SPINAL PATHOLOGICAL SIGNALS IN A FEMALE INDIVIDUAL FROM THE MEDIEVAL NECROPOLIS OF ALCÁÇOVA DO CASTELO, MÉRTOLA, PORTUGAL

Umbelino, C.1,2; Silvério, C.1; Marques, C. 1,2; Matos, V. 1,2; Martínez, S.G. 3; Rodrigues, C. 3; Torres, C. 3
1University of Coimbra, Department of Anthropology; 2CIAS; 3Campo Arqueológico de Mértola | umbelino@antrop.uc.pt

THE SITE

As a result of several archaeological campaigns that took place between 1978 and 2000, under the supervision of CAM – Campo Arqueológico de Mértola, a medieval necropolis was uncovered in the Alcáçova do Castelo (the fortified neighbourhood) in Mértola, Southern Portugal.

This necropolis dated from the Late Middle Ages (14th to 16th centuries) comprises nearly 700 skeletons. Further systematic excavations will be performed soon.

Until now the Department of Anthropology of the University of Coimbra had the opportunity to analyse nearly 50 individuals from this site. In the future the study of the complete series is planned. The individual under study identified has skeleton 549 comes from the 1996 intervention.

This Christian cemetery was located near the main Church along the foot of the hill where the Castle was implanted. It occupied the former Islamic quarter destroyed after 1238 with the Christian conquest of the city by the military Order of Santiago.

THE INDIVIDUAL

IDENTIFICATION: CAM1996 – A. Sep. 549

FUNERARY DATA

The individual was buried in an extended position with the head resting to the right and the upper limbs crossed over the pelvic area, with a west-east body orientation. The inhumation was made directly into a pit.

BIOLOGICAL DATA

Young, adult individual (sternal end of the clavicle is completed fused but some parts of the epiphyseal lines of long bones are still evident). Probably a female?

PATHOLOGICAL EVIDENCES

Vertebral column

- a striking kyphosis resulting from the destruction of the vertebral body of the 8th thoracic vertebra (T8),
- ankylosis of the body, facet joints and lamina of the C3-C4 with a decreased body height of the C3
- a compression fracture affecting the T8, with ankylosis through T7 and T9 vertebral bodies and zygapophyseal joints fusion between T8 and T9
- a vertebral block made up by the L1 to L3, with anterolateral fusion of the bodies but without facet joint involvement
- the presence of syndesmophytes and paravertebral ossification are visible on the x-ray
- in the radiological image is also evident the maintenance of the intervertebral space between L2-L3, but not between L1-L2

Rib fractures:

- on the neck of the 4th and 5th right ribs, confirmed by the radiographic analysis
- on the sternal end and diaphysis of two non-identified rib fragments, also visible in the radiographs
- a possible fracture on the sternal end of the 7th and 8th left ribs observed macroscopically but not radiographically

Forearm fractures:

- on the distal third of both left shafts
- advanced healed fracture, apparently oblique
- the fracture line is very subtle on the radiographs

Fibula fracture:

- the radiographs exhibits subtle fracture lines, parallel ones, in the middle of the left shaft, unnoticed based on naked eye observation
- macroscopically, there is some possible ligament ossification in the posterior-medial proximal end

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FINAL CONSIDERATIONS

The abnormal angulation of the spine results from the wedging of the vertebral body. The thoracic segment could be evocative of spinal T8, due to the collapse of the vertebral body, however, the absence of clear signs of sequestration, both macroscopically and radiologically, the lesser destructive process and the milder gibbus when compared with those described in the paleopathological literature for Pott’s disease, makes tuberculous spondylitis less likely.

The aetiology of the lumbar changes is not straightforward. The pattern of paravertebral fusion and the presence of syndesmophytes is more common in spondylarthropathies. Nevertheless, the total absence of others indicators such as erosive lesions in the observed articulations, the sacro-iliac joint fusion, or additional criteria for the identification of those conditions led us to consider these entities a more remote possibility.

The traumatic nature of the lesions observed in the left forearm, ribs and left fibula is unequivocal. A similar process could explain the alterations observed on the cervical and thoracic segments. The fractures in adjacent ribs, located on the vertebral end, and their close proximity with the thoracic spinal changes corroborates the possibility of a traumatic event in the axial skeleton.

All fractures are in an advanced healed state, with well remodelled macroscopic osseous callus and tenuous fractures lines in the radiographic images indicating a considerable study of the complete series is planned. The individual under study identified has skeleton 549 comes from the 1996 intervention.

There is no doubt that we are in the presence of a poltraumatised individual, nevertheless it is difficult to state whether a single or multiple traumatic events were responsible for the reported fractures – a constraint inherent to paleopathological studies.

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