

Talking bones, intermingled individuals from a medieval secondary burial from the church of Saints Pietro and Paolo in Brentonico (Trento, Italy)

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Abstract. In the past decades the increased awareness of the importance of secondary burial, intermingled contexts or not well-preserved skeletal assemblage has led to the development of methodologies useful for the paleopathological analysis of these types of findings. This letter briefly presents the analysis performed on 22 individuals from the secondary medieval multiple grave of the church of Saint Pietro and Paolo in Brentonico. Bones talking to us despite the difficult of a paleopathological analysis performed on intermingled bones. Here, a brief resume of the research and a quick overview of the pathology of this medieval human group is presented.

Key words: Trentino, anthropology, paleopathology, secondary burial, differential diagnosis

The church of Saints Pietro and Paolo is situated in Brentonico (698 m a.s.l.), a village of the homonymous plateau on the southern part of the Province of Trento (Trentino-Alto Adige, Italy).

The church is one of the oldest religious buildings of the Vallagarina, which may have been erected between the 8th and 9th centuries. It has been archaeologically investigated since 2003. During this continuing investigation, a multiple mass grave was discovered under the 13th century Romanesque bell tower. The *terminus ante quem* for the burial is the construction of this tower above the tombstones of the grave.

The structure was identified as a secondary deposition of the most evident bones of a minimum number of 22 individuals: 4 subadults and 18 adults, 5 females, 10 males and 3 subjects of which the skeletal sex was not determined. The study, the assessment of biological and paleopathological profile is usually more complicated in multiple deposition composed by intermingled bones.

Indeed, as defined by Fox & Marklein (1), an intrinsic characteristic of secondary burial is the de-

individualization of the remains, with resultant decreases of diagnostic accuracy. A bone with pathological evidence in many cases cannot be certainly related to a specific condition, especially in case of a-specific evidence. However, a bone or a fragment that cannot be associated to a single individual is still a source of information about the biological and pathological history of the local population (1).

The increased awareness of the importance of secondary burial or not well-preserved skeletal assemblage has led in recent years to the development of methodologies useful for the analysis of these types of findings (2). In cases where bones of the same individual cannot be identified, paleopathological analysis should be carried out with caution and in a generalised way, in order to avoid speculation (2).

Nevertheless, speculation can be prevented with a good differential diagnosis conducted with the aid of diagnostic investigations. The importance of applying a broad differential diagnosis has often been highlighted in literature (2, 3); this may help by circumventing



Figure 1. a) A severe case of *cribra cranii*; b) Periostitis of the tibial shaft; c) Arthrosic degeneration humeral head; d) Osteochondritic phenomena on the semi-lunar surface of the acetabulum in a juvenile subject.

the problem of data incompleteness, without losing it completely.

The pathological picture, which emerged from the study of the Brentonico's sample, mostly underlines traces of deficiency syndromes with different levels of expression, on the totality of individuals of burial, adults and subadults. The constant presence of *cribra cranii* (Fig. 1a), with a generally severe level of expression, and *cribra orbitalia*, combined with periostitis (Fig. 1b), diffused on the femurs and tibias, can be interpreted as a signal of food shortage, iron-free diet or avitaminosis. In the same way the arthrosic evidences are homogeneous; the presence of degeneration is attested but it is not possible, due to the nature of the sample, to understand the triggering cause. The joints of the shoulder, knee and pelvis turn out to be the most compromised (Fig 1c); in the case of the pelvis, the strong arthritic degeneration is often accompanied by osteochondritic phenomena, also found in the sub-adult sample (Fig. 1d).

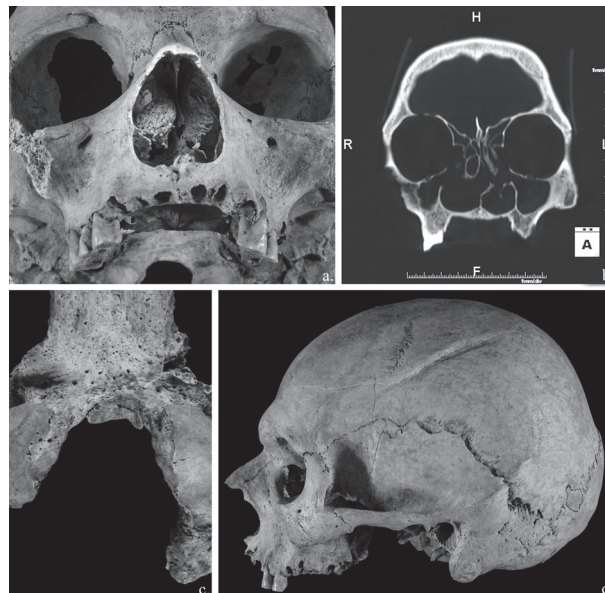


Figure 2. a) Concha Bullosa of the left middle turbinate; b) Coronal CT image, evidences of the Concha Bullosa; c) Third condyle on the front arch of the foramen magnum; d) Penetrating trauma on left parietal bone.

Among the diseases and anomalies found in the adult sample, some deserve more attention for their particularity. We have observed the presence of a case of Concha Bullosa (Fig. 2a; Fig. 2b), rarely found in archaeological documentation due to the difficult conservation of the nasal district (4), a case of “third condyle” (Fig. 2c), an accessory facet, placed on the front arch connecting the two occipital condyles, cause of limitations in the rotational movement of the head and a possible case of osteochondroma, a form of benign cartilage tissue ossification tumour led to tibia and synostosis fibula to the proximal joint. Moreover, in the sample there are several cases of traumas and fractures attributable mainly to accidental causes with exception of two skulls with evidence of penetrating trauma (Fig. 2d).

Despite the exiguity, incompleteness and selection of bones in the sample, the data achieved, which is not considered representative of the whole population of the time or place, is however relevant for a first classification of the living conditions and pathological picture of the communities of Trentino, a region still little investigated in the paleopathological study (4, 5, 6).

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