liquor), fresh *mummy* (artificial *mummy*) and dry *mummy* (Egyptian *mummy*).

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