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Report on the human inhumation from Campanaio, Province of Agrigento, Sicily (Site code MO97)

by

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Summary

A single human skeleton presumed to be of late Roman date was uncovered during the 1997 field season at Campanaio. It was initially recorded in situ and subsequently examined in more detail after excavation and cleaning. The burial position of the skeleton and the lack of grave cut suggest that this may not have been a deliberate burial. Skeleton E 328 represented a male individual of medium height, between 25 and 35 years of age. Several pathological conditions were noted, but no evidence to suggest the cause of death.

Keywords: SICILY; CAMPANAIO; LATE ROMAN; HUMAN REMAINS; INHUMATION; PATHOLOGY; TRAUMA

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Introduction

The site of Campanaio, *commune* of Montallegro (Province of Agrigento), lies on a gently sloping hill facing west towards a small lake. The inhumation was discovered during excavation in September 1997, in Area E, after removal of a tile fall associated with the 5th century AD abandonment phase of a nearby building. It is unclear if the burial was deliberate or accidental as there appeared to be no associated grave cut. The building was occupied into the 5th century so the human remains are likely to also be of this date.

Methods

The remains were excavated by hand trowelling, recorded *in situ* by photography, planning and detailed notes. The height of the skeleton was measured whilst still in the ground. The bones were then lifted and washed prior to further detailed recording. Age at death was estimated using the dental wear stages developed by Brothwell (1972).

Results

Preservation

The skull, pelvis, and scapulae were poorly preserved and were very fragmentary when lifted, which meant that the sex determination carried out in situ could not be further substantiated. The rest of the bones were reasonably well preserved, with the left side in a slightly better state than the right. The bones were light in weight and rather fragile.

Description of the inhumation

The inhumation was found under a large quantity of tile fallen from the nearby building, in a shallow depression with no obvious grave cut. The skeleton lay on its right hand side with the head to the west, feet to the east and facing south. The left shoulder and upper torso were slumped forwards, though this may be the result of decay rather than the original burial position. The face was also turned slightly downwards. The left arm was extended with the left hand lying between the legs just below the pelvis. The right arm was extended and lay against the side. The legs and feet were fully extended with the feet and knees together on top of each other.

Description of the human remains

Cranium and mandible

The cranium was very fragmented, both in the ground and after excavation. Although the maxilla was in four pieces the teeth were still in place (see Table 1 for teeth present). The left temporal was fairly complete with the right one less so, the mastoid processes were reasonably large and the zygomatic root extended above the external auditory meatus. The zygomatics were also reasonably complete but the rest of the skull was heavily fragmented. The mandible was broken into three pieces but could be reconstructed. The gonal angle was near to 90^{o} with a small degree of flaring and the mandible was robust with a square chin.

Vertebrae

Seven cervical, eleven thoracic and five lumbar vertebrae were present. The missing thoracic vertebra was probably from the middle of the series as this was the area where the bones were most fragmented.

Sternum and ribs
Both the manubrium and body of the sternum were present although the caudal end of the body was missing. All the ribs appeared to be present in the ground but this was difficult to determine once excavated as they were very fragmented.

Pectoral girdle
Both scapulae and clavicles were present and complete in the ground. The glenoid and spinous regions of the right scapula were intact with fragments of the blade. An enlarged suprascapular notch was present. The left scapula was more fragmented. Both ends of the right clavicle were present but part of the shaft was missing, and the left clavicle had the acromial end missing.

Arms
The head of the right humerus was rather fragile but the bone was complete. The right radius and ulna both had the distal ends missing. The left humerus was less fragile than the right and was complete. The left radius and ulna were the first bones to be exposed and were lifted prior to the author seeing the skeleton to establish if they were of human or animal origin. The radius was complete, while the ulna had the distal end missing.

Hands
Of the right hand, all the carpals and metacarpals, and four proximal, three middle and two terminal phalanges (including the thumb) were present. Of the left hand all the carpals and metacarpals, and five proximal, four middle and three distal phalanges (including the thumb) were present, as well as one sesamoid.

Pelvic girdle
The sacrum was very fragmented and fragile, but enough was present to indicate that it was both narrow and curved. The pelvis was complete but very fragile in the ground and fragmented on lifting. The subpubic angle and the angle of the sciatic notch were both narrow, and the auricular surface was sunken. These were the only sexing criteria which it was possible to evaluate.

Legs
Both the femora were complete, with well pronounced linear asperae. The left femur had the trochanter major missing. Both patellae were present, both tibiae were complete with well pronounced muscle scars, and the fibulae both had the distal articulations missing.

Feet
Of the right foot, all the tarsals and metatarsals, five proximal, three middle and five distal phalanges, and one sesamoid were present. Of the left foot, all the tarsals and metatarsals, five proximal, four middle and four distal phalanges, and two sesamoids were present.

Description of pathologies

Cranium
The structure of the bone of parts of the cranial vault (probably the frontal and parietals) was severely altered; there was definite thickening of the skull due to expansion of the diploe between the two surfaces. The exterior surface was of normal appearance but the interior surface was greyish and showed areas of destruction, in some cases forming holes into the diploe. Some fragments had

delaminated between the interior and exterior surfaces, showing very much enlarged diploe.

Oral pathology
Most of the maxillary teeth had calculus deposits. These were worst on the incisors where subgingival green calculus deposits were heavy. The rest of the teeth had supra gingival calculus. The left upper premolar 4 had been lost antemorten and the root hole was completely closed.

The mandibular teeth were affected by a variety of problems. The right 1st molar showed a large caries cavity on the mesial/occlusal face. The mesial roots were detached from the tooth by the cavity. The right 3rd molar showed signs of an apical abscess draining through a widened hole around the roots. Possibly as a result of the dental problems on the right side of the mandible the degree of occlusal wear was less than on the left molars, and possibly for the same reason the supra-gingival calculus deposits were also heavier on the right side.

Periodontal disease had led to severe alveolar recession around most of the anterior mandibular teeth and to antemortem loss of both central incisors.

Axial skeleton
Marginal osteophyte growth was noted in many places down the vertebral column: the odontoid joint between the atlas and axis; on the inferior surface of the 6th cervical and the superior surface of the 7th; on the superior surface of the 12th thoracic; on both surfaces of the 5th lumbar; and on the superior surface of the sacrum. Osteophyte growth was also noted on the spinous joints of the 12th thoracic to 5th lumbar vertebrae. Some of the centra appeared to have experienced degeneration of the surface structure of the bone, but this may just have been a preservational factor rather than pathological.

Two right rib fragments showed evidence of greenstick type fractures to the exterior surfaces, with subsequent remodelling. The sternum showed evidence of osteophyte formation or ossification of cartilage around the costal notches and degeneration of the surface of the clavicular notches.

Left Scapula
Either the epiphysis of the acromion had not fused or it had subsequently fractured at this point, leaving the end of the acromion ununited, with evidence of new bone growth on both fragments. The latter explanation seems more likely.

Pelvic girdle and hip joints
The auricular surfaces on both the pelvis and sacrum showed pitting and new bone growth, and some fusion between the two. The right acetabulum had a very pitted surface with associated new bone formation and quite extensive osteophyte growth around the margins, and the right femoral head was similarly affected. The preservation of the left hip joint was less good but traces of a similar problem were visible.

Feet
In the right foot it appeared that the middle and distal phalanges of two toes had fused together, and in the left foot three cases were noted.

Discussion

Sex, age and height determination

On balance, the various features of the skull and pelvis which it was possible to use for sex determination suggested that this individual was male. All the epiphyses present were fused, indicating an adult. All the 3rd molars had erupted and the degree of attrition suggested an age between 25 and 35 years (after Brothwell 1972).

The height of the individual was measured *in situ* as 167cm from the left heel to the top of the head, whereas the estimated height based on the measurements of the femur and tibia was 180 cm. In the ground the legs appeared quite long in proportion to the rest of the body, which may account for the discrepancy. Thus the height in life was likely to have been nearer to 167 cm (5'5") than 180 cm (5'11").

Pathology

The presence of periodontal disease combined with sub- and supra-gingival calculus suggests poor oral hygiene. This in turn may have contributed to the formation of the abscess and caries cavity. The unequal wear on the two sides of the mouth is understandable, as the presence of the abscess and caries cavity on the right side would have made chewing on this side extremely painful.

The arthropathies noted in the hips, back and chest are unusual for an individual not of advanced years. A similar case was noted in a Roman high status burial at Sherburn-in-Elmet, North Yorkshire, England (Johnstone and Dobney 1997). For that individual the explanation appeared to lie in the fact that the diet of a high status individual may have resulted in the tooth wear failing to accurately reflect the persons age. This explanation seems unlikely in the present case as there is little evidence to suggest an individual of high status.

It is fairly common for fractures of the acromion process to fail unite as it is extremely difficult to immobilise the area sufficiently for healing to take place.

The pathological condition of the skull is unusual, and the degree of thickening is certainly abnormal. The destructive bone changes of the inner table and the enlargement of the diploe suggest that this individual may have suffered from anaemia (Brothwell *pers comm.*). Given the geographical location of the skeleton (Mediterranean) it is possible that the underlying cause was Thalassaemia, a genetic disorder causing anaemia.

Archive

The human remains are stored at the museum at Heraclea Minoa in Sicily, whilst the paper and electronic records pertaining to this work are stored at the EAU, University of York.

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Table 1. The dentition of Skeleton E328. P = present, X = antemortem loss, / = postmortem loss, C = caries cavity, A = abscess.

Right Maxilla								Left Maxilla							
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
P	P	/	/	P	P	P	P	P	P	P	P	X	P	P	P
8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8
A	P	C	P	P	P	P	X	X	P	P	P	P	P	P	P
Right Mandible								Left Mandible							