### Preliminary anthropological and historical investigation of the Saint Cristopher Church in Pian di Marte, Italy (18th-19th century)

*Omar Larentis, Angela Bruno, Fabio Iemmi, Lorenzo Immordino, Alessandro Leto* Centre of Research in Osteoarchaeology and Paleopathology, Department of Biotechnologies and Life Sciences, Insubria University, Italy

Abstract. The parish church of San Cristoforo in Pian di Marte - on the hills north of Lake Trasimeno - represents a monument that, in the last decade, has aroused the curiosity and interest of historians and scholars. The restoration work on the building revealed the existence of five underground rooms below the nave, used as burial chambers. The renovation of the church made it possible to investigate anthropologically the human skeletal remains so as to derive valuable information regarding the population of the ancient parish. Furthermore, the discovery of these remains sparked a new interest in the history of this church and its community, which led to the systematic analysis of published and unpublished sources available to reconstitute its historical memory. In this contribution, we present the first historical-anthropological evidence related to the Pieve di San Cristoforo in Pian di Marte, with particular attention to some tapohonomic and anthropological aspects of the skeletal sample.

Keywords: Pian di Marte, Italy, 18th-19th century, taphonomy, typhus epidemic

#### Introduction

Man's work to link his existence with his territory has reached extraordinary, almost proverbial results in Umbria, managing to engrave in the minds of many the image of the typical house of stone and the hilly landscape of the region. Nobody who comes from other locations can suffer cultural voids. Umbria is the emotional dock of an absolute and timeless sea. Art was never a minor factor here because the anthropization had a conciliatory partnership between concept and form and it can really happen, quite often, to come upon historical and archaeological contexts, behind a corner, ready to capture with a mixture of familiarity and enigma.

The parish church of San Cristoforo in Pian di Marte is located on the northern hills of Lake Trasimeno, in central Italy; the territory is almost Tuscany but also Umbria, surely an offshoot of the Chiana's Valley. The site, called Il Poggio (The Hillock) and now called Pian di Marte, is located in the territory of Castel Rigone in the municipality of Passignano sul Trasimeno (Fig. 1 a).

The first mention of a church in Pian di Marte comes from a documented written in 1136, when on December 13<sup>th</sup>, Perugia's episcopate was confirmed by Innocenzo II (1); later, in 1163 the church is found in a declaration of guaranteed protection from the emperor Frederick I Barbarossa to the bishop of Perugia and all of the churches under his jurisdiction (2). In 1565 we have news of the existence of the baptismal font, of which the edification date is ignored (3). Nowadays, the location of the first church is unknown. However, in 1628 was documented the intention to move the church not too far away, on the healthier side of the hillock (4), where it was then built during the 18<sup>th</sup> century by Don Giacomo Buitoni of San Sepolcro, the parish priest at the time (5).

The parish Church of San Cristoforo in Pian di Marte was abandoned from the beginning of the '80s of the 20<sup>th</sup> century until the year 2000 when it was purchased by private citizens along with the whole architectural structure following the concession from the Ecclesiastical Institution.

In 2002, the then Regional Cultural Heritage Superintendence decreed the monumental bond for the entire structure. In 2011, the Municipality of Passignano found in Pian di Marte one of the most important testimonial locations of its territory, establishing it as a Minor Old Town.

In time, Pian di Marte has captured also the interest of historians such as the academic Giovanni Brizzi of the University of Bologna, of writers like Paolo Rumiz (6, 7), and the director Alessandro Scillitani in the movie "Ritorno sui monti naviganti" (Artemide Film, 2017). Photographers like Aldo Palazzolo, Monika Bulaj, Maurizio Montagna, Filippo Belletti and Ezio Ratti have loved and portrayed the location.



**Figure 1.** a. Map with a white church showing the location of Pian di Marte (Perugia, Umbria) where the Saint Christopher church is located. The top of the map is the north; b. Aerial photo of the "Poggio", the hill where the church and the other architectural structures were built. In the right corner the new cemetery of Pian di Marte, built at the beginning of the 20<sup>th</sup> century. The top of the map is the north; c. Nave of the church with the five entrance to the hypogeal chamber on the floor. Photo by Ezio Ratti, published in the monography "Conosci la fabbrica dove fioriscono i colori?", Vidal 2020: d. Plan of the Saint Cristopher church. Hypogeal chambers are numbered from 1 to 5.

The architectural complex is very spacious and was grown in the centuries, comprised of the parish, the parish house, large housing areas, stables and houses for various productive activities, including the drying of tobacco; in a certain sense, the structure presents a pretty clear representation of its geography, starting from the square that precedes it, that has the high self-sufficient fructiferous capability, advantageous for the local community (Fig 1b). The parish churches owned nearby farmland guaranteeing the sustenance of the parish with agricultural production and water resources, the farming of cattle and sometimes even small factories (8). The present suggests a past of discrete wealth, primarily from the attention given to the development of the architectural surfaces and the abundance of stone used as a building material, and the presence of an elegant balcony that faces the square, the large frame of the church itself and its robust bell tower.

Nowadays, to visit it we have to venture off the usual touristic paths, and let ourselves go along the roads that marked the borders of the estates with names that conjure in our minds every era that ever happened; time ago was even more far off modernity, more reserved, lost even, or at least present as an orientalist exotic idea. It was a remote place compared to the living centres of the Papal State even if it's close to Perugia, of which it forcibly shared the fate for various centuries.

After the structural and architectural restoration that happened during the first decade of this century, the path of enhancement of the church was started in 2016, with a planning stage done in agreement with the Regional Cultural Heritage Superintendence, that brought the functional and aesthetic recovery of the establishment and the church, with focused attention on the criteria of universal accessibility. (Fig 1c.). The site and the project of full restoration immediately kindled the attention of the territory, thanks also to the large burial chambers, and the remains contained inside. These last two in particular were subjects of a lot of interest from the Centre of Osteoarchaeology of Insubria University, which for years has been enhancing the anthropological heritage of minor centres (9, 10).

# The chronicle of Pian di Marte: the manuscript by Don Valentino Tucci

During the restorations, which included both the ceiling and the floors, focused attention was given to the hypogeal rooms that span underneath the nave (Fig. 1 d). These rooms guard the remains of the ancient inhabitants of the parish area. The first step for the restoration of the history of both Pian di Marte and its inhabitants was a meticulous work of research and archival consultation of the Diocesan Archive of Perugia. The bibliography regarding the state of these marginal parish churches is meagre (8).

But the research and archival analysis managed to find a precious text in which are contained both the history of the complex and specific notes of the hypogeal burials that seemed to be built since the first decades of the 18<sup>th</sup> century for the burial of the parish church population of San Cristoforo in Pian di Marte (5).

The same manuscript found in the Diocesan Archive of Perugia tells us about hailstorms, damaged roofs and canals, famines, and epidemics that fell upon this community, catapulting us in a novel that as its background has the latifundia and the suffering of the people. The text actually comprises different types of manuscripts, pages of inventories and ordinary parish chronicles, organized by the parish priest Don Pasquale Cavicchi around the end of the 1800's.

A large portion is a sort of memorial written by Don Valentino Tucci, the head parish priest from 1826 until his death in 1840 (Fig. 2 a, b). Tucci goes above and beyond writing a list of all of the wealth and restorations done by him and the other head priests, in 1830 he began writing a story on Pian di Marte, starting from the legends that link it's name with the cult of the Etruscan God Mars, the birth of Emperor Pertinace, on whom a historical litigation is currently going on, the Battle of Trasimeno Lake, until reaching his own time, but leaving out his present, along with the narration of the political events that were happening on the whole peninsula, strongly affecting his country.

He doesn't deny the important events that are useful to our research, such as the terrible famine during the beginning of his century, followed by a terrible epidemic that took the lives of many people. His narration seems a suspended atemporal tale, where the attention to detail on an often forced recalling of a respectable past that can bring honour to a province who himself defines as savage, fades in a silence bound by his own contemporaneity. The only historical facts given to us are the ones concerning a conspiracy against his beloved Bishop. The same Bishop who took him away from his wealth in Perugia and forced him to supervise a meagre cold

Cratorio alla Hampa Catio i timiti di quetta Lasocchia vie un publico Ciatorio di juj Ratoonatus della Janiglia Laluarni Refidente ed ini de movante, fotte il Titolo di Minienzio Hella Hampa. Ju cootto questi Ovatorio l'Anno 1813, con decorto emanato da Monjaro Juancolco Leanini Rignotti Vicavio generale apo Itolico manato il di 10. Locomboo 1814. Per la manito il di 10. Locomboo 1814. Notizie Storiche appartemente alla Lievania di J. Cristoforo di Lian di Marte vaccolte da me Jac. Valentino Tucci Lievano Lev la manutenzione di questi Ovaterio fu flipolato Ilto mento di un pero di Ierra Voto la Coeta di milura circa-mine Una possi Leggiti del Motaro della Curia Cedeastrica ligo Israfino Silvestrini. A cui vi e unito un Catalogo dei Lavie chi de han A cui vi e unite un lataroge des savoene, die han no sotto in vari tempi guesta Chiefa, Ed ancora in ji trovano deferite i bonipii fatte ji nei terrene, come pure nelle Cafe ji Savocchiali che Coloniche, non mene, che nella Chiefa da varii Diovani, 2 Rettori della Vigeo Socalino Silvestrini. Questi Ovalorio e stato coveredato dal Latrono Sigre Licho Lavojni a tutto Jue Joefe di tutto cio che suo abiognare tanto por la Tunzioni private, de Solenni. In esto i elebrano tre Teste l'Anno a pose del Sigre La Jugini cio la Testa di I. Vincenzio Titolaro ai 5. di devile La Tosta di J. Cheofra ai 25 di Giugno. = La Tosta di J. Cat terina ai 25. di elevembre mede/ima Jo Jaces. Valentino Juni Rottore della Chiya di J. Crittere ro di lian di chate ho fatto il sudetto inventario di tutte to co fo e seri forva deferitti, dichiavando fulla mia Coficera di nulla avere ommetto por dolo o frode di ciò che puo fottate a detta Chieta. Chiela. A. Z. 1830. ~ a in equal tempo una copia della Mappa che li confevua in dechivio. Careftia Si noti anrova qui di perfaggio che l'anne 1816 fi di coli gran penuvia, che il Grano li vendeva 16 il hubbio, e coli grande fi la mostalita, cagionata dalla fame e da un morbo contagiolo chiamato Tito, che i Cadaveri non fi potevano più sep. pellive in Chiefa, ma nei Cemeteri a bella potta formati foto pene gravifime affinde il fetore dei frequenti Cadaveri non ammosbaffe da vantaggio i divente.

Figure 2. a. Front cover of the manuscript by Valentino Tucci. Photo by Ezio Ratti; b. Page of Tucci's Manuscript, where he declare the truthfulness of the inventory that he reported ["Io Sacer. Valentino Tucci Rettore della Chiesa di S. Cristoforo di Pian di Marte ho fatto il sedetto Inventario di tutte le Cose e beni sopra descritti, dichiarando sulla mia Coscienza di nulla avere messo per dolo, o frode di ciò, che può spettare a detta Chiesa."]. Photo by Ezio Ratti; c. Page of Tucci's Manuscript where he report the living condition during the typhus epidemic of 1816 ["Carestia. Si noti ancora qui di passaggio che l'Anno 1816 fu di così gran penuria, che il Grano si vendeva (Scudi) 16 il Rubbio, e così grande fu la mortalità, cagionata dalla fame e da un morbo contagioso chiamato Tifo, che i cadaveri non si potevano più seppellire in Chiesa, ma nei Cemeteri a bella posta formati, sotto pene gravissime, affinché il fetore dei frequenti Cadaveri non ammorbasse da vantaggio i Viventi."]. Photo by Ezio Ratti.

place, a house with broken windows and an estate entrusted to a "non-adequate" farmer.

A detailed inventory, useful in terms of tracking the consistency of the food resources, was written during his last years (Fig. 2 c), the estate had an average production capacity of 24 "staje" (an ancient unit of measurement that roughly equates to 15kg) of grain in a limited farmable area compared to rest of the estate; a lot of fruit and vine trees, including walnuts, complete a better description compared to the previous ones, but the productive capabilities were modest, just like the entire surface of the property, with a farmable area of around "36 mine" and "21 tavole". This means that the estate was small but sufficient for the sustenance of the parish. In a span of six years examined by the parish priest, we can realize the enormous variability of the data of production, but a complete description of the revenue and expenses that still provides a positive balance: the yearly revenue amounted to an average of 176 "shields" to the 76 as a cost of production. Even if the revenue is subject, during the six years, to a sometimes-decisive variability due to the farmable capabilities of the summer, like in the years 1830 and 1831, we can still observe that the balance is always positive. We are far from the terrible year of 1816. When the manuscript lingers during that period, it does so in a dramatic tone, it was the famine that preceded the epidemic, for example, the weath was sold at 16 "shields", which means incredibly expensive. The mortality was so high, due to both hunger and a sickness called typhus, that the bodies could no longer be buried in the church but in cemeteries intentionally built, under great suffering, so that the stench of the corpses didn't get the living sick (Fig. 2 d). For many years, the people of the parish gave their attention to the care of the estate rather than the church, justifying the state of abandonment that Tucci found at his arrival.

Tucci himself self-celebrates his work and in truth, his successors never denied his merits. The manuscript gives dates of the progressive operations carried out in the church. It allows identifying the position of the burial manhole covers during the span of the alterations. Surely, it allows us to ensure the historicity of the two hypogea adjacent to the main entrance of the church, dating back at least to 1745. One of these seems to be the noble sepulchre to which was given the *jus patronatus* to the two local families who often financed the bigger operations in the structure. The chronicles regarding this place will diminish with time, until the second half of the 20th century, relegated only to the parish records.

## Structural and stylistic description of the burial chambers

The five vaulted hypogeal rooms, which span under the floor of the only nave of the church, are burial chambers (Fig. 1 c, d). They are not connected, have different size, height and morphology, they are also made by different material and buildings styles, which may denote specific functions.

These factors, related to the historical and archival research data and with the anthropological analysis, can be of support regarding the dating of the chronology of the maintenance and redesign operations of the monumental complex.

The hypogeal rooms are dark and difficult to access and was not possible to freely move inside them. Anyway, with non-invasive expedients, it was possible to partially verify and document chambers. The compartments showed different building strategies, verifiable in the use of materials and on the surface details. A poor and incomplete brickwork is alternated with good quality plaster, with carved inscriptions and painted religious iconography (Fig. 3 a). Likely, the lack of care of a formal aesthetic denotes common and poor burials, going against how the project manifests itself in regards to its realization quality.

The difficulty of access and extreme conditions, like collapses and the subsequent filling of debris that go on top of the burials, allow mostly visual inspections (Fig. 3 b). A data that emerges is that the fifth plugging of the hypogeal rooms was realized with different building modes and materials compared to the partition of the longitudinal walls. This observation allows hypothesizing that the hypogean spaces could extend and unravel in areas currently non-inspectable. These specific walling, brickwork and stones bonded with lime and local materials could be used for excluding saturated, degraded and unhealthy spaces and at the same time act as the structural support of the flooring of the nave. Independently from the date of the state of affairs of the single hypogeal rooms, it's conceivable the pluggings were used to border and optimize existing volumes.

In the more preserved and better built hypogeal chamber, where it presents an aesthetic function to honour the burials of dignitaries, prelates and wealthy families, are detected symbols engraved on the curing plasters, dates and painted inscriptions (Fig. 3 a, c). Chamber number 1 housed a great quantity of skeletal material, a complete obliteration of the pavements; a more detailed description of the surroundings and its content follows in the contribution. Chamber number 2 is characterized by the presence of eight adult individuals deposed in wooden boxes on their backs with their heads towards the north-west. The



**Figure 3.** a. Cross and Golgota engraved on the mortar of a chamber; b. An inscription engraved on the mortar of a chamber. Some human bones are visible in the foreground; c. One of the many phrases engraved in the mortar of the chambers ["Delmondo (...) miei amici 1856"].

laying down stands out due to the abundance of funerary objects and clothes of different materials. Chamber number 3, since today, gave us certain small wooden boxes and skeletal remains of children of an age ranging between infants and puberty. The children were buried in a similar orientation as the individuals in chamber 1 and 2. Chamber number 4 seems the more chaotic; a large number of adult individuals were deposed in an apparently confused way on the whole hypogeal chamber. The preliminary analysis of the space allowed us to evaluate the thickness of the bone layer of at least 50 cm from the bottom. In chamber number 5 bone remains from both adults and children were found; with these was found the presence of some elements of clothing of the deceased, scattered in a chaotic manner inside the hypogeum.



Figure 5. Photoplan of chamber 1. The right wall represents the north. Photo and editing by Enrica Tonina.

## Bioarchaeological approach to the analysis of the chamber 1

We chose to present the preliminary data relating to some taphonomic issues, to the wooden materials and skeletal material found inside chamber 1. The chamber is representative of the conservation and deposition characteristics of most of the other burial chambers.

#### Taphonomy

Dozens of subjects fill chamber 1, most of which had laid in the same orientation. In fact, from the first visual inspection, it was possible to verify that most of the deceased had been buried supine, with their arms at their sides or crossed on the chest, the head east-south and the feet west-north. However, three individuals were buried in a prone position, on all the other subjects: the first in the east area of the hypogeum, with the head to the east-south and the feet to the west-north; the second was leaning against the north perimeter, with its head to the west-south and the feet to the east-north; the third, which also represents the last deposition in the chamber, was found supine, with the skull in the west corner and the legs in an unnatural position, with the posterior region of the thigh near the back and the feet just below the shoulders.

The room has several fillings. The first is a layer of decomposed organic material near the south wall, caused by the decomposition of the wooden coffins. The strong hygroscopicity of the organic matrix in which the skeletal remains lie, the presence of a simple beaten earth floor at the bottom of the room and an embankment that surrounds the entire building have allowed the rising damp to create a very humid environment, in which fungal attacks have also undermined the preservation of bone tissue.

In the first half of the twentieth century, the stone that closed the room collapsed. This event led to the destruction of the skeletal material affected by the impact.

#### The coffins

Although the high humidity that characterizes chamber 1 did not favour the conservation of either the woods or clothing, it was possible to recover and evaluate some wooden elements that were part of a coffin. These elements were located near the western wall and were part of a wooden box placed parallel to it.

Medicina Historica 2021; Vol. 5, N. 1; e2021007

The analysis of these elements made it possible to verify some characteristics of the coffins. These were made of chestnut with rough boards and were assembled with iron nails and wooden dowels that both had the function of keeping the box in shape.

Finally, the analysis of the woods allowed us to reconstruct a hypothetical model of a coffin, which must have measured about 175x55x30 cm and was formed by several axes that reflected its length as regards the bottom, the sides and the cover and by others, small, placed transversely with the function of stabilizing and making the case more robust.

### The skeletal remains Materials and methods

The skeletal remains of chamber 1 were in a good state of preservation and representation in the northern part of the chamber and poorly preserved in the southern. As for the anthropological methods, we used metric variables of the femoral head (11) and pelvis for sex determination (12, 13). Skeletal age was estimated from the phase of the fourth rib (14, 15), the level of degeneration of the auricular surface (16) and the pubic symphysis (17). Individuals were attributed to the following age groups: adult (20-40 years); mature (40-60 years); senile (> 60 years); adult not determinable (nd.; > 20 years). We performed trauma analysis and paleopathological evaluation following the specific literature (18-21). Furthermore, we assessed the degree of osteophytosis of the insertions and origins of muscles and ligaments to verify and quantify the use of the main joints (22) and to hypothesize the activities carried out by the subjects (23). Finally, the measurements of long bones allowed us to determine the individual's height (24).

#### Results

In chamber 1 there are at least 38 subjects with complete skeletal development, of which 12 are males, 5 are females and 21 of undetermined sex (Table 1). In some cases, it was possible to estimate the age of



10 cm

**Figure 5.** Wood planks found in chamber 1. Red dashed line = finished edges; Red arrow = nail parallel to the plank; red square = nail perpendicular to the plank. g. in green, the processing marks on the plank. The thickness is: a. 29.5 mm; b. 21.4 mm; c. 26.3 mm; d. 42.5 mm; e. 23.8 mm; f. 20.9 mm. Photo and editing by Enrica Tonina.

Subject	Sex	Age	Height	Linea aspera	Soleus	Triceps surae
1	F	А	159.5	2	2	/
2	М	А	174.2	2	2	1
3	ND	М	/	/	2	2
4	ND	А	171.6	2	2	1
5	М	М	165.2	2	3	3
6	F	М	153.2	3	2	/
7	ND	М	173.7	3	/	/
8	F	S	156.0	2	1	2
9	ND	А	/	/	/	/
10	ND	А	/	/	/	/
11	ND	AND	/	/	/	/
12	М	А	171.8	1	1	2
13	М	А	175.8	2	1	1
14	М	А	171.4	1	1	2
15	М	М	165.6	2	2	3
16	ND	М	/	/	/	/
17	ND	AND	161.0	/	2	/
18	ND	А	169.9	/	1	/
19	ND	AND	/	/	/	/
20	М	М	166.1	3	2	3
21	ND	AND	/	/	0	0
22	F	А	159.9	1	0	1
23	М	S	162.8	2	2	2
24	ND	AND	/	/	1	0
25	М	А	175.2	2	2	3
26	ND	М	/	/	2	3
27	ND	А	/	/	2	1
28	F	М	158.5	3	2	3
29	ND	S	/	/	1	2
30	ND	AND	/	/	1	1
31	М	А	173.0	1	1	1
32	М	А	175.6	1	1	2
33	ND	AND	/	/	/	/
34	ND	М	165.1	/	2	/
35	ND	М	/	/	3	2
36	ND	AND	/	0	1	/
37	М	S	161.9	2	1	2
38	ND	М	/	3	2	/

**Table 1.** Main data collected on individuals in room 1. M = male, F = female, ND = skeletal sex not determined; A = 20-40 years, M = 40-60 years, S => 60 years, AND => 20 years; the height is in cm, "/" = elements not available or not measurable; entheses were recorded according to the level of their degree of expression (0-4), "/" = elements not available or not evaluable.

individuals with greater precision. Whenever possible, these were included in the age groups they belong to 14 adults (7 males and 2 females), 12 mature (3 males and 2 females), 4 senile (2 males and 1 female) and 8 undeterminable adults. The height of the subjects was estimated thanks to tibias and femurs in 22 cases (12 males, 5 females and 5 of indeterminate sex). Based on sex and age, the heights of the individuals are distributed in the following intervals: adult females between about 159 and 160 cm; mature females between about 153 and 158 cm; the senile female about 157 cm; adult males between about 171 and 176 cm; mature males between 165 and 168 cm; senile males between 162 and 163 cm; the other estimates are between the lower limit of about 153 cm and the upper limit of about 176 cm.

We evaluated enthesopathies and pathologies only in the lower portion of the subjects. This is mainly due to the poor state of conservation and preservation of the remains. We recorded the linea aspera on the femur on 21 subjects (12 males, 5 females and 4 of undetermined sex). In males, the trait was recorded on: 7 adults (M<sub>2</sub> = 1.4); 3 ripe (M<sub>2</sub> = 2.3); 2 senile (M<sub>2</sub> = 2). In females, the trait was recorded on: 2 adults ( $M_{2}$  = 1.5); 2 mature ( $M_1 = 3$ ): 1 senile (value = 2). In subjects of undetermined sex, the trait was recorded on: 1 adult (value = 2); 2 ripe ( $M_a = 3$ ). In one case, a value of 0 was recorded on an individual for whom no sex was determined or age was estimated. We recorded the degree of expression of the soleus on the tibia on 31 subjects (12 males, 5 females and 14 undetermined sex). In males, the trait was recorded on: 7 adults (Ma = 1.3); 3 ripe (Ma = 2.3); 2 senile (Ma = 1.5). In females, the trait was recorded on: 2 adults (Ma = 1); 2 mature (Ma = 2): 1 senile (value = 1). In subjects of undetermined sex, the trait was recorded on: 3 adults (value = 1.7); 5 ripe (Ma = 2.2); 1 senile (value = 1). The trait was recorded on 5 subjects for whom no sex was determined or age was estimated (Ma = 1). We recorded the sural triceps on the calcaneus on 24 subjects (12 males, 3 females and 9 of undetermined sex). In males, the trait was recorded on: 7 adults ( $M_{a} = 1.7$ ); 3 mature ( $M_{a} = 3$ ); 2 senile  $(M_a = 2)$ . In females, the trait was recorded on: 1 adult (value = 1); 1 mature (value = 3): 1 senile (value = 2). In subjects of undetermined sex, the trait was recorded on: 2 adults ( $M_2 = 1$ ); 3mature ( $M_2 = 2.3$ ); 1 senile (value = 2). We recorded the trait on 3 subjects for which no sex was determined nor age estimated ( $M_a = 0.3$ ). Some of the subjects show pneumatisation of the middle turbinate (25). Besides, other enthesopathies were also recorded, only in particular cases (Fig. 6 a-d). Finally, osteophytosis, osteochondrosis and remodelling of the cortical tissue was recorded (Fig. 6 e-h).

We deserved particular attention to skeleton number 6 (Tab. 1): a woman over the age of 55, about 153 cm tall, which was the last subject placed in chamber 1. From a paleopathological point of view, we record some alterations of the bone tissue. We can summarise the bone alterations in evident proliferative and, at the same time, destructive episodes of the bone matrix. Also, the subject is characterised by the fusion of the lower spine and compromised hip joint and femurs (Fig. 7).

#### Discussions

In chamber 1 there are both male and female skeletal subjects, all adults, mature or senile. Unfortunately, age estimation and sex determination suffered from some limitations of the sample. Among these, the sporadic and non-optimal preservation of the skeletal portion above the hip joint. In this regard, it is worth noting that this study presents partial data and is being verified and integrated into the next excavation campaigns.

Adults of both sexes were buried in the chamber. The hypogeum was full of depositions in wooden coffins with the same orientation that respected the deceased canonically buried with head east-south and feet west-north.

The wooden coffins were made of chestnut boards of considerable thickness and size, not refined, as many signs of roughing of the planks were still visible. To date, the scarcity and modesty of some items of nonperishable clothing found inside the room suggest the humble social background of these people. Height is higher in men than in women and decreases in both sexes with increasing age, according to the expected normal biological variability.

The analysis of muscle insertions allows us to hypothesize an intensive use of the lower limbs. This



**Figure 6.** ID 2 Right coxal: a. Entheseal changes of the origin of the semitendinosus muscle; b. Entheseal changes of the origin of the biceps femori muscle; c. Osteophytosis of the acetabular margin; ID 25 right femur: d. Entheseal changes of the insertion of the gluteus minimus muscle; ID 14 right tibia: e. osteochondritis dissecans in the posterior area of the proximal lateral articular surface; ID 22 4th lumbar vertebra: f. Osteophytosis of the inferior margin of the body; ID 20 right coxal: g. Osteophytosis of the upper portion of the auricular surface, probably indicative of a sacrum iliac fusion; ID 31 left coxal: h. Bone remodelling of the cortical tissue on the anterior inferior iliac spine area. Photo by Enrica Tonina.

111

**Figure 7.** Skeleton of ID 6, bones recovered in the laboratory. Scale bar represents 10 cm. Photo by Omar Larentis. information may suggest a sample affected by intense

and repeated muscle activity in the legs. However, the poor preservation of the bones leads to interpretative caution. Likewise, osteochondritis, osteophytosis, and bone remodelling evidence must be interpreted with caution. The study still in progress and the partial and selective conservation of the skeletons do not allow the performance of a differential analysis on single individuals or the presentation of overall data.

The skeletons found last deposited in the chamber deserve particular attention. Indeed, they were buried in different positions and modalities compared to all the others. No wooden coffins, no position suggests Catholic pietas or respect for the subjects already buried there. Emblematic is the case of individual 6, the last in order of deposition. She was affected by a disabling disease, which had in all probability reduced her to paralysis of the lower limbs. The changes affecting the femoral head and the acetabulum can only lead to the hypothesis of the subject's paraplegia. This condition makes it possible to explain the unnatural position of the legs and feet concerning the trunk, which is only possible if the lower limbs were free to make movements anatomically unavailable for a healthy person. Besides, the body position allows us to assume that the woman was thrown from above into the room.

Why was a woman thrown into the chamber in this way, without respecting her memory? We have to bear in mind that she was probably not self-sufficient and belike cared for by the community for a long time. So with her two other subjects. Don Valentino Tucci could answer this question. It recalls the terrible typhus epidemic that hit Pian di Marte and the territory starting from 1816, the many deaths and the speed with which a location for their burials had to be founded (5, 26).

#### Conclusions

Pian di Marte, again, never ceases to amaze, offering new information and suggestions, which lead the curiosity of scholars towards an understanding of its past.

The analysis of chamber 1, albeit partial, shows a cross-section of the adult population who, probably during the 18<sup>th</sup> and early 19<sup>th</sup> centuries, inhabited those places. The conclusion of the overall anthropological and paleopathological analysis will be the next steps of the research. We will pay particular attention to individual 6, who already at a first visual examination presents itself as an exceptional paleopathological case. Radiocarbon dating and isotopic analyses will be performed to check chronologically the possible skeletal peculiarities found and any dietary differences between the subjects.

We will verify and integrate the osteological data thanks to historical sources, and we will compare Pian di Marte with other similar contexts present in the area. The church of Pian di Marte represents a valuable context from an anthropological, palaeopathological and historical perspective. Our curiosity towards him has allowed us to acquire unique information that will permit us to verify what for now are only suppositions due to the partiality of the data. However, this path is already framed as a rich and prosperous study experience of osteological materials as testimonial values of the ancient parish population, of archival documents and of the history of the monumental complex as milestones to understand its past, a design experience synergistic and unique in terms of method, objectives and purposes.

#### Acknowledgements

The authors would like to thank the Diocesan Archive of Perugia for the support during the archival researches, the architect Martin Hlavacek for his precious evaluations, the photographer Ezio Ratti for the photography of the church, Enrica Tonina and Chiara Tesi of the Centre of Research in Osteoarchaoelogy and Paleopathology for the photographic documentation and the recovery of the human remains of the chamber 1.

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Correspondence:

Omar Larentis

Centre of Research in Osteoarchaeology and Paleopathology

Department of Biotechnologies and Life Science

Insubria University

Varese, Italy

E-mail: olarentis@uninsubria.it