THE CONTRIBUTION OF ARCHAEOTHANATOLOGY TO THE UNDERSTANDING OF THE DURATION AND USE OF COMPLEX BURIAL DEPOSITIONS

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Introduction

Archeothanatology provides the theoretical and methodological tools to reconstruct past mortuary and funerary gestures and practices, being particular relevant to understand the nature of highly fragmented, commingled and abundant bone assemblages (Duday, 2010; Krusel, 2016; Neves, 2019). These assemblages are typical of particular funerary practices, like the ones performed in Late Neolithic and Chalcolithic collective graves, but also, of mortuary forensic contexts like mass graves (Tuller and Hofmeister, 2016). The effort put to perceive this particular intrusive bone assemblages led Duday and colleagues to formalize this field of knowledge: Archaeothanatology (Duday, 2010). Following these principles, Marçais et al. (2016) have tackled the notion of duration and rhythm of depositions that one can observe in collective burials or in mass graves. Facing the absence of skeletal material with enough collagen to be dated this method was developed to discuss the time dimension in complex contexts. In this work we apply this concept to a Chalcolithic hypogymn located in southern Portugal (Monte do Carrascal 2, Beja, Portugal), where a series of nine C14 dates were obtained in order to ascertain the feasibility and accuracy of the method proposed by Marçais and colleagues.

Hypogymn I of Monte do Carrascal 2

Monte do Carrascal Hypogymn I (Beja, Portugal) presents a circular chamber with nine interstratified deposits, presenting different phases of funerary use, hiatuses, structure collapses and rebuild actions. In all 4479 skeletal pieces were recovered. 78% of these are from stratigraphic unit 2 (US2) where at least 62 individuals were deposited – 22 non adults and 40 adults – in ten subsequent layers. The number of individuals within these excavation layers varies between four and ten individuals. The vast majority of the individuals were deposited in decubitus lateral, with flexed members, without any preference regarding the left or right side. Orientations were also very diverse. The bone position regarding the anatomical organization of the human skeleton and the state or the labile and persistent joints indicate that the bodies were left on the ground, without any sediment covering. The bones spatial distribution and the existence of some features like wall effects put in evidence the existence of wood or fiber structures or containers, as previously stated (Neves, 2019).

Material and methods

The excavation was conducted with a field protocol developed with an archaeothanatological and geoarchaeological basis, being all data combined in a single GIS database (Neves, 2019). The state of the skeletons’ labile and persistent anatomical connections was scored according to Marçais and colleagues (2016): if the labile connections in the lower burial deposits remained, it was considered that the time span between two deposits was short, while the more dislocated the lower burial deposits, the greater the time span between two successive depositions, resulting in a model of the rate at which burials were made.

Results

The categorization of the deposition of the individuals according to Marçais et al. (2016) scheme (2 and 3) reveals that in the second and first archaeological stripping, the skeletons are very incomplete. The hypogymn should be considerably filled, so there may have been a need to reposition individuals already skeletonized. This change between the fifth and the third stripping where the overlapping of very complete skeletons is noted, although others are more incomplete. In the eighth, seventh and sixth stripping, the presence of complete skeletons is indicative of the short time lapse between depositions. Inversely, on the ninth archaeological décapage the skeletons were very incomplete. This suggest a longer interval between depositions. Also different parts of the skeletons are missing, like crania and some mandibles. On the last stripping of this layer (10th décapage) the overlap of individuals represented by complete skeletons is notorious. When a new cadaver was deposited on the surface of the burial ground the previous one (i) had not lost their anatomical continuity and had not been subjected to any manipulation or removal of skeletal elements. In order to ascertain the accuracy of the method, these results were lately compared with the radiochronological framing of this unit. Radiocarbon dates were obtained from nine human bone samples (petrous and temporal bones) and as predicted by archaeothanatology and stratigraphy, 14C results show a strong continuity of depositions between 2900 - 2400 cal. 2 and BC. (4 and 5) (Neves et al, 2018).

Discussion and final remarks

The context under analysis resulted from an anthropic deposition of 62 individuals carefully arranged in the hypogymn I. The radiocarbon data allowed to frame chronological this depositions between 2900 - 2400 cal. 2 and BC. The construction of a Bayesian model for these dates reveal their contemporaneity during this time lapse (cfr. Fig. 4). Hence 14C results also show that these depositions occurred in a simultaneous manner, in a time span of four hundred years. The application of the Marçais and colleagues scheme (2016) helped to perceive the rhythm and time interval between depositions. The state of the label’s and persistent connections showed that although the filling of the hypogymn was variable (with some individuals being represented only by a few bones), it was mainly rapid. Fresh cadavers were juxtaposed to previous ones that were not completely skeletonized or disarticulated. This situation is compatible with a funerary occupation that last for several decades.

In all, the obtained results show that the Marçais et al. (2016) method can be used to perceive the rhythm of use of complex sites being them archaeological (multiple and collective graves) or forensic (mass graves).

References


