SHORT REPORT: PALEOPATHOLOGY

The alleged mummies of the Pandone family in the conventual church of San Francesco at Prata Sannita, Caserta (southern Italy)

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Abstract. Monastic and conventual communities in central and southern Italy have historically preserved human remains, either intentionally or through spontaneous mummification facilitated by the region's cold, dry climate. Here we present a preliminary investigation of a previously undocumented collection of three mummies housed in the conventual church of San Francesco in Prata Sannita, Caserta. These remains have traditionally been attributed to Scipione Pandone, his wife, and their daughter, though definitive identification remains uncertain due to the absence of textual evidence. An alternative hypothesis suggests that the remains might belong to Federico Pandone (son of Scipione's brother), his second wife, and their daughter. The mummies, previously housed in a chapel and now stored in a wall cupboard, are well-preserved on their external surfaces and show partial bandaging, suggesting the possibility of intentional preservation. The environmental conditions of the crypt may have also contributed to their spontaneous mummification. To ensure comprehensive bioanthropological and paleopathological analyses, the bodies will undergo external inspection, computed tomography (CT) scans, and minimally invasive tissue sampling for histopathological, paleonutritional, and paleogenomic studies. Additionally, textile fragments and any surviving grave goods will also be examined using advanced analytical techniques such as SEM-EDS and FT-IR spectroscopy. Aim of the study is to elucidate the health, diet, and lifestyle of the subjects. The findings will contribute to a better understanding of cultural and social practices surrounding death and burial in the Italian Apennine regions, and the results are expected to provide a scientific basis for the permanent on-site exhibition of the mummies.

Key words: mummy studies, paleopathology, Campania region, southern Italy

Introduction

Monastic and conventual communities played a crucial role in the conservation of mummified remains belonged to religious figures and aristocrats (1–5). The preservation of human bodies in these settings included both intentional (anthropogenic) and spontaneous (natural) mummification processes. The inland areas of central and southern Italy are characterized by mountains and highlands with a cold, dry climate. These conditions create an ideal environment

for spontaneous mummification, and central Italy is renowned for its abundance of natural mummies (6–10).

In this short contribution, we present a small series of mummies housed in the conventual church of San Francesco in Prata Sannita, Caserta, southern Italy (Figure 1). These mummies have not been previously documented in paleopathological literature and include two adult subjects along with an infant. The aim of this study is to outline the operational plan and the research perspectives that will be undertaken.



Figure 1. A) Position of Prata Sannita in the Italian peninsula. B) Prata Inferiore (red pointer) and the convent (blue pointer) incorporated in the modern village. Maps data ©2024 Google Earth.

Historical background

Prata Sannita is a picturesque village in the Italian province of Caserta, located beside the Matese mountain. The original settlement of Prata Piana was established in the late 7th century. In 863 A.D., following its destruction by Saracens, the surviving inhabitants decided to relocate to a more secure and defensible place. Since the year 1000, Prata's importance had steadily increased, culminating in 1197 in its designation as a civitas instead of castrum. The medieval village, known as Prata Inferiore, is situated at 333 meters above sea level, perched around the castle on a rocky spur overlooking the river Lete valley (11). A medieval bridge, which remains still accessible, crosses the river (Figure 1).

In 1334, the Pandone family ascended to lordship over Prata, administering the barony for a period of approximately two centuries. Francesco Pandone, who was appointed Count of Venafro in 1443, ruled the barony until 1457. His grandson, Scipione, is credited with completing the construction of the conventual church of San Francesco, thereby fulfilling the wishes of his father, Carlo (11, 12). In 1460, the construction of the convent in the Romanesque style was initiated at the behest of Scipione Pandone (1443–1492). The

church, consecrated in 1480, became a significant site for the Pandone family (12, 14) (Figure 2A). In 1492, Scipione passed away and, in accordance with his final wishes, his remains were transferred to Prata to be bur-ied in the family chapel of this church, which was still under construction at that time. According to historical accounts, the count's body was meticulously treated for preservation, a common practice among the aristocracy of the time. The body was first placed in a temporary resting place before being transferred to the aforemen-tioned chapel, later called the Celani Chapel (15).

The alleged Pandone mummies in Prata Sannita

The adult mummies had long been displayed in an upright position inside two niches on both sides of the altar of the Celani chapel. In 1915, during the res-toration and modernization works of the church, the mummies were moved to the St. Anthony chapel. It was only in 1945 that they were placed in their current position (16). The repeated relocations and prolonged exposure to the environment have likely contributed to the deterioration of some preservation features.

The mummified remains, which are located in a wall cupboard in the right transept of the church,



Figure 2. A) The conventual church of San Francesco in Prata Sannita. B) The wall cupboard in the church's right transept.

comprise a male, a female, and a headless infant. According to established tradition, these remains belong to Scipione Pandone, his wife Lucrezia Gaetani (or Caetani), and their daughter. Scipione was the second Count of Venafro and the Baron of Prata from 1457 until his death. On May 28, 1467, he married Lucrezia, the daughter of Onorato II Gaetani, Count of Fondi and Protonotary of the Kingdom of Naples. Historical evidence substantiates this claim, as Scipione had completed the construction of the convent and the church in accordance with the expressed desires of his late father, Carlo. The only members of the Pandone family known to be buried in the church are Scipione and, many years later, the surviving widow of his youngest brother Camillo (1451-1495), Lucrezia di Capua (15, 16). In 1945, the remains of a woman and a young man were found in two separate anepigraphic graves. Both bodies were found to be intact upon initial discovery, but they rapidly deteriorated upon exposure to the air, becoming completely reduced to dust. Assuming the female body found in the aforementioned graves was that of Camillo's widow, the female mummy adjacent to Scipione Pandone must belong to Lucrezia Gaetani (15).

However, alternative identifications have been proposed by some scholars, including the possibility that the remains belong to Federico Pandone (son of Camillo), his second wife Giulia Piscicelli, and their daughter Lucrezia, as written on the plaque under the cupboard that currently holds the mummies (14, 17). Federico (1479–1538) was the Baron of Cerro al Volturno and one of the last famous members of the family, renowned for his extravagant lifestyle and his lavish marriage to the charming Ippolita d'Afflitto. Little is known about his second wife, Giulia Piscicelli, who came from an ancient Neapolitan noble family.

An additional plaque mentions the name of a parish priest who lived in the 19th century (Figure 2B). The absence of textual sources and epigraphic information has rendered definitive identification challenging.

Finally, we cannot rule out the possibility that the mummified bodies in question date back to the recent past, perhaps the second half of the 19th century, and belong to laypersons, as widely documented in Southern Italy.

Preliminary survey of the mummies

A preliminary survey of the mummies was conducted to assess their state of preservation and plan further investigations. This survey revealed the necessity of comprehensive bioanthropological and paleopathological analyses to enhance our understanding of

the mummification processes and the individuals' life histories.

After opening the cupboard doors, the presence of three mummified bodies lying in two levels was revealed (Figure 3). The body of an adult female could be observed in the upper shelf, whereas the lower level contained the bodies of an adult male and an infant. The male body measured 171 cm in length and the female body measured 165 cm. The child mummy was found to be headless, with its partially skeletonized post-cranial portions measuring 62 cm in length (Figure 4). The adult mummies showed excellent preservation, particularly on their external surfaces. The lower limbs of the male mummy, as well as the legs and forearms of the female, were partially bandaged, as might have been the case with the remaining parts, which were probably stripped during previous relocations. They featured a smooth texture, with a plain weave pattern and natural color, reminiscent of unbleached linen. The presence of such fabric bandages on the lower limbs may indicate intentional preservation measures, which may have involved embalming practices or other techniques aimed at enhancing natural preservation. In order to avoid direct contact of embalming substances with biological tissues, textiles were often placed between the body surface and the substances. These external body treatments, with or without evisceration, were performed on the bodies of religious figures as well as of lay notables (1, 3, 4). Alternatively, the cold and dry conditions of the old crypt may have contributed to spontaneous mummification, a phenomenon commonly observed in many inland areas of central Italy (5-8).

Future research

A study project, supported by the Diocese of Alife-Caiazzo, has been approved by the Fondo Edifici di Culto (FEC) of the Italian Government's Ministry of the Interior, which is in charge of the building. The study will begin as soon as we receive the approval of the Superintendence for Archaeology, Fine Arts, and Landscape for the Provinces of Benevento and Caserta. The study of these mummies will offer a unique opportunity to explore the health, diet, and lifestyle

of aristocratic individuals in southern Italy during post-medieval times. Also, the collected data may be of help in providing crucial information on their identity and parental connections. Complete investigations of bodies and bandages will be performed in order to trace their bioanthropological profile, and to assess their daily life.

Anthropometric and paleopathological analyses will be performed by a conservative approach through external inspection, computed tomography (CT) scanning also with tridimensional reconstructions, and videoendoscopy (18, 19). Minimally invasive sampling of tissues will be performed to allow histopathological, paleonutritional, and paleogenomic (ancient DNA) studies. The post-mortem microbiome and possible traces of pathogens will also be analyzed in order to assess the presence of disease markers, which could provide insight into the individuals' health histories or underlying conditions. Textile fragments and any surviving grave goods will also be analyzed to provide additional context. When needed, additional samples will be submitted to scanning electron microscopy with microanalysis (SEM-EDS) and Fourier-transformed infrared (FT-IR) spectroscopy (20).

The results of these investigations will contribute to a broader understanding of mummification practices/mechanisms in the Italian Apennine regions and provide a scientific basis for the permanent exhibition of the mummies on-site. The inland areas of Molise and Campania regions share cultural and environmental features similar to those of the inner Abruzzo region. These areas have historically been associated with a rich heritage of natural mummies, often preserved in conventual and monastic settings. The mummies in Prata Sannita represent a significant addition to this heritage, representing an interplay between faith, science, and cultural practices.

Conclusions

Due to the rich heritage of natural mummies, inner areas of Italian Apennine regions are considered of great bioanthropological and paleopathological interest. This small mummy series in Prata Sannita shows relevant analogies with similar series discovered in the



Figure 3. The mummies inside the cupboard.



Figure 4. The headless infant mummy.

inner Apennine regions of Emilia-Romagna, Marche, Umbria, and Lazio. The proposed study will provide significant information regarding the genetic characteristics and nutritional status of the subjects, as well as insights into their daily activities and the diseases they may have experienced during their lifetimes. Furthermore, light will be shed on the cultural and social practices surrounding death and burial in this particular region.

Acknowledgements: We would like to thank His Excellency Monsignor Giacomo Cirulli (Bishop of the Diocese of Alife-Caiazzo), for his support to the study project.

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