The Unidentified Skeletal Collection of Capuchos Cemetery (Santarém) housed at the University of Coimbra

A Coleção de Esqueletos Não Identificados do Cemitério dos Capuchos (Santarém) da Universidade de Coimbra

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Abstract The aim of this article is to present to the scientific and academic community a new osteological collection housed at the Department of Life Sciences from the University of Coimbra (Portugal), the Unidentified Skeletal Collection of the Capuchos Cemetery. The skeletons were collected from the same cemetery as those of the 21st Century Identified Skeletal Collection, however their identity is unknown. The collection is comprised of 73 individuals, of which 68 are adults of both sexes (34 females, 33 males, and one individual of unknown sex) and five are non-adult individuals. It is estimated that the majority of adult individuals have a European ancestry

Resumo O objetivo deste artigo é apresentar à comunidade científica e académica a Coleção de Esqueletos Não Identificados do Cemitério dos Capuchos. Os esqueletos, de indivíduos contemporâneos, foram recolhidos no mesmo cemitério que os da Coleção de Esqueletos Identificados Século XXI, porém a sua identificação é desconhecida. A coleção é composta por 73 indivíduos, sendo 68 adultos de ambos os sexos (34 mulheres, 33 homens e um indivíduo de sexo desconhecido) e cinco não adultos. Estimou-se que a maioria dos indivíduos adultos tinha uma ancestralidade europeia (n = 52; 76,47%). Os esqueletos estão razoavelmente preservados, embo-

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(n = 52; 76.47%). The skeletons are reasonably preserved, although several are incomplete (n = 8; 10.96%) as result of both taphonomic changes occurred during the burial, and also due to experimental researches performed (some of which destructive). Regarding the osteopathology, it was observed that the majority of adult individuals have pathological changes (n = 67; 98.53%), with degenerative pathology being the most frequent in the sample. In addition, 13 individuals (17.81%) exhibit medical devices and/or signs of surgical procedures. The Unidentified Skeletal Collection of the Capuchos Cemetery is an osteological collection that, although not containing individual biographical data, has contributed to teaching, research and development of new methods for Biological and Forensic Anthropology in subjects such as osteology, morphology, biological profile, paleopathology, and cremains.

Keywords: Skeletal collection; biological profile; paleopathology; forensic anthropology; biological anthropology.

ra vários estejam incompletos (n = 8; 10,96%) devido a alterações tafonómicas ocorridas durante a inumação, mas também devido a investigações que têm vindo a ser realizadas (algumas das quais destrutivas). Em relação à osteopatologia, observou-se que a maioria dos indivíduos adultos apresenta alterações patológicas (n = 67; 98,53%), sendo a patologia degenerativa a mais frequente. Além disso, 13 indivíduos (17,81%) apresentam dispositivos médicos e/ou sinais de procedimentos cirúrgicos. A Coleção de Esqueletos Não Identificados do Cemitério dos Capuchos é uma coleção osteológica que, embora não contenha dados biográficos individuais, tem contribuído para o ensino e para a investigação em Antropologia Biológica e Forense em áreas como osteologia, morfologia, perfil biológico, paleopatologia, alterações térmico-induzidas e desenvolvimento de novos métodos.

Palavras-chave: Coleção osteológica; perfil biológico; paleopatologia; antropologia forense; antropologia biológica.

Introduction

The collection of human skeletons, which are an invaluable source of information to anthropological research, has become a worldwide practice, and resulted in several reference osteological collections. These collections are of paramount importance to evaluate biological profile, human variability, paleopathologies, and to test and develop new methods to assess these parameters.

As is widely known, the earliest human osteological collections were assembled in Europe and the United States of America, promoted by great names of the history of Anthropology such as John Hunter, Pierre Paul Broca, and William Turner. The Hamman Todd collection (with over 3000 individuals), the Terry collection (with 1728 individuals) and the Huntington collection (with 2933

individuals) were among the first, and were used for educational and research purposes, thus allowing the development of techniques both in Forensic Anthropology and Bioarchaeology (Rothschild and Rothschild,1995; Jantz and Jantz, 1999; Hunt and Albanese, 2005). In Portugal, the first collections gathered during the 19th century were the Ferraz de Macedo Collection, housed in Lisbon, and the Medical School Collection, housed in Coimbra (Rocha, 1995; Cunha and Wasterlain, 2007; Umbelino and Santos, 2011). During the first half of the 20th century, two more identified collections were collected in Coimbra, the Identified Skeletal Collection and the International Exchange Collection, and one in Oporto, the Mendes Correia Collection (Rocha, 1995; Cunha and Wasterlain, 2007; Umbelino and Santos, 2011; Cardoso and Marinho, 2015/2016). At the end of the last century, the Bocage Museum Identified Skeletal Collection started to be built (Cardoso, 2006). And, recently three more were presented, the Évora Identified Skeletal Collection (Anselmo et al., 2016), the 21st Century Identified Skeletal Collection (Ferreira et al., 2014; 2021), and the BoneMedLeg Collection (Cardoso et al., 2020). These identified osteological collections have functioned as large reservoirs of scientific research.

Besides the identified osteological collections, the unidentified ones are also relevant. Despite known limitations, they contribute to improve the knowledge of different human populations, namely how they evolved, how they adapted to different environments and constrains, how they lived, and how they cared for the deceased.

The Unidentified Skeletal Collection from the Capuchos Cemetery (CC_NI: acronym of the Portuguese name: Cemitério dos Capuchos – Não Identificados) is housed at the Forensic Anthropology Laboratory of the Life Sciences Department of the University of Coimbra, Portugal (José, 2019; Tomé, 2019). It is currently composed of 73 individuals without basic information such as date and place of birth, occupation, age-at-death and cause of death. The purpose of this paper is to characterize the taphonomic, biological and paleopathological profiles of these individuals and present them to the scientific community.

Legal contextualization of the collection

In Portugal the creation of human skeletal collections emerged from the recurring practice of exhuming unclaimed corpses after a few years of burial (the law states that the exhumation can be executed after three years, as long as the corpse is skeletonized). After the legal time of burial has passed and there are no signs of family worship, the human remains of the individuals are exhumed for ossuaries or cremated (Ferreira, 2012; Ferreira and Cunha, 2013/2014; Ferreira

et al., 2019; Coelho, 2020). Considering the Portuguese legal framework and the current overcrowding of some cemeteries (Nascimento and Trabulo, 2008; Ferreira, 2012; Ferreira and Cunha, 2012; Ferreira and Cunha, 2013/2014, Ferreira et al., 2019; Coelho, 2020), including the Capuchos Cemetery (Santarém), the University of Coimbra proposed the use of this unclaimed osteological material for scientific research and pedagogical purposes, establishing a protocol with the Santarém City Council (Ferreira et al., 2014). This collaboration, with the positive legal decision from the Ethics Committee of the Faculty of Medicine of the UC (CE_026.2016), originated the 21st Century Identified Skeletal Collection (CEI/XXI) (Ferreira et al., 2014; 2020) and, later, the Unidentified Skeletal Collection of the Capuchos Cemetery (CC_NI), both housed at the Forensic Anthropology Laboratory of the Life Sciences Department (José, 2019; Tomé, 2019).

Chronological framework

The individuals from this collection are of unknown identity as there are no cemetery records which can characterize them in terms of their biography.

At the time of the Portuguese civil war (1832–1834) and during the cholera epidemic (also in the 19th century), the burial sites in Santarém were overcrowded. In order to face this situation, and since burials were no longer allowed inside the temples, convent fences were created in order to serve as temporary burial sites (Queiroz, 2002). In the wake of the Portuguese Liberal Legislation of 1834, the Capuchin monastery was extinguished after the Liberation Army entered Santarém in May of the same year (Queiroz, 2002). According to Cemetery Regulations published in the Municipal Postures of 1863, the integration of the Church and the passage from the Capuchin Monastery to municipal heritage (public cemetery) took place in 1835 (Queiroz, 2002; Município de Santarém, 2020).

Hence, the recovery of eleven metal plates with names and dates of death in 12 individuals of this collection is significative. The oldest date of death goes back to 1865 and the most recent date of death refers to 1942. Considering this information, one can assume that the individuals of this collection died most likely between the late 19th and early 20th centuries. However, it is known that the context of the exhumation of the skeletal remains was carried out by the cemetery gravediggers (the information on when these exhumations were executed is not available) and, therefore, these identification plates may not correspond to these individuals (José, 2019; Tomé, 2019). Consequently, this is only a probable chronology of the collection and further research is needed to its accurate dating.

Description of the collection

The Unidentified Skeletal Collection of Capuchos Cemetery is currently composed of reasonably preserved skeletons of 73 individuals, of which 68 are adults of both sexes and five are non-adult individuals (Tables 1 and 2).

Taphonomic profile

The individuals from CC_NI underwent initial cleaning (in loco, by the cemetery professionals) upon exhumation and were later transported to the Forensic Anthropology Laboratory in plastic bags. In the laboratory, the cleaning process was completed (using wooden brushes and wood stilettos), and each bone piece was marked with varnish and acetate pen. Afterwards, the skeletons were individually placed in boxes identified with the collection acronym and an individual serial number (Figure 1).

The conservation status of adult individuals was evaluated according to the IPG – General Preservation Index (Ferreira, 2012; Ferreira and Cunha, 2012), in order to evaluate the general preservation parameters of each bone. Furthermore, the preservation analysis of non-adult individuals was done according to the Buikstra and Ubelaker (1994) recommendations, adapted to the conditions of the present

Figure 1. General aspect of how each skeleton from the Unidentified Skeletal Collection of Capuchos Cemetery is stored.

collection. State of preservation of the skeletal material varies. The collection presents a range of cases, from IPG values that indicate an excellent state of preservation to skeletons which are generally incomplete and poorly preserved (Tables 1 and 2).

The individuals of CC_NI are reasonably preserved, although the majority of the skeletons (71; 97.26%) show some level of fragmentation. The appendicular skeleton, specifically the femur and tibia, is better preserved when compared to the axial skeleton in which the thoracic and sacred vertebrae are frequently damaged. It was also observed that small bones, such as those of the hand and feet, are partly absent, which may be due to the remains have been exhumed by cemetery gravediggers. As these bones are smaller, their recovery was more difficult.

It is observed that males (39.4% excellent or well preserved and 33.3% poor or incomplete and poorly preserved) tend to be in a better state of preservation than females (23.5 excellent or well preserved and 52.9% poor or incomplete and poorly preserved). Also, young adults tend to be better preserved than elderly individuals, although this difference is not statistically significant (Chi-square = 3.360; df = 4; P = 0.499).

It was also observed the preservation of soft tissues such as hair, beard, nails, and cartilage in some adult individuals (19; 27.94%). Other taphonomic alterations correspond to chromatic changes (26 individuals; 35.62%), namely white, black, green and blue colours which are due to environmental factors of the cemetery itself (Henderson, 1987; Schultz, 1997; Dupras and Schultz, 2014), e.g., soil type, water infiltrations in the graves, or coffin materials such metal nameplates. Other materials such as clothes, personal objects, crucifixes, or costume jewellery associated with the skeletons could have also contributed to these taphonomic changes.

It is important to mention that several individuals were (and continue to be) object of study in practical classes and in various investigations (Table 3). Thus, the state of preservation of these skeletons was also conditioned by the fact that they are part of an osteological collection of a university laboratory. The use of these skeletons in practical classes is fundamental for a well-rounded training of future anthropologists, however, the continuous handling of bones increased the postmortem fragmentation (obviously the students are instructed on the good practices of handling the skeletons, in order to mitigate damages provoked by continuous handling). In addition, several investigations (including genetic approaches and research on thermal-induced changes) have been carried out based on the skeletons of this collection (25; 34.25%). These are often destructive since they require sampling for genetic or chemical analysis, or burning of bone parts (see below the collection research policies for investigation). In this

Table 1. Preservation and completeness of the adult individuals from the Unidentified Skeletal Collection of Capuchos Cemetery.

General Preservation Index	Sex									Total
	Female			Male			Unknown			
	Young adult	Mature adult	Elderly adult	Young adult	Mature adult	Elderly adult	Young adult	Mature adult	Elderly adult	
Excellent preservation	0	1	0	0	0	1	0	0	0	2 (2.94%)
Well preserved	0	3	4	0	9	3	0	0	0	19 (27.94%)
Reasonably preserved	0	7	1	0	8	1	0	0	0	17 (25.00%)
Poor preservation	0	3	12	0	5	5	0	0	0	25 (36.77%)
Incomplete and poorly preserved	1	0	2	0	1	0	0	0	0	4 (5.88%)
Very incomplete and well preserved	0	0	0	0	0	0	0	0	0	0
Very incomplete and poorly preserved	0	0	0	0	0	0	1	0	0	1 (1.47%)
Total	1	14	19	0	23	10	1	0	0	68

Table 2. Preservation and completeness of the non-adult individuals from the Unidentified Skeletal Collection of Capuchos Cemetery.

Individual number	General Preservation Index	Age-at-death
CC_NI_19	Incomplete and poorly preserved	9.5–14.5 years
CC_NI_20	Well preserved	8.5–13.5 years
CC_NI_21	Well preserved	1–3 years
CC_NI_22	Very incomplete and well preserved	< 1 year
CC_NI_73	Very incomplete and well preserved	approximately 11 years

aspect, the situation of CC_NI is worse than that of 21st Century Identified Skeletal Collection. In order to avoid the CEI/XXI' degradation, unidentified skeletons are preferably used on destructive analyzes, including for the development and benchmarking of research protocols to be carried out in the CEI/XXI.

Biological profile

The methods applied to assess each of the parameters of the biological profile were selected for one or more of the following reasons: they were developed on the basis of CEI/XXI; they were developed for Portuguese populations, and they were and still are used worldwide.

To access the ancestry of these individuals (only adults) non-metric and metric methods were performed following Hefner (2009) and Navega et al. (2015), respectively. The morphological characteristics and cranial measures resulting of the application of these methods were uploaded in the statistical programs hefneR and AncesTrees, accessed on the Osteomics website (http://osteomics.com/) (d'Oliveira Coelho et al., 2020). As recommended, ancestry was initially estimated through morphological approach. The results obtained afterwards were used for the clusters selection during AncesTrees processing data. Due to poor preservation, ancestry was not estimated in 16 individuals, the remaining 52 adult individuals are European (Table 4).

Regarding sex estimation in adult individuals, several methods were applied for the iliac bones, long and tarsal bones and the skull. The iliac bones were analysed following the morphological recommendations of Buikstra and Ubelaker (1994), which allowed the evaluation of the shape and the presence or absence of dimorphic characteristics, and the metric method of Bruzek et al. (2017) which measurements were inserted in the software DSP2 – Probabilistic Sex Diagnosis. Regarding the long bones, the metric methods of Curate et al. (2016) for femur, and Wasterlain (2000) for humerus, femur, talus and calcaneus, were selected. The skull was only morphologically evaluated, following the recommendations of Buikstra and Ubelaker (1994). Firstly, the iliac bones were analysed. When these could not be evaluated, whether they were absent or too fragmented, metric methods results were considered. The results obtained through the skull analysis were only considered when the previous methods were not applicable. Half of the adult individuals were female (34; 50%), 33 were male (48.53%), and for one adult (1.47%) sex was not estimated due to its incompleteness and poor preservation (Table 1).

For adult individuals age-at-death estimation signs of skeletal senescence were observed, specifically the alterations of the pubic symphysis and the sternal end of the 4th rib, following the methods

Table 3. Research developed in the Unidentified Skeletal Collection of Capuchos Cemetery until the end of 2020.

Reference	Title/purpose of the study
Amarante (2016)	The impact of differential post-depositional taphonomy on bioanthropological research
Marques et al. (2016)	Osteometrics in burned human skeletal remains by neutron and optical vibrational spectroscopy
Piga et al. (2016)	A structural approach in the study of bones: fossil and burnt bones at nanosize scale
Vassalo et al. (2019)	The influence of gravity in bone heat-induced warping and its implications for the estimation of the pre-burning condition of human remains
Makhoul et al. (2017)	Experimental burning and real fire scenarios: are they comparable in terms of chemical anthropology?
Gonçalves et al. (2018)	Vibrational spectroscopy reveals intrabone, intraskeleton, and interskeleton variation in human bones
Mamede et al. (2018)	Potential of bioapatite hydroxyls for research on archaeological burned bone
Gabriel (2019)	Thermally induced changes: influence of heat exposure duration on colorometry, morphometry and chemometrics
José (2019)	Anthropological characterization of a sample from the Unidentified Skeletal Collection of Capuchos Cemetery
Tomé (2019)	Anthropological characterization of a sample from the Unidentified Skeletal Collection of Capuchos Cemetery
Coutinho (2020)	Impact of the deposition conditions of human bones and teeth on their chemometric profile

Table 4. Age group, sex and ancestry of the adult individuals from the Unidentified Skeletal Collection of Capuchos Cemetery.

Age Group	Sex						Total
	Female		Male		Unknown		
	European	Unknown	European	Unknown	European	Unknown	
Young adult	0	1	0	0	0	1	2 (2.94%)
Mature adult	12	2	20	3	0	0	37 (54.41%)
Elderly adult	13	6	7	3	0	0	29 (42.65%)
Total	25	9	27	6	0	1	68
	34 (50%)		33 (48.53%)		1 (1.47%)		

of Suchey-Brooks (1990) and Işcan et al. (1984; 1985). The characteristics of the auricular surface and acetabulum were also evaluated (Rougé-Maillart et al., 2009). Table 4 shows the results of age-at-death groups by sex: two individuals (2.94%) died young, before 30 years old; 37 (54.41%) were mature adults (with an age-at-death estimated between 30 to 60 years old), and 29 (42.65%) were elderly (> 60 years old). Concerning the non-adult individuals, age-at-death was estimated following Ubelaker (1979), AlQahtani et al. (2010), and the recommendations of Schaefer et al. (2009). The age-at-death of the five non-adult individuals ranges from birth to adolescence (Table 2). Since the individual CC_NI_73 is only comprised of two lumbar and two sacred vertebrae, in addition to bone maturation evaluation, these bone pieces were compared with non-adult individuals from this and other collections. It was concluded that its size and maturation status was similar to 11 years old individuals.

For stature estimation of the adult individuals, measurements were made on humerus and femur, and first and second metatarsal bones following the methods of Mendonça (2000) and Cordeiro et al. (2009), respectively. Of the 68 adult individuals, it was possible to estimate stature in 33 females and 30 males. The estimated stature of female individuals varies between 134.7cm and 171.3cm while the stature of male individuals lies between 145.8cm and 195.6cm. Although the two methods were applied, the minimum and maximum stature (including the standard deviations) were obtained through the maximum humerus length using the Mendonça (2000) method.

Non-metric traits

The analysis of non-metric characteristics was only performed in adult individuals, in order to classify the morphological variation of each individual and the laterality in which they were found. For this analysis a set of 31 characteristics were selected, of which three cranial (White and Folkens, 2005; Magalhães, 2018) and 28 postcranial (White and Folkens, 2005; Barnes, 2012; Fagundes et al., 2017). This collection presents great skeletal variability. The selected non-metric characteristics are frequent (Table 5), being observed in about 97% (females n = 32; males n = 30) of the adult individuals without differences between sexes. The scapula was the bone with the highest frequency of these morphological variations, with the scapular notch present in 70% of the individual, followed by the bipartite talar facets observed in 46% of adult individuals.

Paleopathological profile

To investigate pathological changes, all bones were subjected to a careful visual inspection examined under good lighting conditions, following recommendations provided by multiple authors (Aufderheide

Table 5. Frequency of the non-metric traits of the adult individuals from the Unidentified Skeletal Collection of Capuchos Cemetery.

Non-metric Character	N/ Frequency
Metopic suture	4 (7%)
Supernumerary ossicles	7 (12%)
Concha Bullosa	15 (28%)
Supraclavicular foramen	0
Bifid acromial end	0
Scapula foramen	8 (13%)
Scapular notch	42 (70%)
Bipartite acromion	1 (2%)
Septal aperture	3 (5%)
Humeral septal translucency	0
Sternal cleft	0
Sternal perforation	9 (20%)
Manubrium foramen	0
Manubriosternal synostosis	9 (16%)
Spina bifida occulta	0
Butterfly vertebrae	0
Sacralization	3 (5%)
Lumbarization	0
Supra or infra numerical vertebrae	2 (4%)
Partial accessory transverse foramina	7 (11%)
Accessory transverse foramina	14 (23%)
Third trochanter	0
Hypotrochanteric Fossa	0
Bipartite patella	0
Patellar notch	0
Bipartite calcaneal facets	15 (27%)
Os trigonum	0
Absence of the anterior talar joint face	0
Bipartite talar facets	26 (46%)
Fibular trochlea	0
Retrotrochlear eminence	0

and Martín, 1998; Ortner, 2003; Waldron, 2009; Wedel and Galloway, 2014; Nikita, 2017). An exhaustive paleopathological study is not presented here, but only the general results in order to illustrate the potential of this collection. No bone lesions were found in the five non-adult individuals. However, it is important to note that their state of preservation and completeness (see Table 2) prevented a comprehensive analysis.

This preliminary pathological analysis revealed several types of lesions. As usual, the most common were the articular and non-articular degenerative lesions, present, as expected, in all elderly individuals (Figure 2), and in 36 out of 37 mature adults. The only exception was one female, with an age-at-death estimated between 30 and 40 years old. Twelve individuals shown vertebral lesions compatible with DISH, presenting uniform distribution both in terms of age-at-death and sex. Osteoporosis was suspected in three elderly women. Further diagnosis is to be confirmed using osteodensitometry. A mature man presented round lesions in the metatarsals, similar to those caused by gout, and other had bilateral *cribra orbitalia*. A woman and two men, all elderly, presented lesions with irregular edges disseminated by their skeletons, possibly related to a neoplastic condition (Figure 3).

Figure 2. Eburnation in the elbow joints from the individual CC_NI_12 (elderly male).

Figure 3. Osteolytic foci suggestive of neoplasia in the left coxal bone from the individual CC_NI_69 (elderly male).

Thirty-six adult individuals (52.21%) exhibited antemortem traumatic injuries (five mature and nine elderly females; and 16 mature and six elderly males), more frequent observed in the axial skeleton, particularly in the ribs (Figure 4). Two males shown traumatic lesions with sharp edges, homogeneous staining and without osteogenic reaction to macroscopic level (Figure 5).

It should be recalled that these results represent a preliminary diagnosis and more detailed studies of these lesions are necessary to reach a more concrete diagnosis.

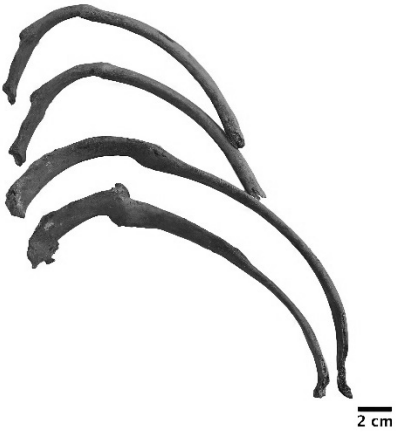

Figure 4. Left ribs with bone callus from the individual CC_NI_6 (mature male).

Figure 5. Perimortem trauma in the right tibia and left fibula from the individual CC_NI_61 (mature male).

Prostheses, other medical devices, and signs of surgical procedures

Thirteen adult individuals (19.12%) have medical devices and/or signs of surgical procedures: one with amputation of the legs (elderly female); one with a pacemaker (mature female); three with dental prostheses (one mature and two elderly females and a mature male); two with ocular prostheses (elderly females); three with ender nails (one mature and one elderly females; and one mature male); two with buttress plates (one elderly female and one mature male) (Figure 6); and one with a hip prostheses (mature male). In relation to the amputation and the prosthetic devices in the appendicular skeleton, bone remodelling was observed in all the individuals, which indicates that the procedures were performed several years before death.

The study of these orthopaedic devices in Forensic Anthropology and their use in training, is relevant due to their uniqueness. These allows to understand the surgical techniques used, to identify the constituent materials, and possibly achieve a chronology and country of origin, which are valuable clues in the forensic process, particularly in the identification process.

Figure 6. Buttress plates in the left fibula of the individual CC_NI_38 (mature male).

Potential and contribution of the collection

After the arrival of the Unidentified Skeletal Collection of Capuchos Cemetery at the Department of Life Sciences (between 2013 and 2015), these human remains were used in practical classes, significantly contributing to the teaching and training of Forensic Anthropology, Bioarchaeology, and Forensic Medicine undergraduate, master, and doctoral students. This collection has been also used in outreach activities to elementary and high school students,

allowing younger students to have direct contact with human skeletons, to perform morphological and pathological appraisals and understand their variability. This was only possible because, although small and unidentified, this collection has a great variability in morphological features and in bone lesions, which allows to understand the difference between normal skeletal characteristic and pathological conditions, as well as to identify idiosyncratic characteristics. More recently, in 2016, researchers were allowed to include this osteological material in their investigations. The collection has been the focus of several and diverse researches, being widely used in the investigation of thermal-induced bone changes (see Table 3).

This collection would benefit from more records of these individuals, including antemortem information about ancestry, sex, age-at-death, stature, dates of birth and death, cause and manner of death, which would increase its scientific potential. Twelve individuals arrived from the cemetery with nameplates providing names, date of birth and/or death, however it is still necessary to verify whether there is a relation between these plates and the burials (as referred above, it is not certain that they are indeed the identification plates of these inhumations). If this information could be accessed, comparisons with the various osteological collections in the world would be possible, as well as the development and/or testing of new methods. It is hoped that, in the future, will be possible to search for potential antemortem data from these individuals which would increase the potential of this collection. Although it is known that the chances of identifying these individuals are very low.

Even though it is comprised of unidentified skeletons, this osteological collection is valuable due to its morphological and pathological variability thus benefiting future generations of physical and forensic anthropologists. In other words, the osteological remains that constitutes the Unidentified Skeletal Collection of the Capuchos Cemetery are available both for training and development of new researches.

In what concerns the collection research policies for investigation, the general rules for accessing the collection consist on a first evaluation where it is verified whether the research in question is relevant or whether it is similar to another one already carried out or in progress. One more topic evaluated is the issue of preservation and the need of more or less destructive analyses. In these cases, the relationship between the loss of bone material and the scientific advance obtained, and its potential contribution to society is considered. For example, in the case of cremains, despite several investigations in this area involving some destruction of bones and/or teeth, the social return is massive,

particularly in Portugal where, in recent years, large fires have been taking place with several fatalities, and, therefore, the role of Anthropology is increasingly relevant both in the recovery of the remains in the field and in the process of identification of the victims.

We believe that this type of collections, as they are not composed of identified individuals, have been neglected, and it is worth disclosing them to the scientific community. With this article, the authors hope to have highlighted the potential of this collection for both teaching and research. Despite all the technological innovations of the last decades, the great instruments of anthropologists continue to be their hands and their eyes, therefore, systematic training with human skeletal material is of paramount importance. Also, the potential of the collection for investigation was shown, emphasizing its use in the development of research protocols on various topics, especially on cremains, a topic that is increasingly relevant in countries like Portugal, where catastrophic fires are more and more frequent, as a result, among other factors, of climate changes. Briefly, we hope to encourage the scientific community to disseminate this type of collections, and to develop and curate them.

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