

Anatomical variations in ancient sardinian populations

Andrea Montella¹, Valentina Giuffra², Marco Milanese³, Eugenia Tognotti¹, Pasquale Bandiera¹

¹ Center for Anthropological, Paleopathological and Historical Studies of the Sardinian and Mediterranean Populations, Department of Biomedical Sciences, University of Sassari, Sassari, Italy - ² Division of Paleopathology, Department of Translational Research on New Technologies in Medicine and Surgery, University of Pisa, Pisa, Italy - ³ Department of History, Human Sciences and Education, University of Sassari, Sassari, Italy

Archaeological excavations carried out in different burial sites of north-western Sardinia allowed to observe anatomical variations in ancient skeletal remains. A case of brachymetatarsia, consisting of bilateral abnormal shortness of the fourth metatarsal bone, was detected in an adult female uncovered from the Medieval village of Geridu (Sassari), dated back to the late 13th or the first half of the 14th century; such a rare deformity has a clinical incidence of 0.02% to 0.05% (1).

Several anatomical variations were diagnosed in individuals brought to light from the plague cemetery of 16th century Alghero (Sassari). The skeleton of a 9-10-year-old child showed a skull malformation due to premature bilateral closure of the coronal suture, diagnosed as non-syndromic brachycephaly (2). Posterior schisis of the first cervical vertebra, consisting of failure of the midline fusion of the two hemiarches with a small gap, was seen in a male aged 20-30 years; this type of anomaly has a current occurrence of approximately 4%. Occipitalization of the atlas associated with posterior spondylolysis was observed in a male aged 35-45 years. There is complete fusion of the superior articular facets of the first cervical vertebra with the occipital condyles; this congenital anomaly has a current incidence of 0.14 to 0.75% of the population.

The small number of published osteoarchaeological cases of anatomical variations makes any report important.

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References

- [1] Giuffra et al., (2014) A case of Brachymetatarsia from Medieval Sardinia (Italy), *Anat Rec* 297: 650-652.
- [2] Giuffra et al., (2013) A probable case of non-syndromic brachycephaly from 16th century Sardinia (Italy), *Int J Paleopath* 3: 134-137.

Keywords

Osteoarchaeology; brachymetatarsia; brachycephaly; posterior arch defect of the atlas; occipitalization of the atlas.