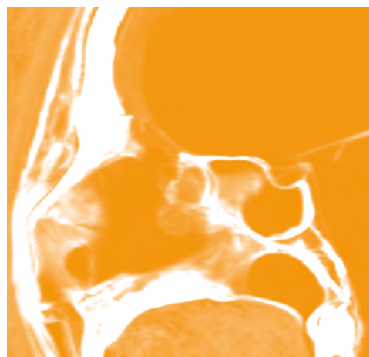


A medley of mummies from Deir el-Bahari

Abstract: The results of radiographic and visual examinations of four mummies originating from Deir el-Bahari, now kept in different museums throughout Egypt, are presented here. One individual dates to the Twenty-second Dynasty, and the remaining three date to the Twenty-fifth Dynasty, and were possibly related. Some of the mummies possessed amulets, with one individual having unusual accouterments in addition to the amulets.

Keywords: Egypt, mummy, sawdust, resin, amulets, hand positions

A group of mummies and coffins were investigated as part of a larger Polish project dealing with burials in the temple of Hatshepsut at Deir el-Bahari. The Twenty-fifth Dynasty encoffined burials (Heresenes, Nespaqashuty and Padiamunet) were originally located on the Upper Terrace in a shaft in front of the mortuary Chapel of Hatshepsut (Tomb XVIII). However, at the time of writing, the encoffined bodies are kept in Luxor Museum (Nespaqashuty) and the National Museum of Egyptian Civilisation's (NMEC) storage facility at Fustat (Heresenes and Padiamunet). The cartonnage-encased body of Shauamunimes (Twenty-second Dynasty) presented here is unprovenanced, but as burial equipment belonging to individuals with the same name and titles has been recently found by the Polish–Egyptian mission to Deir el-Bahari, it probably originates from there (Barwik 2003: 122ff.; Sheikholeslami 2018, in this volume), and thus it is included in this article. It is currently kept in the Egyptian Museum in Cairo. The containers for these mummies and their history are presented in this volume in the article by Cynthia May Sheikholeslami.



Salima Ikram¹
Carlos Prates²
Sandra Sousa²
Carlos Oliveira²

¹ Department of Sociology,
Egyptology and Anthropology,
American University in Cairo

² IMI-art/Affidea, Lisbon, Portugal

Acknowledgments

We are grateful to Cynthia May Sheikholeslami, project director, for inviting us to collaborate on this project. The project was generously funded by the American Research Center in Egypt's Antiquities Endowment Fund. Thanks are owed to the following people and institutions for their help and support in completing this project: Egyptian Museum Cairo: El-Sayed Amer and Mahmoud el-Hawagy (General Directors); Curators Ibrahim Abdel-Gawad, Wafaa Habib, CT-Machine Tarek Abd el-Aala; Technicians Said Atta, Ramadan es-Sayed, Ramadan Hamed, Abdel-Rahman Ibrahim, Mounir Lotfy, Abdalla Hassan, Adel Abdel-Hamid, Alaa Hindawy, and Farag Nasser; Luxor Museum: Sanaa Aly (Director), Curators Samia Abdel Aziz Abdel Razek, Eman Fares Abadeer, Nesreen Ayaad Armeneos, Nakhla Shawky Habeb; the National Museum of Egyptian Civilization Cairo: Khaled al-Anany (Director), Curators Mohamed Mokhtar, Khaled Sadek, Ahmed el-Said, Somaya Abdel-Khaleq, Karem el-Said, Tamer Abdel-Fattah, Mustafa Ismail, Yehia Hussein, Mahmoud el-Masry, Ayat Magdy, Mohamed Ragab, Essam Ahmed Soliman, Mahmoud Abdallah, Technicians Ibrahim Mohamed, Adel Malak, Mohamed Ismail, Mostafa Magdi; Sohag Ministry of Antiquities, Museum, & Sheikh Hamad/Athribis Magazine: Gamal 'Abd al-Nasser (General Director of Sohag Inspectorate), Abdellatif Ibrahim (Sohag Museum Curator), Ibrahim el-Sherif, Talat Abdel Aziz Fawzy, Ragab Fahmy, Gamal Saad, Hamada Immam, Mina William, and Mohammed Yazid; Ministry of Antiquities: Mustafa Amin (General Director, Supreme Council of Antiquities), Mohamed Ismail and Hany Abd El Azm (Directors of Foreign Missions Affairs), Samia el-Merghani (Director for Human Remains); Hisham el-Leithy; Cairo University: Hany Amer made the CT-scans. Polish Centre of Mediterranean Archaeology University of Warsaw and its nd the Polish–Egyptian Archaeological and Conservation Mission at the Temple of Hatshepsut in Deir el-Bahari: Zbigniew Szafranski (Mission Director), *reis* Ragab Yassin Ahmed, Romani; and Nicholas Warner and Mohammed Labib.

METHODOLOGY

As all the mummies were wrapped or enclosed in cartonnage, they were examined through imaging. Three mummies, that of Shauamunimes (Twenty-second Dynasty) in the Egyptian Museum, and Heresenes (Twenty-fifth Dynasty) and Padiamunet (Twenty-fifth Dynasty) from the National Museum of Egyptian Civilization collection, stored in the Fustat magazine of the Ministry of Antiquities, were x-rayed *in situ* (Karmex Diagnostic X-ray Unit PX-20N, AC 115V 50/60HZ, 50–130 KVP 2–20mA), and CT-scanned at the Egyptian Museum's mobile facility (Siemens Emotion 6 machine), using a slice thickness of 1 mm.¹ The images were later processed and reviewed by the team, with the IMI-art palaeoradiologists rendering all the CT images that appear in this article. The fourth mummy, Nespaqashuty (Twenty-fifth Dynasty), was only x-rayed in the Luxor Museum, where no scanning facilities are available.² The canopics of Padiamunet and Heresenes in the Luxor Museum were examined visually and through x-ray. Those of Nespaqashuty, now held in the Ministry of Antiquities magazine in Sohag, were visually examined.

SHAUAMUNIMES (I), TWENTY-SECOND DYNASTY TEMPLE SINGER³

A sealed cartonnage case containing the mummy of the temple singer Shauamunimes (*ḥsyt n ḥnw n Imn*),

dating to the early Twenty-second Dynasty [Fig. 1], probably from the reign of Osorkon I (Taylor 2017), and possibly originating from Deir el-Bahari is now on display at the Egyptian Museum Cairo (TR 21.11.16.15). It was examined



Fig. 1. Cartonnage of Shauamunimes in the Egyptian Museum, Cairo (Courtesy of the Egyptian Museum/photo S. Ikram)

- 1 The authors are grateful for discussions with Robert Loynes and Frank Rühli on this group of mummies.
- 2 Preliminary results were published in Sheikholeslami and Ikram 2017; the results here reflect the current thinking on these mummies, after more work had been carried out on the images.
- 3 This mummy has been previously scanned, and some of the results relating to her heart were published in Thompson et al. 2013.

by x-rays and CT-scans. The head was not flush with the top of the cartonnage case that enveloped the mummy [Fig. 2 left], which is a common trait in mummies of this type (see Eladany 2011: 302 for examples of spaces between head and top of cartonnage; Taylor and Antoine 2014: Fig. 102), often because space is needed to manoeuvre the body into the casing (Adams 1966).

The age of death of this young woman was about 17, or less probably 14–17, as evidenced by the fact that her long bones were still fusing (distal femur, proximal tibia), and by her dentition (Buikstra and Ubelaker 1994; White and Folkens 2005: 363–375).

In life, Shauamunimes was probably about 1.63 m high (Raxter et al. 2008). Her arms, wrapped separately, lie along the sides of her body and rest on her thighs, not quite on her pudenda (the mummy of Tjayasetimu, a temple singer, in the British Museum, London, EA 20744, had her hands placed more definitely over

her pubes). The legs were wrapped separately and then the area between them filled with linen bundles. On the whole, she was well wrapped in linen bandages, with different numbers of layers depending on the body part. In addition to bandages that were wrapped around the entire body, extra pads of linen were used to bulk out the body, particularly in the region of the legs. In some portions of the wrapping (over the legs, over the torso), one can see several layers of textile followed by a resinous layer, and then completed by more textile layers. A similar situation has been noted on Leiden AMM. 22–21, in the region of the head (Raven and Taconis 2005: 104–107). Unfortunately, we are not sufficiently versed in the appearance of different qualities of textile in CT images, although these seem to be of good quality, not very coarse, but not of the gossamer variety.

Shauamunimes was excerebrated via the ethmoid, with some linen introduced into the cranial cavity [see Fig. 2

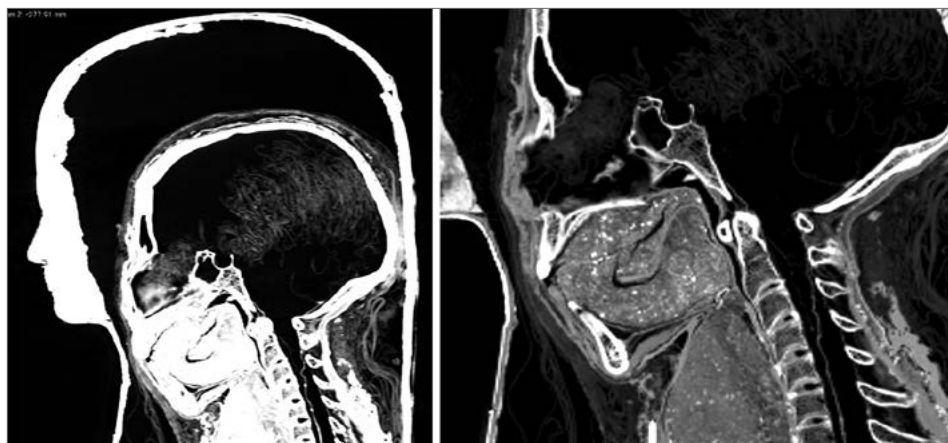


Fig. 2. Shauamunimes's head within the cartonnage, showing the space between the two, as well as the packing in the mouth and the textile filling in the cranium; right, close-up of the filling in the mouth and neck (All CTR images in this article IMI-art unless stated otherwise)

left]. Her mouth and neck were stuffed with some sort of mixture made up of a grainy substance (mud of some sort or sawdust, mixed with oils) [Fig. 2 right]. This is a continuation of a Twenty-first Dynasty tradition that was established to give the deceased a more life-like appearance (Smith and Dawson 1924: 110–120). Parallels have been noted in other Twenty-second Dynasty mummies, such as Meresamun (Teeter and Johnson 2009), Tanekharut (AMM. 22–21 in Raven and Taconis 2005: 100–103), and Tayuheret from Bab el-Gusus (Badr 2014), on bodies from Bab el-Gusus in the Egyptian

Museum (TR 28.4/26.27-1 and DelB 39), and other recently examined mummies from Thebes at Dra Abu al-Naga and the Valley of the Kings.⁴ This practice seems to have continued throughout the Third Intermediate Period, albeit inconsistently (Petisis is such an example, AMM. 19 in Raven and Taconis 2005: 115–119).

The evisceration incision is on the left side: The four visceral packages were returned to the body, being carefully placed in the thorax and abdomen [Fig. 3], a common phenomenon for this period (Smith and Dawson 1924: 113, 116, 120; Gray 1967), each with a pierced tab-like metal amulet,

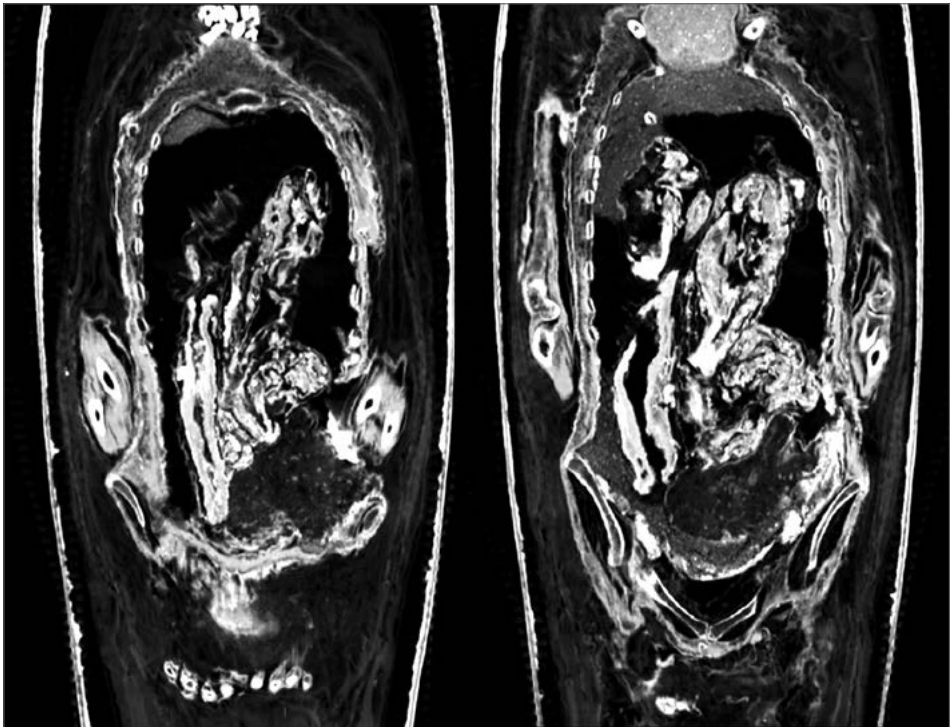


Fig. 3. Shauamunimes's abdominal packages

4 The ones from the Djehuty Project at Dra Abu al-Naga are being studied by Jesus Herrin and Salima Ikram, and those in the Valley of the Kings, KV 40 are being examined by Susanne Bickel, Salima Ikram, Frank Rühli, Roger Seiler, and Marina Estermann.

presumably bearing the protective likeness of the relevant Son of Horus (Raven and Taconis 2005: 112–114). The visceral incision was covered by a square plate made of a dense material undeterminable with the current scan resolution and the repertoire of comparable materials, which could possibly have been enhanced with a drawing of a *wadjet* eye [Fig. 4], as seen on other embalming plaques of this period. Its four corners are pierced by holes. Wooden, wax, and metal examples of these have been found on mummies of the Twenty-first Dynasty onward (British Museum, London: EA15572; several in the Egyptian Museum, Cairo: JE6267; JE41586; TR 13.11/24.20; TR 13.11/24.29; TR 13.11/14.28; TR13.11/24.16; TR13.8/24.38; TR 13.11/24.34 and on mummy JE296825; Metropolitan Museum of Art, New York: 25.3.164; Petrie Museum, London: UC52459, UC52460, UC52462). The heart

remains in the body. Additional linen serves to pack the body.

A curious feature was observed in the area of the thighs. Long lamellated bands that appear to be some sort of plant (though it is slightly within the realm of possibility that these are made of finely pleated linen) were placed over the skin, helping to thicken the thighs so they seem more life-like [Fig. 5]. Unfortunately these scans do not provide sufficient detail to identify this material (and there are not enough matching data/images with which to compare them); they could be papyrus stems or palm leaves, but not palm ribs.

A string of at least 12 amulets lay on her neck [Fig. 6]. These included *tyt*, *djed*, a foot, *wadj*, possibly images of standing deities, rectangular and stela-shaped objects with suspension loops, possibly an *ib*). A scarab was placed within the wrappings, in the area at the base of her

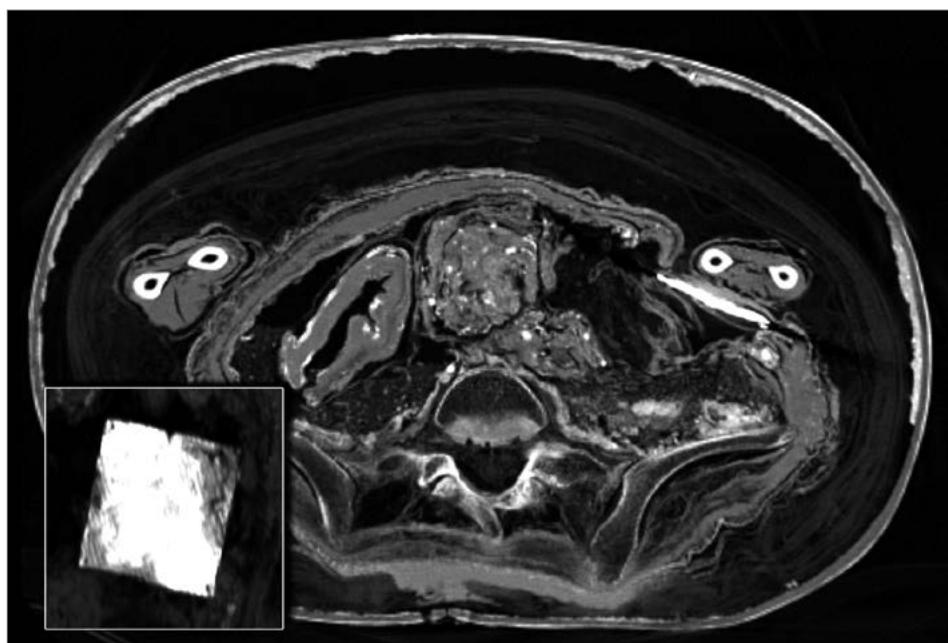


Fig. 4. Shauamunimes's evisceration cover/plaque

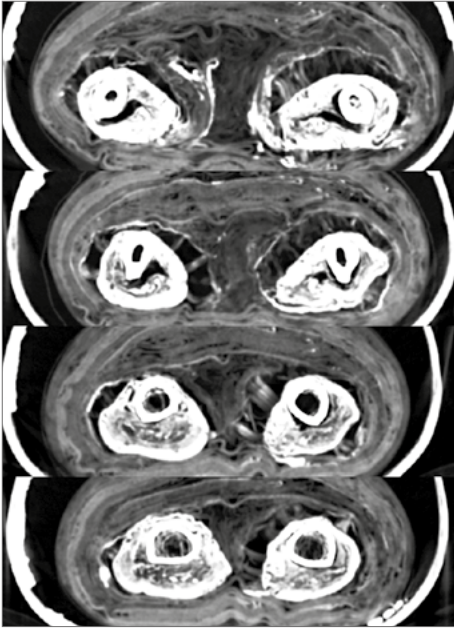


Fig. 5. Enigmatic material on Shauamunimes's thighs

throat; a winged scarab, possibly of cartonnage, was placed near the bottom of her sternum, and a few other amulets were scattered in the area of the thorax. These included a rectangular elongated plaque that appears to be over the heart area, decorated perhaps with a winged scarab, and a small rectangular amulet near one of the visceral packages [Fig. 7].



Fig. 6. Visualisation of the amulets around Shauamunimes's neck

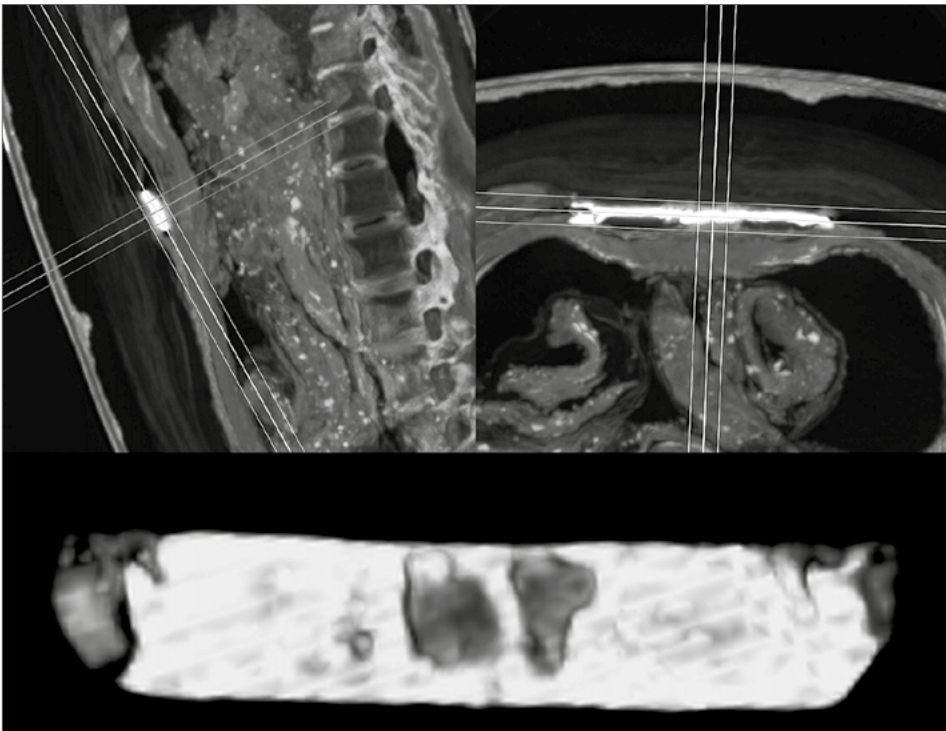


Fig. 7. Amulet found on Shaumunimes's breast/chest area

Comparable amulet groupings appear on the mummy of Tamut (British Museum, London EA 22939; Taylor and Antoine 2014: 68–91; Eladany 2011: 314), and some others from Bab el-Gusus (Daressy 1907). In addition to the amulets on her torso, Shauamunimes also had two amulets (rings?) at her wrist and hand.

A similar feature was found on the mummy of Tjanefer (Cairo Museum JE29682; Clarke et al. 2014; Linda Sutherland and the Horus Team, personal communication; Daressy 1907; some details of Tjanefer's amulets can be found in Clarke et al. 2014).

A curious feature was noted in Shauamunimes vertebral column: she has a butterfly vertebra, a rare congenital malformation that usually causes no harm or pain to its owner [Fig. 8]. Generally this appears on a lumbar vertebra, but in this case it is on the thoracic 11th vertebra. The cause of death is unclear.

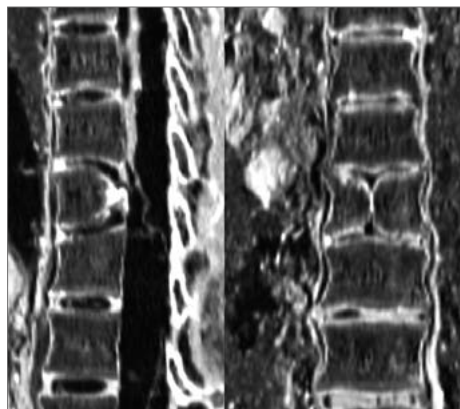


Fig. 8. Shauamunimes's vertebral column showing her butterfly vertebra, a congenital malformation

PADIAMUNET (iii) TWENTY-FIFTH DYNASTY PRIEST OF MONTU, GRANDSON OF TAKELOT III

The wrapped body of Padiamunet (iii) (currently bearing the number Luxor Museum J 346) was covered with a faience bead net that extends from the shoulders to the ankles, with bead tassels decorating the bottom edge and the two long sides edged with a heavier band of beads (see Silvano 1980 for typologies) [Fig. 9]. The body was wrapped in several layers of bandages topped by a now tea-coloured linen shroud (probably originally pinkish red, commonly found in mummies of the Twenty-fifth Dynasty, with some exemplars known from earlier in the Third Intermediate Period) which, at least at the feet, overlaps in front. The shroud is kept in place and further adorned by a series of bandages that can be discerned beneath the bead net. A long vertical bandage runs down the centre, flanked by two other vertical bandages. Horizontal bands further secure these on the face, at the shoulders, elbows, wrists, hips, knees, and above the ankles. An X, like the Twenty-first Dynasty leather braces, crosses over the chest and around the neck like a halter. Such combinations are well attested for other Twenty-fifth Dynasty mummies (Raven and Taconis 2005: 120–131).

Imaging of the mummy of Padiamunet (iii) showed the body, unmistakably of a man who was about 1.67 m tall (Raxter et al. 2008). The body was positioned with the arms crossed over the chest, the hands resting close to the shoulders, with the right over the left [Fig. 12]. There seems to be some variation in hand positioning during this period, perhaps

linked to status, as the mummy of another Padiamunet (British Museum, London, EA 6683) who was a temple doorkeeper, had the arms along the sides of the body, hands resting on the thighs (Taylor and Antoine 2014: Figs 89–91). It is interesting that other mummies of contemporary date slightly vary their positions. He was between 25 and 40 years of age. All the bones were fused and he has adult dentition, with some tooth loss (some of the maxillary molars and mandibular incisors), areas of focal bone destruction by abscesses, crown wear and alveolar recession.

He was excerebrated nasally, from the left nostril. A small, 8 cm long wooden (average density between -600 and -400 HU, matching wood density) stick was left behind by the embalmers in the cranial cavity, stuck in the posterior cerebral falx—perhaps a broken piece of the tool that was used to help excerebration [Fig. 10]. A few other examples of such an occurrence have come to light thus far: a mummy in Leiden has a fragment of a wooden stick left by the embalmers in the nose (Raven and Taconis 2005: 157), another in the British Museum also has a tool left in the cranium (Taylor and Antoine 2014: 46–59), as does one in the Archaeological Museum in Zagreb (Čavka and Uranić 2015: 124), and another one that was identified by CT-scans, too (Jackowski, Bolliger, and Thali 2008: 1477).

Padiamunet (iii) was eviscerated from the left side, with two visceral packets (possibly false ones as he has canopics (Luxor Museum J 75) that appear to have some contents) introduced into the body in the upper part of the thorax [Fig. 13]. The lower portion filled with a granu-



Fig. 9. Padiamunet prior to being x-rayed (Courtesy Ministry of Antiquities/photo S. Ikram)

lar packing material of very low density (sawdust?), less in the left side than the right (the torso of Padiamenet (EA 6683) in the British Museum is also packed, but without visceral or other packages). A deformed trachea and the main bronchi are well visible, and next to it inferiorly some

dense and laminar remnants of mediastinal tissue. These, being very thin and with a curled shape, do not match the usual range of mummified heart remains.

His arms are wrapped together with his body, and his legs are wrapped individually, and separated by a linen pad. His eye

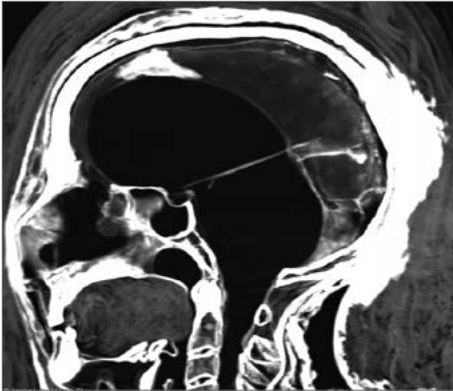


Fig. 10. Remnants of the embalmer's tool are visible in Padiamunet's cranium



Fig. 11. Amulets in Padiamunet's neck area, with several standing deities

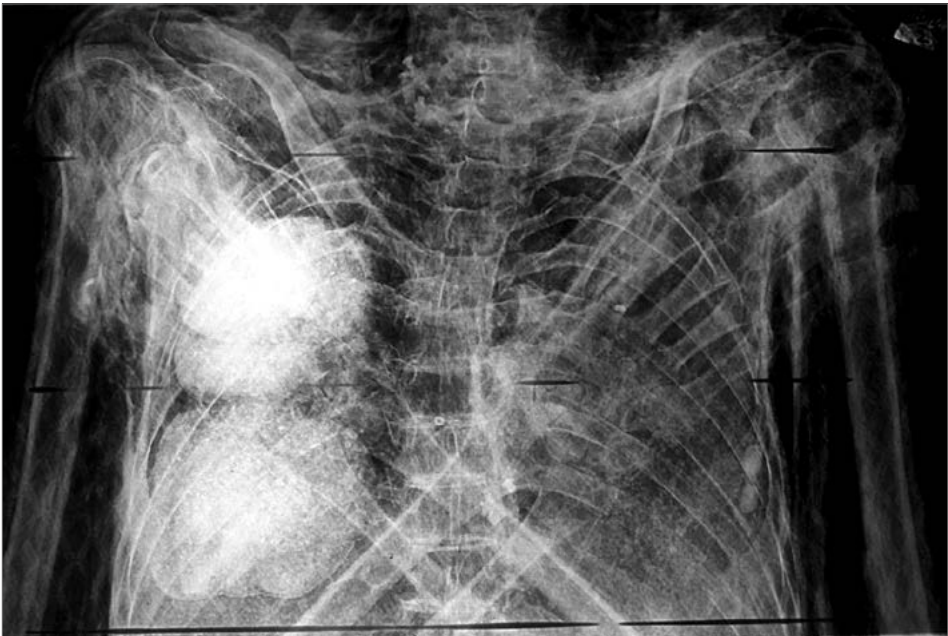


Fig. 12. Packages in Padiamunet's chest; his crossed arms are visible

sockets are packed with linen and some plate or cloth soaked in resin has been placed on top of each one. The mouth is stuffed with linen as well, and his ears sealed with plugs of cloth soaked in a resinous substance. His genitals were coated with resin before being wrapped separately.

Padiamunet (iii) was well supplied with amulets [Fig. 11]. A possible *wedjat* eye of stone or faience or glass lies to the left of his nose. He wears a plethora of amulets made of stone or glass or particularly dense faience around his neck, suspended on a thread. They include: *wedjat* eyes, *tyt* amulets, *djed* pillars, standing figures of deities (or *hes* vases), and loose, under his neck, a headrest amulet. There is also a *wedjat* near his left nostril. The amulet in the area of the heart does not look like a heart scarab. There is an-

other *wedjat* in the area of the right wrist, and two other oval amulets of some sort, possibly small scarabs, in the thorax.

The mummy of Padiamunet (iii) also had two very unusual accessories. As mentioned above, his hands are crossed high on his chest, but along his arms lay a crook and a flail [Fig. 14], both most probably made of wood. Both the crook and flail are unusual accessories for a priestly mummy of this—or indeed *any*—period. Perhaps future work on other mummies will show that this genre of accessory is more common than currently supposed, but until the present moment, these remain a rarity. It is interesting that pseudo-amulets and jewelry made of linen or cartonnage have been found on mummies, including those from the second cache discovery at Deir el-Bahari (Niwiński 2001: 41–45; Daressy

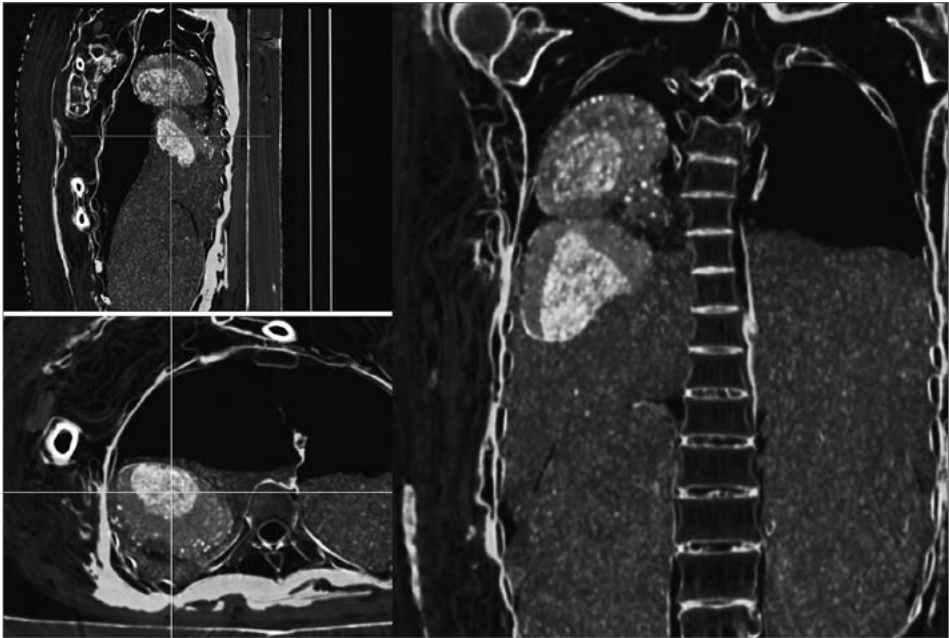


Fig. 13. Visceral packages and filling in Padiamunet's torso

and Smith 1903; Ziegelmayer 1985: 45). Linen accouterments, including sandals, were also put on Ptolemaic-era mummies (Ziegelmayer 1985: 42), and rolls of linen were used to imitate papyrus Books of the Dead (Ziegelmayer 1985: 43; Niwiński 2001).

In addition to dental abscesses, Padiamunet (iii) also suffered from lower cervical discarthrosis (C5–C6). Although not severe, it would have caused discomfort.

His canopic jars are exhibited in the Luxor Museum and are ceramic with limestone covers. These were visually examined and x-rayed, but as one might expect, there was only linen and soft tissue (unidentifiable to precise organ) in the packets. Future work on the contents of canopic jars is intended, using histology and more refined imaging, following the protocols that are to be established by the Ancient Egyptian Canopics Project, directed by Frank Rühli.

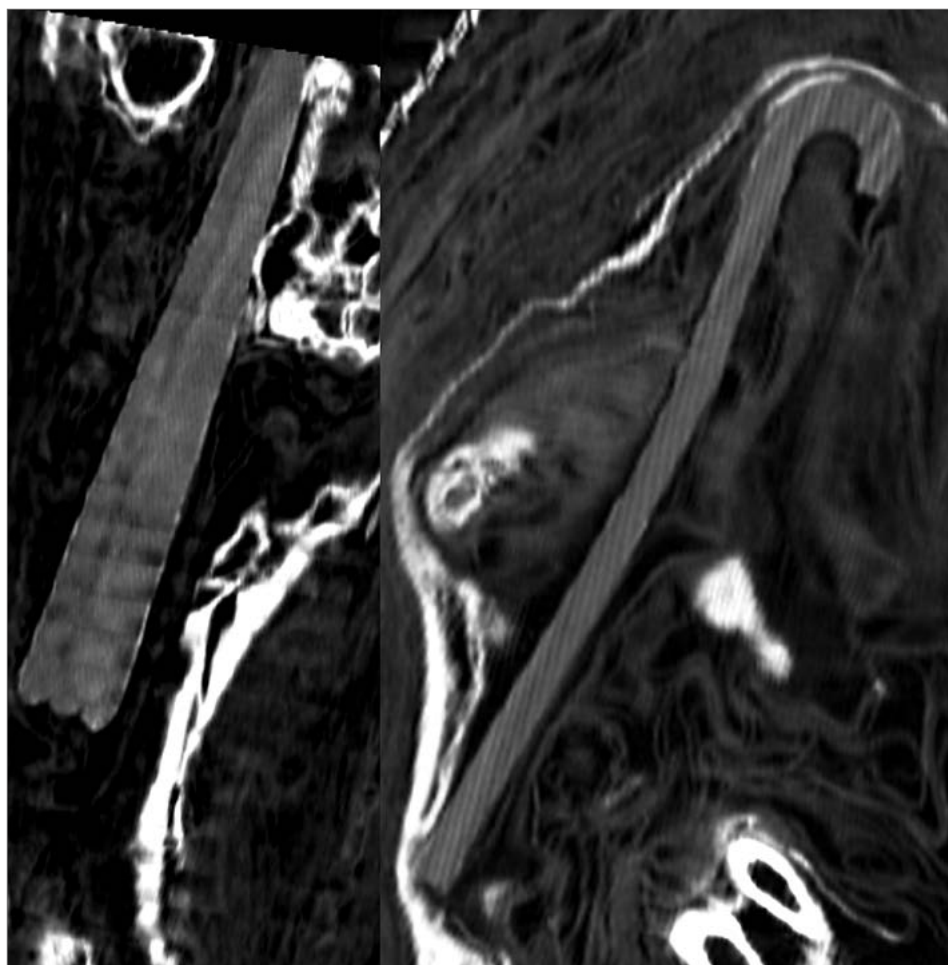


Fig. 14. Padiamunet's wooden crook and flail

**NESPAQASHUTY (VI), PRIEST OF MONTU,
TWENTY-FIFTH DYNASTY,
NEPHEW OF PADIAMUNET (III)**

The mummy of Nespaqashuty (vi), Luxor Museum J 347, was 1.74 m long, and at its widest, at the elbows, measured 0.42 m. The well-wrapped body lay in a wooden coffin and was covered, neck to just above the ankles, by an elaborate faience bead net (unlike that of Padiamunet [iii], whose foot-side ends in 19 to 20 tassels [Fig. 15]). The net has a central vertical column with a border of blue, reddish, and white beads that do not follow a regular pattern (see Silvano 1980 for typologies of nets). Their density no doubt helps to weigh the net down and keep it in place. Within the column, over the torso, the beads form a large black scarab with multi-coloured (black, blue, red, yellow) schematic wings defined by rows of chevrons. Its hind legs hold a blue disk outlined in red. Placed on top of the net, just below the bead scarab, although probably not in its original position, is a gold schematic *ba*-bird with outspread wings, surmounted by a disk. The central portion of the figure is inset with a faience scarab. Details of the wings are engraved.

Beneath this, in the bead net, is a standing figure of a goddess in a white dress, with outstretched wings, crowned with the horned sun disk. The wings are well made and use the same palette as the rest of the bead decoration. Her head is flanked by schematic gold figures; a suspension hole is drilled in the top of each. Directly beneath her feet is a vertical band of text in beadwork of solid black glyphs on a white background, covered an inscribed band of gold or gilded cartonnage that is pierced at all four corners.

The body was wrapped in a variety of qualities of linen, some with fringes still attached. The outermost shroud was of fine linen and secured by a series of inward folded bandages. One was vertical, with at least seven horizontal bandages: two bands at the neck/shoulders, one at the elbows, one just below the pelvis, one at the knees, one in the middle of the calf and one at the ankles. Two strips of



Fig. 15. Nespaqashuty encoffined (Courtesy Luxor Museum/photo S. Ikram)

similarly folded linen were crossed over the chest, reminiscent of the red leather braces commonly found on Twenty-first Dynasty mummies. Small smears of resin were used to ensure that the bandages remained in place. Such wrappings and elaborate nets are well known from other Twenty-fifth Dynasty mummies (Raven and Taconis 2005: 120–131).

The body belongs to a young man, between 15 and 17 years of age, based on the fusion of his distal femur and proximal tibia (White and Folkens 2005: 363–375). He was about 1.70 m tall (Raxter et al. 2008). Although smears of resin are not visible on the top of the wrappings, the body was stuck to the coffin, and as it is quite heavy, it is clear that substantial amounts of resinous/adhesive substances must have been used in its preparation, and that the body had been placed in the coffin while the resin was warm and tacky.

Radiographic images show that beneath the wrappings, Nespaqashuty's arms are crossed, high over his chest, left over right, with the hands extended [Fig. 16]. It has previously been suggested that such a position of the hands and arms was more commonly found in the Ptolemaic period. The evidence from the mummies of Padiamunet (iii) and Nespaqashuty (vi) supports the Twenty-fifth Dynasty dating of the anonymous female mummy (now called "Amunet"), originally from excavations at Deir el-Medina, with the same hand-arm position, now in the collection of the Columbus, OH, Historical Society, some of whose wrappings have been dated to about 800 BC on the basis of C¹⁴ testing (Sheikholeslami 2013). He appears to be excerebrated, although the quality of the radiograph is not exemplary; what seems

to be a false eye or, less likely, an amulet was placed over his right orbit. Possibly a similar one had been placed on his left eye, but has fallen away and does not appear in the x-rays [see Fig. 16]. He was eviscerated from the left side and the lower part of the body is packed with a granular substance that might be sawdust or a combination of sawdust and sand or mud. The legs, particularly the left one, show horizontal cracks, possibly suggesting that the body was covered by a thick layer of resin, creating a sort of carapace, and that this has cracked. Thick applications of resinous materials have been noted in mummies of the Twenty-first Dynasty onward, and such a coating would have contributed



Fig. 16. Nespaqashuty's crossed arms (Photo S. Ikram)

to the weight of the body (Smith and Dawson 1924; S. Ikram, personal observation in Thebes).

His teeth are worn and some are lost. It is not totally clear if the missing ones had fallen out post-mortem—one of the incisors probably did, since there is no sign of alveolar reabsorption. There is some lipping in the lower neck and back vertebrae, early signs of discarthrosis in the lower dorsal and lower lumbar areas. Aside from those on the head, no amulets were visible in the x-rays, although it is possible that CT-scans might reveal some.

Nespaqashuty's handsome set of limestone canopics, topped with the heads of the Four Sons of Horus, are now in a magazine in Sohag, as they are intended for display in the Sohag Museum. The viscera were desiccated with natron, highly resinated, and then wrapped in linen, as per usual.

**HERESENES (TWENTY-FIFTH DYNASTY),
MAYBE WIFE OF PADIAMUNET (III)
OR THE MOTHER OF HIS NEPHEW
NESPAQASHUTY (VI)**

Heresenes (Luxor Museum J 346), located in the Fustat magazine of the NMEC at the time of writing, was well wrapped in a pink linen shroud that had faded to a tea colour in places. Like other mummies in the group, an X bandage covered her torso, and horizontal reinforced bandages were situated at her head, thighs, knees and ankles. Another X on her lower legs was formed by the wrapping of these horizontal bands. Discoloration and a negative impression of patterning on the shroud suggests that this was once covered with a bead net [Fig. 17].

CT multiplanar reconstructions show that she had curly-hair impregnated with



Fig. 17. Heresenes prior to x-raying (Photo S. Ikram)

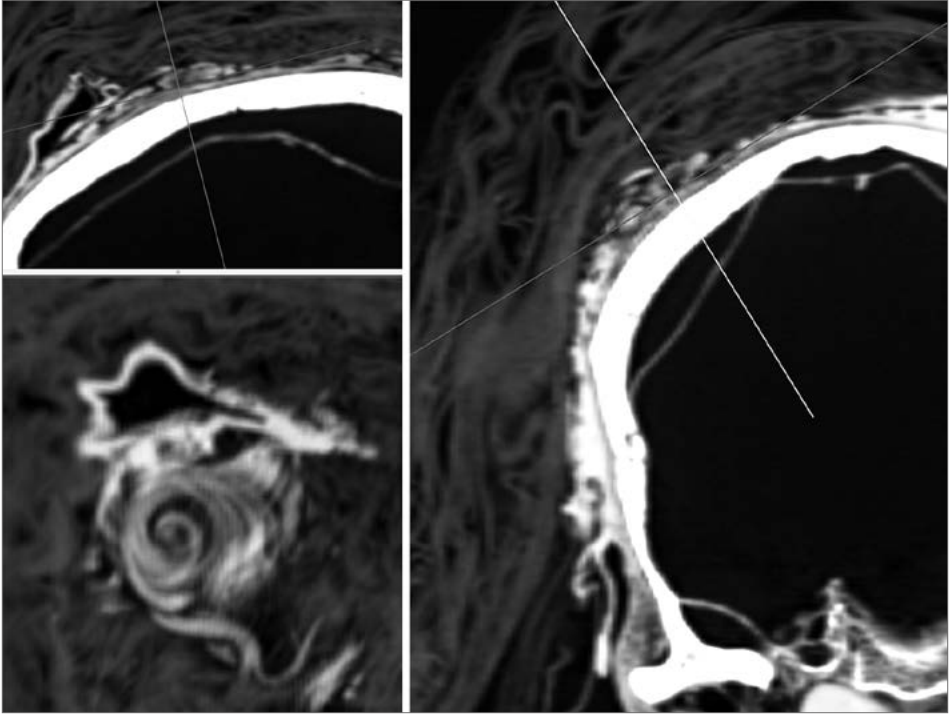


Fig. 18. Heresenes's lock of hair

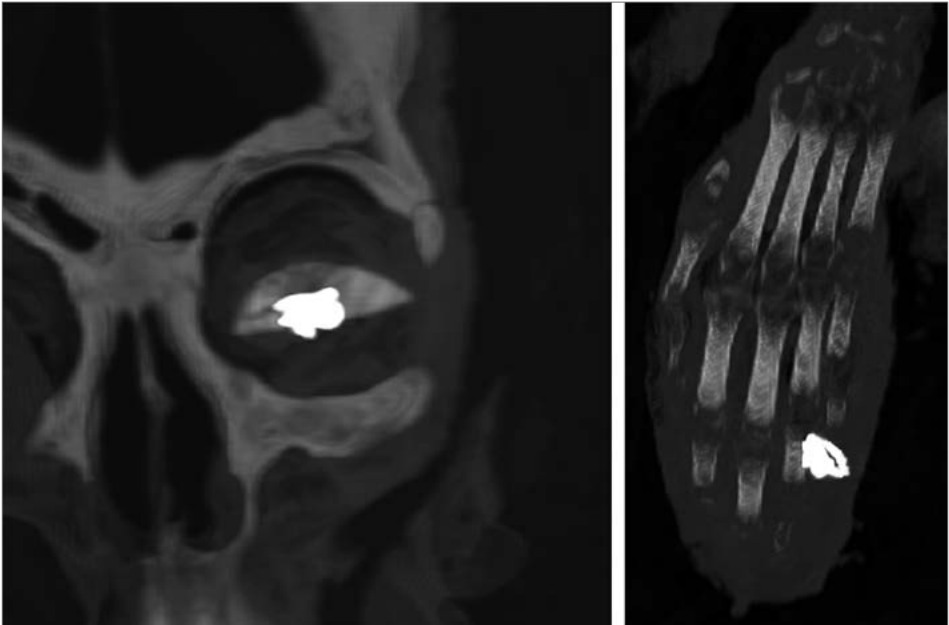


Fig. 19. Heresenes's left artificial eye and *wadjet* eye amulet (left) and ring with a *wadjet* eye on her left hand (right)

resin [Fig. 18], and her body is positioned with her arms extended along her sides, the hands resting on her thighs. The arms were wrapped in two to four layers of linen, before being wrapped in with the body. The legs are wrapped in at least five layers of linen, before being wrapped together. When alive, she was between 1.55 m and 1.59 m tall (Raxter et al. 2008), very much in keeping with the ancient Egyptian norm (Zakrzewski 2003). She probably died when she was in her twenties, based on long bone fusion (femurs, tibiae all fused) and dentition—there is some attrition on her molars (Buikstra and Ubelaker 1994; White and Folkens 2005: 363–365).

Her eyes were given form by having what are possibly the bulbs of small onions, which might have been covered by a thin coating of wax or maybe even resin, placed beneath the lids. The use of tiny onion bulbs to simulate the eyeball is seen in the Twentieth Dynasty (Smith and Dawson 1924: 105), and probably persisted. A *wedjat* amulet is located over each eye [Fig. 19 left], attached to the resin/onion. Above at least one layer of wrapping lay artificial eyes, possibly of stone or glass. They are now slightly displaced, with the right one having fallen near the ear. Although false stone eyes are well attested from the Twenty-first Dynasty onward (Lucas and Harris 1962; Gray 1971; Smith and Dawson 1924: 105, 113; Magniez 2008), it is unusual to have eye amulets in conjunction with them.

She was not excerebrated and her brain remains *in situ*. Her lower ethmoid bone is damaged, but upper cranial access was not achieved this way, which is perhaps why her brain remained intact. She was

eviscerated through a cut in the left side with a linen plug sealing it; the viscera were wrapped and placed in ceramic canopic jars with saucer-like lids. Some of the packages had been attacked by insects, leaving a significant amount of frass. A great deal of resinous substance was used on two of the viscera (Luxor Museum J 808-4 and J 808-1), while the other two showed less evidence of resin. One of the containers appears to contain the remains of the liver (Luxor Museum J 808-3); the others presumably contained the intestines, lungs, and stomach, but it is hard to determine this without histological work or CT-scans, neither of which were possible at the time of work. The heart remains in the body.

The thorax and abdomen were filled with large quantities of what is possibly sawdust and silt or less likely, based on the density (-800 and -600 HU), sand, with linen used near the evisceration cut. Other mummies of this period (as well as slightly earlier and later) have sawdust filling (Magniez 2008). Resinous materials were applied generously, and some have soaked through the bandages along the back and legs, and dribbles or smears of resin interrupt the wrappings. At least four (faience?) amulets are noted on the lower thorax: a *wadjet* eye, a possible falcon, and two that are unidentifiable. On the left hand, a slim finger boasts a ring with a *wadjet* eye as its bezel [Fig. 19 right].

Heresenes showed signs of chronic inflammation of the sacroiliac joints, in conjunction with a significant disruption at her pubic symphysis that is not the result of post-mortem manipulation [Figs 20, 21]. The main CT pelvimetric measurements revealed abnormally low

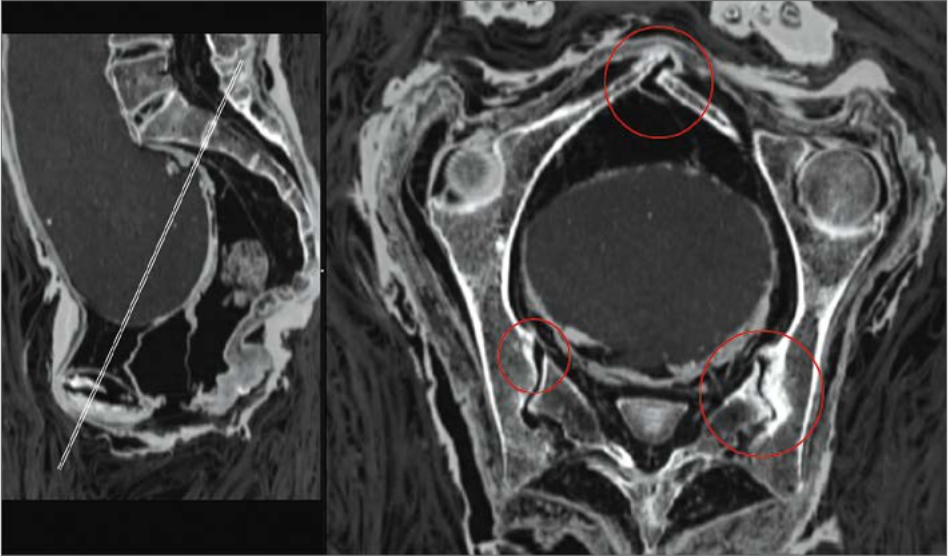


Fig. 20. Coronal oblique pubic symphysis sacroiliitis in Heresenes

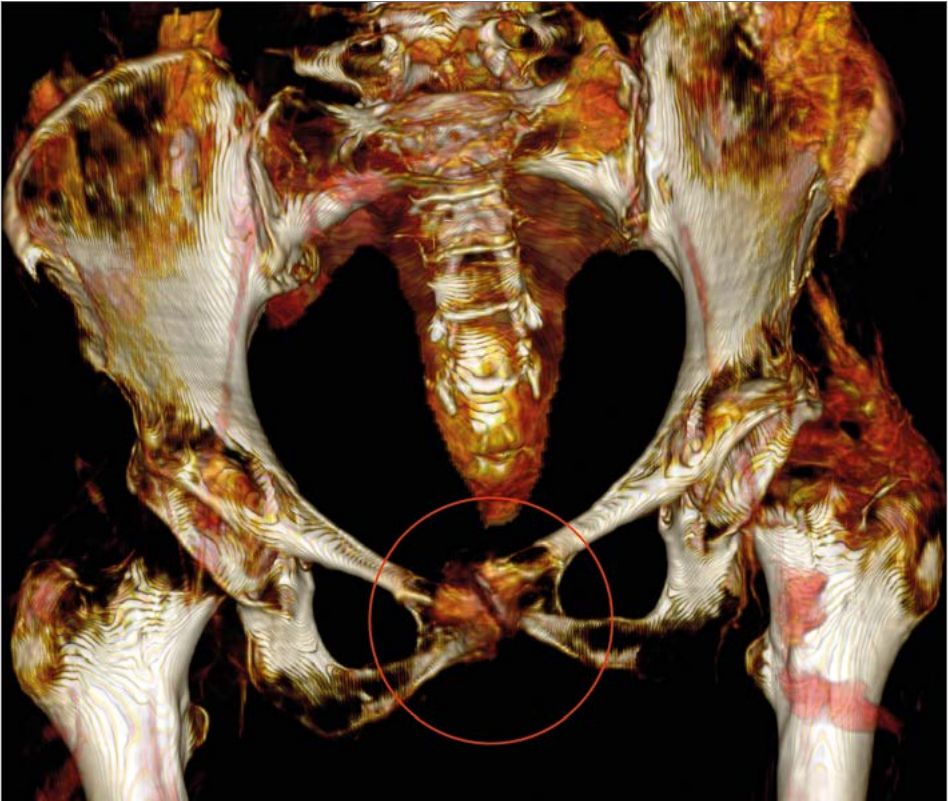


Fig. 21. 3D visualisation of the pubic symphysis dislocation of Heresenes

values, specifically excessive narrowness of the transverse diameters of pelvic inlet and outlet. As the pelvic skeleton is a closed ring with its elasticity based on both sacroiliac and pubic joints,

those specific findings in a young female are most probably the result of a traumatic childbirth event. Thus, Heresenes surely suffered from pain in the pelvic region.

DISCUSSION

All of the mummies displayed characteristics of Third Intermediate Period mummification, with the embalmers trying to provide a more life-like aspect to the bodies by packing or wrapping them so that they were fleshed out, and providing them with false eyes so that they could see and function in the Afterlife. A particularly valuable contribution of this study is the examination of Shauamunimes, which adds to the limited repertoire of Twenty-second Dynasty mummies that have been radiologically examined, thereby extending and deepening scientific understanding of mummification during that period.

Although all four mummies display many of the hallmarks of later mummification, there are some unusual features to be found. The position of the hands, crossed high on the chest of the two male mummies, is not generally closely associated with the Twenty-fifth Dynasty, but is common later on in the Ptolemaic era. In these instances, it might be related to their particular priestly rank; future studies of other contemporary mummies, particularly those holding similar titles, should help establish whether this is the norm for the group, or if the two mummies studied during the course of this project are unusual. Certainly, this is not a feature shared by all the mummified

priests of Montu (Yoyotte and Monier 2011) of this time period.

The crook and flail by Padiamunet's crossed arms are possibly (at least to date) unique accoutrements for a priestly mummy, although some anthropoid coffins of the priests of Montu feature these objects held in the deceased's hands (for instance, CCG 41044 and 41047, Gauthier 1913: Pls IV and IX).⁵ They, like the crossed bandages reminiscent of leather braces, and the bead netting are probably indicators of the increased importance of the identification of the deceased in his coffin with the god Osiris, ruler of the Afterworld, and the potential for resurrection. It is possible that other mummies were equipped with such objects, maybe if not in wood, then in some other material that is hard to detect by x-ray, such as reinforced linen-resin (Niwiński 2001), which might come to light in the future when advanced CT scanning technologies are used more frequently on a greater number of mummies. Additionally, examining similar priestly mummies whose coffins are known to have crooks and flails, as well as studying their titles, might shed additional light on the role and presence of these objects on the mummies themselves. The similarity between the burial equipment (mode of wrapping and inclusion of bead nets) of the two men,

5

We are grateful to Cynthia May Sheikholeslami for providing this reference.

as well as Heresenes (though her coffins are for a female) is striking; it is possible that the same workshop was used for all of them.

The use of stone eyes together with *wedjat* amulets is also unusual, although stone eyes and *wedjat* amulets are well attested independently; again, scans of other mummies from a similar time-period and socio-economic group will inform our understanding of the use of amulets on mummies during this time period. The presence of possible plant material that fleshes out Shauamunimes's legs is not documented elsewhere, though there are a few references to plant materials (generally lotus, though onions have also been tentatively identified) being found on the nether limbs of mummies (Pettigrew 1834: 102; Granville 1825: 282;

Daressy 1907: 29–36; see Niwiński 2001 for a discussion), linking the deceased with Nefertum.

The joint expertise of palaeoradiologists and egyptologists, working closely together and carrying out detailed examinations over a long period of time of mummies and their images, allows for a more sophisticated and comprehensive understanding not only of the physical condition of the deceased, but also of mummification practices throughout the Third Intermediate Period. Future work on these and other mummies of this period, together with their associated coffins and grave goods, if any, will enhance our understanding of changes in mummification technology and religious belief during this era.

Salima Ikram ORCID 0000-0001-6640-7055

Department of Sociology, Egyptology and Anthropology, American University in Cairo
AUC Avenue, Tagammu 5, New Cairo 11835, Egypt
salima@aucegypt.edu

Carlos Prates ORCID 0000-0003-4731-9273

Sandra Sousa ORCID 0000-0002-9937-0540

Carlos Oliveira

IMI-art / Affidea

Av. República 99B, 1050-190 Lisbon, Portugal
geral.imi.art@imi.pt

How to cite this article: Ikram, S., Prates, C., Sousa, S., & Oliveira, C. (2018). A medley of mummies from Deir el-Bahari. In Z.E. Szafranski (Ed.), *Deir el-Bahari Studies 2. Polish Archaeology in the Mediterranean 27/2* (pp. 237–258). Warsaw: University of Warsaw Press.
<https://doi.org/10.5604/01.3001.0013.3246>

References

- Adams, C.V.A. (1966). The manufacture of Ancient Egyptian cartonnage cases. *Smithsonian Journal of History*, 1(3), 55–66
- Badr, I. (2014). Using C.T scan as non destructive tool for mummies examination applied on Tayuheret mummy (1054–1046 B.C.). *Egyptian Journal of Archaeological and Restoration Studies*, 4(2), 113–118
- Barwik, M. (2003). New data concerning the Third Intermediate Period cemetery in the Hatshepsut temple at Deir el-Bahari. In N. Strudwick and J.H. Taylor (eds), *The Theban necropolis: Past, present, and future* (pp. 122–130). London: British Museum Press

- Buikstra, J.E. and Ubelaker, D.H. (eds). (1994). *Standards for data collection from human skeletal remains: Proceedings of a seminar at the Field Museum of Natural History, organized by Jonathan Haas [=Arkansas Archeological Survey Research Series 44]*. Fayetteville, AR: Arkansas Archeological Survey
- Čavka, M. and Uranić, I. (2015). CT and MR research on two Egyptian mummies from the Archaeological Museum in Zagreb. In M. Tomorad (ed.), *History of research into ancient Egyptian culture conducted in southeast Europe* (pp. 123–126). Oxford: Archaeopress
- Clarke, E.M., Thompson, R.C., Allam, A.H., Wann, L.S., Lombardi, G.P., Sutherland, M.L., ... Thomas, G.S. (2014). Is atherosclerosis fundamental to human aging? Lessons from ancient mummies. *Journal of Cardiology*, 63(5), 329–334
- Daressy, G. (1907). Les cercueils des prêtres d'Ammon (Deuxième trouvaille de Deir el-Bahari). *ASAE*, 8, 3–38
- Daressy, G. and Smith, G.E. (1903). Ouverture des momies provenant de la Seconde trouvaille de Deir el-Bahari. *ASAE*, 4, 150–160
- Eladany, A.H. (2011). *A study of a selected group of third intermediate period mummies in the British Museum* (unpubl. Ph.D. diss.). University of Manchester. Retrieved from <https://www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:156208&datastreamId=FULL-TEXT.PDF> [accessed: 15.08.2018]
- Gauthier, H. (1913). *Catalogue général des antiquités égyptiennes du Musée du Caire. Nos 41042–41072: Cercueils anthropoïdes des prêtres de Montou*. Cairo: Institut français d'archéologie orientale
- Granville, A.B. (1825). *An essay on Egyptian mummies: with observations on the art of embalming among the ancient Egyptians*. London: W. Nicol
- Gray, P.H.K. (1967). Two mummies of ancient Egyptians in the Hancock Museum, Newcastle. *JEA*, 53, 75–78
- Gray, P.H.K. (1971). Artificial eyes in mummies. *JEA*, 57, 125–126
- Jackowski, C., Bolliger, S., and Thali, M.J. (2008). Common and unexpected findings in mummies from ancient Egypt and South America as revealed by CT. *Radiographics*, 28(5), 1477–1492
- Lucas, A. and Harris, J.R. (1962). *Ancient Egyptian materials and industries* (4th, rev. ed.). London: Arnold
- Magniez, C. (2008). Priests of Mentu in the Musée de l'Homme. In P. Atoche Peña, C. Rodríguez Martín, and Á. Ramírez Rodríguez (eds), *Mummies and science, world mummies research: Proceedings of the VI World Congress on Mummy Studies, Tegui, Lanzarote, February 20th to 24th, 2007* (pp. 99–103). Santa Cruz de Tenerife: Academia Canaria de la Historia
- Niwiński, A. (2001). Coffin, cartonnage and mummy of Aset-iri-khet-es in the light of Egyptological research. In H. Szymańska and K. Babraj (eds), *Mummy: Results of interdisciplinary examination of the Egyptian mummy of Aset-iri-khet-es from the Archaeological Museum in Cracow* (pp. 33–52). Kraków: Polish Academy of Arts and Sciences

- Pettigrew, T.J. (1834). *A history of Egyptian mummies, and an account of the worship and embalming of the sacred animals by the Egyptians*. London: Longman, Rees, Orme, Brown, Green, and Longman
- Raven, M.J. and Taconis, W.K. (2005). *Egyptian mummies: Radiological atlas of the collections in the National Museum of Antiquities at Leiden*. Turnhout: Brepols
- Raxter, M.H., Ruff, C.B., Azab, A., Erfan, M., Soliman, M., and El-Sawaf, A. (2008). Stature estimation in ancient Egyptians: a new technique based on anatomical reconstruction of stature. *American Journal of Physical Anthropology*, 136(2), 147–155
- Sheikholeslami, C.M. (2013). *25th Dynasty coffin set in Columbus, Ohio and London*. Paper presented at the 64th Annual Meeting of the American Research Center in Egypt in Cincinnati, Ohio, 19–21 April 2013
- Sheikholeslami, C.M. (2018). Montu priestly families at Deir el-Bahari in the Third Intermediate Period. In Z.E. Szafranski (ed.), *Deir el-Bahari studies II* [=PAM 27/2] (pp. 325–364). Warsaw: Warsaw University Press
- Sheikholeslami, C.M. and Ikram, S. (2017). Twenty-second and Twenty-fifth Dynasty mummies from Thebes: X-ray and CT-scan examination project. *Bulletin of the American Research Center in Egypt*, 210, 22–32
- Silvano, F. (1980). Le reticelle funerarie nell'Antico Egitto: proposte di interpretazione. *Egitto e Vicino Oriente*, 3, 83–97
- Smith, G.E. and Dawson, W.R. (1924). *Egyptian mummies*. London: George Allen & Unwin
- Taylor, J.H. (2017). Two lost cartonnage cases of the early Twenty-second Dynasty. In C. Jurman, B. Bader, and D.A. Aston (eds), *A true scribe of Abydos: Essays on first millennium Egypt in honour of Anthony Leahy* [=OLA 265]. Leuven–Paris–Bristol, CT: Peeters
- Taylor, J.H. and Antoine, D. (2014). *Ancient lives, new discoveries: Eight mummies, eight stories*. London: British Museum
- Teeter, E. and Johnson, J.H. (eds). (2009). *The life of Meresamun: A temple singer in ancient Egypt* [exhibition catalogue] [=Oriental Institute Museum Publications 29]. Chicago: Oriental Institute of the University of Chicago
- Thompson, R.C., Allam, A.H., Lombardi, G.P., Wann, L.S., Sutherland, M.L., Sutherland, J.D., ... Thomas, G.S. (2013). Atherosclerosis across 4000 years of human history: the Horus study of four ancient populations. *Lancet*, 381(9873), 1211–1222
- White, T.D. and Folkens, P.A. (2005). *The human bone manual*. Amsterdam–Boston: Elsevier Academic
- Yoyotte, J. and Monier, T. (2011). Identification des momies de deux familles de prêtres de Montou des XXV^e–XXVI^e dynasties égyptiennes. In P. Charlier (ed.), *3^e Colloque international de pathographie: Bourges, avril 2009* (pp. 85–126). Paris: de Boccard
- Zakrzewski, S.R. (2003). Variation in ancient Egyptian stature and body proportions. *American Journal of Physical Anthropology*, 121(3), 219–229
- Zieglmayer, G. (1985). *Münchner Mumien*. Munich: Selbstverlag