





MEDICINA NEI SECOLI

Journal of History of Medicine and Medical Humanities 34/3 (2022) 89-118

Received: 24.05.2022 Accepted: 03.11.2022

DOI: 10.13133/2531-7288/2691

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Children's World in the Medieval Town of Cencelle (9th-16th Centuries): an Archaeological Analysis

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ABSTRACT

Children's world in Cencelle: an archaeological analysis

The long-time period along which the town of Cencelle developed and its social variety allow some interesting observations on population composition between the Early and Late Middle Ages. A town of Early Medieval foundation with continuity of life until the modern age thus becomes a privileged observatory of the relationship between burial areas and urban centres. In particular, child burials study (from phoetus to 12 years of age) has rised numerous insights into both their distribution in the urban context and the social reasons determining life and death in the city. In this case, child burials comparison found in three different town areas and in different chronological periods enriches the discussion. The mix of archaeological investigation and anthropological analysis delineated the age characteristics at death, possible family relationships and health status of the samples analysed.

Keywords: Infants - Medieval archaeological excavation - Cencelle's town - Burial spacies - Funeral practices

1. Premises

In 1985 volume L'enfant à l'ombre des cathédrale introduction, D. Alexandre-Bidon and M. Crosson define the child as 'the great absentee in history', though "il en est pourtant le moteur, l'adulte en gestation, la société en devenir; mais il échappe à l'historien. Il ne laisse d'empreinte sur l'histoire du Moyen Âge que dans sa version achevée: l'adulte". Infants, by their very nature, do not leave written testimony, they do not write about themselves: their daily life, their experiences, their representation and their insertion into society are narrated by adults, deformed by a lens of someone who is not anymore child from a long time. The Latin term etymology of infans itself, which identifies the first of the six life cycle stages (infancy, childbirth, youth, adolescence, old age and senility) denotes infant's inability to speak, who are therefore totally subject to the adults will. Verbal impotence is also reflected in the legal field in which the aetatis infirmitas (typical of those who have not yet turned 7) does not allow insight and therefore consent to a contract (Cod. Theod. 8, 18, 8; Cod. Iust. 6, 30, 18): infants are effectively excluded from legal life until they enter puberty (tempus discretionis). Although the child progressively acquires word use and mastery, however this is not considered sufficiently adequate for social and political life until the maturity threshold, set at 12 for women and 14 for men, has been reached. So far said, the infants history from birth (or non-birth in the case of foetuses) to 12 years, unknowingly 'written' by their contemporary adults in the funerary identity construction aimed to transmitt their memory in front of the belonging community, can and must be 'told' by today's adults digging burial areas: in fact, funeral space choice reserved for them is dictated by both the role infants played in that specific society and practical and organizational reasons, relevant to the sepulchral system of reference, always keeping in mind the customary (funeral) regulatory framework^{2,3,4,5,6,7,8,9}.

'Infant death topography' analysis has had great bibliographic success in recent decades, particularly for the medieval era and in relation to the identification of deceased infants (including foetuses) *sine baptisma* or with a sacrament: in fact, if the conciliar norms^{10,11} imposed exclusion from the consecrated land of unbaptized stillbirths and infants considered as Original Sin inheritors and therefore deserving of divine damnation (they were welcomed in metaphysical Limbo^{12,13} and, in certain contexts, 'reported' also in the physical *limbus infantium* of the cemetery topography) on the other hand, archaeologists are drawing a much more colorful picture of folkloristic and apotropaic solutions implemented by the society in treating these burials to obviate their imposed marginality. According to Sacco, the *status* of baptized infant or not can be inferred "attraverso un'attenta lettura del contesto topografico di deposizione (prossimo all'edificio, estraneo all'edificio, isolato rispetto a nuclei di sepolture?), sommata all'eventuale età e agli espedienti, se presenti, che possono esser stati posti in campo per migliorare il trapasso del defunto e la sua

non permanenza in uno stato liminale (tecniche *suggrunda*? Coppi e tegole in riferimento allo *sub stillicidio*?)"¹⁴.

Furthermore, a growing body of archaeological evidence^{15,16,17,18,19,20} from throughout medieval Europe suggests a differentiation in funerary treatment for foetuses, perinatal and young individuals within Christian communities.

The broadest reinterpretation of the archaeological indicators of infant burials through an "archaeology of grief" is underlying this paper which deals with 96 infant burials (among them there are 15 foetuses) found in Leopoli-Cencelle and dated between the ninth and sixteenth centuries. In fact, Cencelle represents an exceptional case-study to expand our building and structure knowledge of one of the few Italian Papal foundation towns in Central Italy (with a life continuity at least until the 17th century albeit with different administrative systems, first as an urban center, then as an agricultural estate), as well as to reconstruct its population dynamics: this is due not only to the large sample size available (at present about 1000 individuals, one of the largest European skeletal samples) but also to the widespread presence of material data and a well preserved archaeological context.

The Leopoli *civitas*, founded in 854 by Pope Leo IV (*L.P.*, II, pp. 131-133) in order to defend and ensure inhabitants safety of the Roman town of *Centumcellae*, present-day Civitavecchia, against Islamic raids, represents from an urbanistic standpoint a rare, even unique case in many ways, if only for its definite founding date. The site is located in the Tolfa Mountains, atop a hill 168 m.a.s.l on the northern edge of the Province of Rome, a few kilometres from the Tyrrhenian coast. For the past twentyfive years or so, the site has been the object of archaeological research^{24,25}, promoted and directed by the Department of Medieval Archaeology at Sapienza University of Rome (first under the scientific direction of Letizia Ermini Pani and later under Francesca Romana Stasolla and the writer). Since its inception, project has also involved the D'Annunzio University of Chieti (in person of Maria Carla Somma).

Excavations brought to light part of the settlement, still surrounded by its 740 m of massive defensive walls with seven towers and three gates: (Fig. 1) these structural elements were intended to be deterrent and threatening, but also monumental and imposing. The available documents allowed us to reconstruct the historical vicissitudes of this town, characterized by political instability as early as the town's first attempt to gain independence from the Roman Church (late 11th c.). As a defensive and strategic bulwark of Papal power in the northern Latium territories defence, part of the Roman Church *Patrimonium*, the area was claimed between the 13th and 15th centuries by a number of contenders. Among them were Viterbo, to which the town of Cencelle submitted in 1220²⁶ in order to repay its debt to the city of Corneto (present-day Tarquinia), the Apostolic Camera and Corneto itself, as can be deduced from the oath that the Mayor of Cencelle took before the representatives of the commune of Corneto first in 1307²⁷ and then again in 1362²⁸.

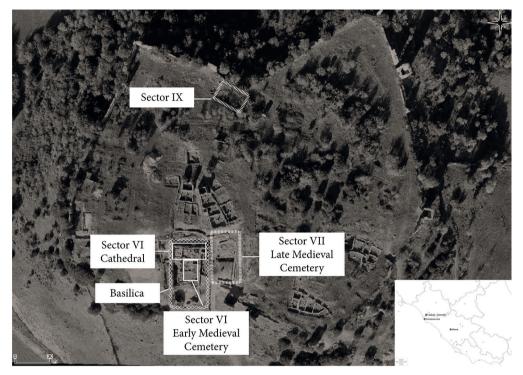


Fig. 1. Cencelle town plan showing burial sites (Sectors VI, VII and IX).

The urban decline of Cencelle (due also to the violent earthquake of 1349) began following the discovery of alunite in the Tolfa Mountains around the middle 15th century; an event that transformed the landscape, which was subdivided into estates to accommodate mineral production and marketing needs. G.B. Cingolani, in his 1696 *Catasto delle Tenute di Allumiere*²⁹, makes specific mention of a *Tenuta di Cincelli*: in this document, Cencelle is portrayed in a particularly meaningful figure accompanied by a legend that reads, *Cincelli oggi diruto*.

These moments of urban life and restructuring (the founding moment in 854, the municipal *facies* from late 11th to first half of the 15th century and the conversion into a farm) are widely reflected in the three funerary areas that follow distinct construction phases, also attesting to the osmosis between the dead space and the living space that characterizes the medieval era.

The first funerary area (Sector VI) relates to the ancient St. Peter's cathedral (mid-9th-11th century). Since its founding moment, Leopoli had this episcopal church, which was placed on the hilltop and flanked by an adjacent necropolis, located, with East-West orientation, between the cathedral and the town walls: the Early Medieval graveyard³⁰, dating back to 9th-11th centuries, consisted of approx. 100 burials, about 9 tombs (including 5 depositions in lithic coffins and sarcophagi) belonging to subadults were found. Part of the original basilica was found under the floor of the

later Romanesque basilica that, at the beginning of the 12th century, incorporated and therefore hid the oldest structure: the later church, located along the North-South axis, still dominates the medieval site of Cencelle. A core of about 21 infant graves (including 4 foetuses and 2 females with foetuses) is placed inside the cathedral, in particular in the central nave and near the baptistery placed in the left nave. At the North-East corner of the subsequent Romanesque basilica, there is a bell tower that pre-existed the lower medieval church: below the structure a small sarcophagus in cinerite tuff was found with the remains of a childhood inhumation with grave goods, clearly a privileged burial.

The other two funerary areas belong to the municipal facies of the city (early 12th-first half of the 15th century), with some burials that can be even dated in the 16th century. The second and largest funerary area (Sector VII) is associated to the large Late Medieval cemetery (12th-16th centuries), which has up to now returned over 1000 burials and is located on the right side of the Romanesque basilica of St. Peter: the church dominates the landscape from the hilltop, symbolically facing the new civic power seat, the palatium comunis^{31,32} rising across the main street. The church (North-South orientation) has three naves and a three-apsed, raised chancel that impressively juts out from the city walls. Beneath the church is a crypt, presumably an oratory-crypt. The main graveyard^{33,34}, at the right of the basilica, experienced many renovation works during the centuries, and in a later use-phase the cemetery area was reduced by the construction of two enclosures encircling the North and East sides of the area. As described by Del Ferro^{35,36}, the northern walls connect several structures defining a rectangular area looking towards the main road of the city with two buttresses at both sides of a huge grey trachyte threshold. This structure, contemporary to the enclosing walls, was archaeologically interpreted as a new striking entrance to the graveyard facing the church. In this necropolis, only partially excavated, 41 infantile burials (but no foetuses) were found, mainly deposited in earthen graves, while 15 (including 4 foetuses) were identified outside the Romanesque basilica, along the eastern perimeter wall (where there is a burial in a sarcophagus) or parallel to the facade.

The third funerary area (Sector IX) has been found in a peripheral area of the town, located in the north-western district of the urban center, near the northern gate, along a road which must have led to this access. A small nucleus of 10 exclusively infantile burials³⁷ was unearthed in an open-air environment close to the northern wall and all dating back according to stratigraphy to the mid-14th century: these are 3 foetuses and 7 individuals of perinatal and infantile age, whose deaths, in many cases, can be related to the last phase of gestation and childbirth. One of these burials, an infant of about 5 years, had the head covered by a large fragment of a tile.

Scientifically established anthropological morphological methods were used by prof. Cristina Martínez-Labarga and dr. Marica Baldoni (Department of Biology, University of Rome Tor Vergata) to assess biological profile of 877 individuals (548)

adults, 62.49% and 329 non-adults, 37.51%) recovered in Cencelle from 2000 to 2017 as well as to reconstruct lifestyle and health status^{38,39}.

In this paper we present the results of an ongoing work on a sample of infant burials equal to 96 individuals (30 from the Early Medieval facies and 66 from the Late Medieval one) for which an age of death from the foetus stage to 12 years was considered (Foetus – 15 individuals, <1 year or Perintanal – 13 individuals, 1–6 years or Infant I – 44 individuals, 7–12 years or Infant II – 24 individuals): in fact, it was decided to privilege in this phase the study of burials in primary deposition which have already been fully analyzed from an anthropological point of view and for which both the minimum number of individuals and the age of death have been established. Despite being partial data, they allow us to make some observations on funeral practices in Cencelle, Early Medieval foundation town with life continuity up to the Late Middle Ages that becomes a privileged observatory for the relationship between funeral areas and urban centers^{40,41}. In fact, the excavation of these infantile burials has raised numerous reflection points both on their distribution in the urban fabric and on the underlying socio-cultural reasons that have determined their topographical 'marginalization' whether 'planned' or 'spontaneous' (and therefore 'clandestine')⁴².

2. Anthropological analysis methodology on infants

The present research focuses on 96 burials of non-adult individuals recovered in several areas of the Cencelle archaeological site. Individuals' age at death estimates were performed in previous researches^{43,44,45}.

Age at death was estimated using well-known scientific methods as described in previous research⁴⁶. Briefly, estimates were obtained by observing dentition degree of formation and eruption⁴⁷, long bone diaphysis and clavicle length measurement^{48,49,50}, as well as the fusion degree observation of the main skeletal ossification centers^{51,52}. Despite being extremely important in anthropological research, sex determination from the morphological analysis of non-adult bone remains may be challenging^{53,54} as outlined in a research paper presented in this volume⁵⁵.

A preliminary taphonomic investigation on some of the burials recovered in the archaeological site of Cencelle led to the hypothesis that in many cases the individuals were wrapped in a shroud⁵⁶. This interpretation, in particular, was based on the observation of the position of the different skeletal elements and on the compression of some of them (e.g. clavicles, humeri, scapulae etc.) as described in detail by Duday⁵⁷. As regards the non-adult burials from Cencelle, however, it was difficult to perform a detailed archaeo-thanatological analysis^{58,59}, as the analysis of non-adults remains is studded by challenges^{60,61}.

From a bioarchaeological point of view, as outlined by researches in the literature, non-adult skeletal remains investigation is of utmost importance to enhance a better

understanding of past human groups even though dealing with non-adults remains is challenging^{62,63,64,65}. The main difficulties are often related to the poor preservation status affecting the bone remains due to both young individuals' bones specific limited mineralization and to burial soil characteristics^{66,67}. The reduced non-adult individuals sample size in archaeological context, moreover, could also be a consequence of burial sites differentiation and funerary treatments^{68,69,70}. However, despite the difficulties, the authors also stress the need to contextualize bone remains in the archaeological framework^{71,72}. As reported in the literature, recent years did not only have seen an increasing scientific publications dealing with non-adult life's aspects as pathology, diet, and weaning often applying innovative and/or multitechnique approaches, but also have seen a substantial shift towards a life-course approach^{73,74,75,76}.

Young individuals' presence (both perinatals and infants) in St. Peter's Church and in the city graveyard led hypothesizing they were baptized as this was mandatory to be buried in the consecrated areas, even though with some mitigations in the Late Medieval period^{77,78}. The question, however, remains controversial, for instance recent research by Crow et al.⁷⁹ reports written and archaeological evidence of practices in Medieval Italy allowing the newborns to be baptized and thus to be buried in the consecrated earth avoiding them damnation, as also described in literary operas⁸⁰. Specifically in Cencelle medieval site, infant burials were also recovered in a separate area close to the city walls⁸¹, so it is difficult at the moment to provide a comprehensive interpretation of the reasons behind this apparent division in multiple areas of the city.

The non-adult graves analyzed in the present research are mostly represented by single primary burials. It is worth mentioning that, as described in detail below, in some cases secondary burials were found in association to the non-adult primary burials, however the discussion on these aspects is far from the scope of the present research. Presence of a perinatal and/or a young infant individual buried alone, without the mother, implies the baby was born at the time of his/her internment. However it is worth notice that cesarean sections were also practiced on expecting mothers dead during pregnancy or labor, since antiquity^{82,83,84}. The *Lex Regia* then known as *Lex Cesarea* established the extraction of the foetuses from the dead mother womb^{85,86,87,88}. As reported in the literature in the Medieval period the practice, performed after the death of the expecting mother, was recommended by the Church aiming at save the newborn's life and to be able to baptize him or her^{89,90,91}. However, it seems that the section started to become a medical practice only later^{92,93}.

In one case of the analyzed burials the non-adult individual was recovered close to a female skeleton (SU 7302; SU 7304). It would be possible to hypothesize existence of a kinship between the two individuals, however as recently pointed out in the literature interpretations should be cautious as the situations are far from being straight-

forward⁹⁴. It is known that in past human populations women used to give birth at home⁹⁵ and mortality related to pregnancy and childbirth is generally assumed to had been extremely high, even though archaeological evidence of pregnant females and/ or deaths clearly attributable to labor and childbirth complications are scanty in the literature^{96,97,98,99,100,101,102,103,104,105}. The recent research by Riccomi and colleagues¹⁰⁶ underlines that the archaeo-anthropological and taphonomic analyses may help to discern the possible causes of death. On the basis of the position of the perinate, in fact, it would be possible to discern among death during pregnancy and/or the start of labor, death due to difficult and problematic and eventually post-mortem fetal expulsion, underlining, clearly, also the interpretative limitations¹⁰⁷.

The presence of burials of two individuals (one female and one perinatal individual) is certainly peculiar, however the recent research by Cilli et al. 108 clearly points out that sometimes things are not as they seems. In fact, the ancient DNA (aDNA) analysis performed on five double burials recovered in the archaeological site of Forlì Campus proved different mtDNA haplotypes in the investigated samples¹⁰⁹. In humans, except from some rare and partly controversial cases 110,111,112, mitochondrial DNA (mtDNA) is maternally inherited 113,114,115 thus the evidence by Cilli and colleagues¹¹⁶ suggests the absence of maternal kinship between the female individuals and the perinatal ones buried together but also among all the analyzed individuals even though as reported by the authors other kinship relationships although implausible could not be excluded at all¹¹⁷. This research¹¹⁸ underlines the need of multidisciplinary approaches in bioarchaeology to enhance a better archaeological context understanding that may potentially be less straightforward than previously thought. Another interesting case reported in the literature¹¹⁹ is the triple burial recovered at the Barma Grande cave dating to the upper Paleolithic (20-25 kya)¹²⁰. The taphonomic analysis suggests that the three individuals (one adult and two juveniles) were probably buried at the same time, however the skeletal remains show different preservation status as the juvenile bone remains were extensively damaged during the WWII¹²¹. The aDNA analysis allowed to confirm the individual's sex for the adult individual, a male, and it also allowed to assess the sex for the two juvenile individuals, two females¹²². The morphological analysis suggested a possible kinship among the individuals due to the presence of a sulcus on the right side of the frontal squama¹²³. The aDNA analysis confirmed the existence of a kinship among the individuals, in detail the two young female had the same mtDNA sequence, which is indicative of matrilineal kinship, whereas the mtDNA sequence of the adult male was different although phylogenetically correlated to that of the juvenile individuals¹²⁴. These data led to the hypothesis that the individuals recovered into this peculiar Paleolithic burial could be a father and his two daughters¹²⁵. In the case of Cencelle further analyses will be needed to ascertain the existence of a kinship between the adult and perinatal individual buried together.

3. S. Pietro church burials

The church of St. Peter in Cencelle articulates the course of its life in three major chronological phases, which archaeological investigation and the study of sources have collocated in a long-time frame ranging from the 9th to the 17th century. Defining a fixed scheme to be associated with the Cencelline church system is quite a complex operation, especially due to the continuous reworking of the soil and the various overlapping phases that over time have led to the obliteration and reuse of structures and architectural elements. However, the stratigraphic excavation has revealed an Early Medieval phase of the building, a second Late Medieval phase and a third in modern times, when the area was converted into a farming structure. One of the dominant features of the sacred apparatus of Cencelle is the constant presence of burials; their analysis can in fact help to understand and investigate the religious and social articulation of the city. To speak, therefore, of a social reading of the population, an analysis of the distribution of burials and the maintenance of the cemetery ground, the discussion of the presence of child burials is particularly important. This type of study provides an important insight into funeral practices and a view into the social life of a part of the population that is usually given little attention. In total, there are 45 infants in St. Peter's church, the majority of whom are between 1 and 6 years old at the time of death (57%), followed by a large number of foetuses (26%) and a very small number of perinatals (13%) and children between 7 and 12 years old (Tab. 1). This first age index, even if limited to one area, is already very explicative of the higher mortality rate observed during the earliest years of life, especially with reference to the high number of foetuses present, as we shall see, in the Early Medieval period. This data also coincides with the anthropological studies conducted on most of the individuals discovered in the excavations carried out up to 2017 in the whole town. From them emerges a picture of the population in which mortality during early childhood (<1 year) was 24.40% and the probability of dying for infants up to 1 year of age was 10.26%, rising in the next age class (1-6 years) to 15.76%. The probability of dying decreases subsequently from age 7 to 18 years, increasing again in adulthood, becoming extremely high in the senile stages (51-60 years, 78%; 61-70, 100%)¹²⁶. Inside the Early Medieval cult hall was a burial area, located between the cathedral and the town walls; the burials were found below the floor of the new Romanesque Basilica, which succeeded the 9th-century structure. The presence of a cemetery area thus appears

Non-adults age classes of St. Peter's Church	N.
Foetus	12
Perinatal (< 1 year)	6
Infant I (1-6 years)	25
Infant II (7-12 years)	2

Tab. 1. Table showing non-adults age classes of St. Peter's Church

programmed and planned to be situated in the central area of the town and conceived as an integral part of urban life^{127,128}. This area entails an intensive use of space, with a first level of burials deposited at a very low level and a deep excavation that reclaims the rocky surface and shapes it to create recesses to accommodate depositions in the earth. The depositions, for the most part with a West-East orientation, are strongly crowded and arranged to utilise as much space as possible within the church¹²⁹. In fact, most of the infant burials found belong to this phase, which, depending on their stratigraphic position, distribution and burial type, delineate differences and chronological characteristics. The manner of deposition, usually involving bodies wrapped in shrouds, provides us, based on the types found, with an initial examination of the status and depositional pattern governing the area examined.

A first subdivision occurs between the types of burials: depositions in the earthen graves alternate with burials placed in lithic coffins and sarcophagi (Fig. 2). The first represent constructed coffins, made from reused elements of walls or previous floors, placed by cutting and often bonded with mortar and earth. The latter, on the other

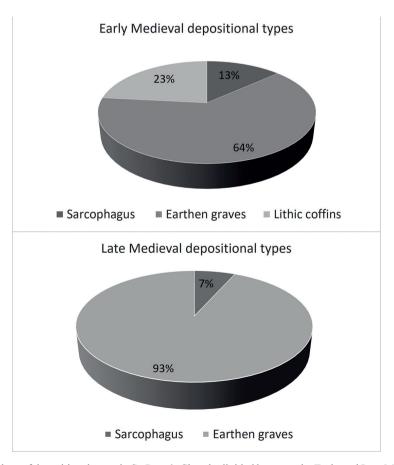


Fig. 2. Pie chart of depositional types in St. Peter's Church, divided between the Early and Late Middle Ages.

hand, are actual enclosures in trachyte or tuffaceous stone, created by modelling and working a single starting block¹³⁰. The Early Medieval phase of the church is marked for the most part by burials in earthen graves, which represent the type most frequently found in Cencelle, also for the Late Medieval period. This type of burial is distributed throughout the area, both in the interior of the Early Medieval church and in the adjacent external necropolis. These include infant burials that retain the canonical West-East orientation, which is also recorded at Cencelle for later periods. There are also a few exceptions with a North-South or vice versa orientation, most often justified by a need to organize the space in such a way that the burials follow and conform to the trend of the structures to which they are attached or placed near them, marking and defining the burial space. In this regard, close to the baptismal font there is a burial with a North-South orientation and one with the skull placed to the East, to adapt to the conformation of the baptistery itself. On the other hand, near the north wall of the Romanesque Basilica, we find two burials with a South-North orientation, which fit into the spaces left by the wall and in the corners created between the various architectural parts (Fig. 4a). It is therefore possible to associate a first phase with the burials in simple earthen pits, dug into the rocky bank and concentrated mainly in correspondence with the north facade of the building and within the wall delimiting the left aisle of the Early Medieval cathedral. The presence of lithic coffins and sarcophagi can, however, be associated with a second phase that invested the entire sacred area, after substantial backfilling. The lithic coffins and sarcophagi are mostly localised in the areas outside the Early Medieval church, near the adjacent necropolis. Evaluating the spatial organisation of the entire apparatus, there is a conspicuous nucleus of 21 infant tombs, located within the interior of the Early Medieval church, particularly near the northern facade and between the annexes of the baptistery, as can be seen in Fig. 3, and another nucleus of 9 infant burials located within the adjacent necropolis, among which 5 depositions in lithic coffins and sarcophagi stand out (Fig. 3). Among the burials inside the Early Medieval church, on the other hand, only three lithic coffins emerge, which are characterised by the presence within them of several child burials, often associated with both adult individuals and redepositions, suggesting, for some cases that will have to be further investigated and studied, the presence of a family unit. An example is given by US 7294, which represents a redeposited accumulation of infants' bones, from which a minimum number of 2 individuals, one perinatal and one aged between 1 and 6 years, were derived. However, based on its size (190 cm in length), it can be assumed that the lithic coffin was made for the deposition of the adult individual found there (US 7288) and that the two infants were also placed with it in the form of redepositions. This practice could be associated either with reasons of obtaining space for practical needs or with possible family ties.

The simplicity of the tombs is matched by the almost total absence of grave goods and material signs suggestive of funerary rituals; in the last-mentioned case, however, it

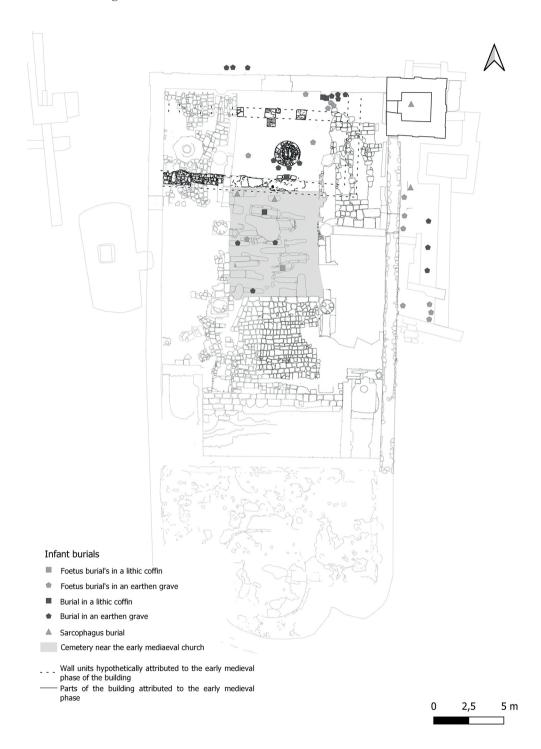


Fig. 3. Plan of St. Peter's Church (Sector VI) with the distribution of infant burials divided into depositional types, also highlighting the presence of foetuses (elaborated by F. Vacatello).

should be noted that there were small fragments of red plaster near the redeposition of infants. Another remarkable example, in this regard, are the burials inside a lithic coffin placed near one of the half-columns that mark the nave of the later Romanesque Basilica. This is a multiple burial, as a minimum of four infants were found inside the lithic coffin covered by a stone slab, of which two are primary burials and two are redepositions. The earliest burial, US 7268, is a redeposition of bone elements of two children aged between 1-6 years and 7-12 years. Second in stratigraphic order is US 7269, with a West-East orientation, which is a primary deposition of an individual aged between 1 and 6 years, placed in a dorsal decubitus position. Contemporary to the second burial is the third, US 7270, also a primary deposition of a 1-6 year-old individual, placed in a dorsal decubitus position with the skull to the West. Above them, three blue beads, which could be considered as small grave goods, were found in the filling and covering layer of the burials within the lithic coffin.

Furthermore, when assessing the spatial and social organisation of the Early Medieval church building and the adjacent necropolis, it is important to note that the distribution of infant burials in the Early Medieval cemetery does not follow any precise criteria and, even in association with the rest of the burials, does not have any planned and distinctive rules, but rather meets the needs of space organisation. The distribution within the Early Medieval necropolis is in fact quite varied and differs, albeit only slightly, from that within the Early Medieval church, in which two areas of sepulchral concentration in particular are delineated. They are placed around the baptismal font and in the north-eastern area of the cathedral, between the bell tower and the north wall of the facade of the later Romanesque Basilica, following the alignment of the structure. In the latter case, the alignment and West-East orientation could perhaps be testimony to the existence of a previous boundary represented perhaps by the intercolumnus or nave of the Early Medieval church. Also quite remarkable is the concentration of five burials in the vicinity of the Early Medieval baptismal font, of which we can attest to the presence of two perinatals, two individuals aged between 1 and 6 years, and even a unique burial of a woman with a foetus (UUSS 7302 and 7304), for which further investigations will clarify a possible family relationship. Another burial of a woman with a foetus (US 7152) is located in the north-eastern corner of the nave; the bones of a foetus, placed in a foetal position, were found inside the pelvis, suggesting that the woman died while pregnant. Nearby, on the north-eastern side, there is a recurrence of three more foetuses, placed close to each other and in burials directly dug into the rocky bank. One of these (US 7275) is placed, together with two other infant depositions, within the same cut of the bank, thus forming a multiple burial designed to accommodate three infants. Another difference between the interior of the Early Medieval church and the adjoining necropolis is the presence of sarcophagi in the latter. In the nave, under the floor of the Romanesque Basilica, two sarcophagi could be found. The first, given its large size, was therefore originally conceived for

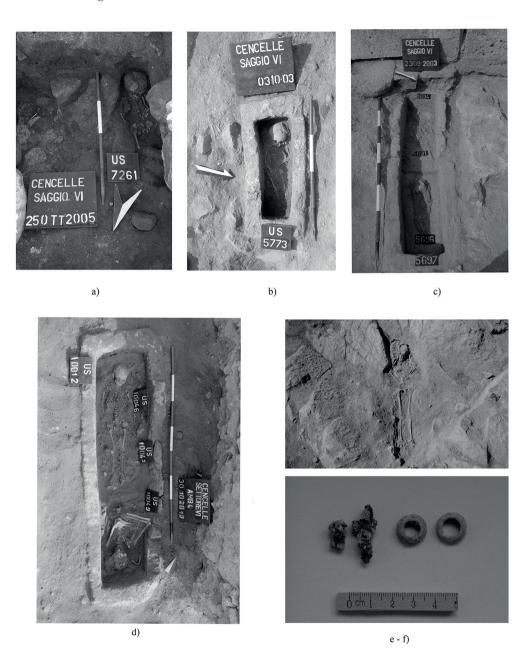


Fig. 4. Table with images of child burials from Sector VI and Sector VII: a) Individual aged 1-6 years with S-N orientation, placed in the space in the N-E corner of the Early Medieval church; b) Perinatal burial of the Early Medieval necropolis, in a small sarcophagus, the size of which suggests that it was made especially for an infant; c) Multiple burial of two infants (a perinatal and a 1-6 year old) in a large sarcophagus originally designed for an adult, located within the Early Medieval necropolis; d) Burial with an individual aged 1-6 years and an adult in a large sarcophagus, situated in the external areas of the Early Medieval church; e) on top, burial in a lithic coffin, placed in Late Medieval necropolis; f) bottom, grave goods from the child burial US 5241 inside the sarcophagus in the bell tower of the Early Medieval church, consisting of two bone rings and iron fragments possibly pertaining to a cross or nail.

an adult individual and later reused to accommodate two burials of infants aged between 1 and 6 years old each and the other less than a year old (Fig. 4c). The second, on the other hand, was small in size and contained a multiple deposition consisting of a redeposition of bone elements of an infant and a primary deposition of an individual less than one year old (US 5773). It is possible to suppose, therefore, that the sarcophagus was conceived from the outset to accommodate the primary infant burial, which also presented a slight elevation of the skull, perhaps because of a so-called earth pillow (Fig. 4b).

On the other hand, the sarcophagus found inside the bell tower, located North-East of the Early Medieval church, and later reused in the Romanesque complex, deserves a separate discussion. The excavation inside it has made it possible to distinguish various deposits related to its use and abandonment. Following the removal of the layers associated with the late phases and their collapse, two distinct trampling levels were documented; below these, a small sarcophagus made of cineritic tuff and a number of adult burials in earthen graves were uncovered. The sarcophagus contained the remains of an inhumate aged between 1 and 6 years (US 5241) and was accompanied by grave goods consisting of two bone rings and iron fragments possibly pertaining to a cross or a nail, suggesting a privileged burial, conceived from the outset to accommodate the infant (Fig. 4f).

The life phases of the Romanesque Basilica, on the other hand, are distinguished by the lack of burials inside the ecclesiastical building, since the necropolis annexed to it developed outside, occupying a large part extending to the East. However, it should be pointed out that outside the building, both along the northern facade and near the Eastern side, burials have been found, albeit in smaller numbers and with a less important layer of interment than the burials mentioned above. There are a total of 15 Late Medieval infant burials pertaining to the exterior of the church, 14 of which are in earthen graves and 1 inside a sarcophagus, which contained an infant aged between 1-6 years together with a sub-adult over 12 years old. The area is characterised by the presence of burials aligned along the eastern outer wall of the basilica, with a North-South orientation, following its course, including 4 foetuses. Similarly, along the facade of the Romanesque Basilica there are three infant burials, two of which have an East-West orientation following the wall and one with a South-North orientation that is completely misaligned. The peculiarity of the area also emerges in the presence of both foetuses and very young individuals no older than six years. This datum, as we shall see, differs from that of the context of the neighbouring Late Medieval necropolis, in which the majority of infant burials record an age of death ranging from 7 to 12 years, thus suggesting the presence of another selected burial site used during the Late Middle Ages for the burial of very young infants. This suggestion is also confirmed by another small area of the town (Sector IX), investigated during 2009, in which a small nucleus of exclusively infant burials was found within a space with trachyte and tufa

walls attached to the northern wall perimeter of the city. The burials, which can also be dated to the Late Middle Ages, are divided into 3 foetuses, 2 perinatals less than a year old and 5 infants between 1 and 6 years old, are buried in the bare earth and most often do not respect the canonical orientation. Some of them are oriented North-South or vice versa, not respecting any wall or structural alignment, but arranged in a very random and disordered manner. Particularly noteworthy among these is a burial in a bisoma earthen grave, in which an infant (US 9133) aged between 1-6 years (to be precise, he appears to be 5 years old) and, along the lower right limb of it, another infant (US 9142) perinatal (9 months old) were laid to rest. The older infant is laid in an East-West orientation and due to its taphonomic characteristics the presence of a shroud is assumed. The teeth show strong traces of tooth enamel deterioration, while the right canine and maxillary central incisors are chipped and worn. These traces may suggest a prolonged working activity, which can be traced back to the processing of fibres or the treatment of a hard and elastic material such as leather. For these two depositions of infants, moreover, one can think of the presence of a single deposition sack, which could perhaps justify the deposition of a slightly older child in a burial area mostly intended for very small infants¹³¹. Also noteworthy is the presence of a large fragment of tile, placed to cover the skull of the child burial US 9115, a custom rarely found at Cencelle, but attested instead in many other contexts, such as an infant grave from S. Maria dell'Impruneta (FI), dated between the mid-11th and 15th centuries¹³². This small nucleus of child burials testifies how in the town, during the Late Middle Ages, there must have been spaces reserved for the burial of children, located even in more isolated areas and far from the context of the city's political and religious power, remaining in line with the statutory provisions and laws regarding baptised and unbaptised children.

4. Late Medieval cemetery burials

Among the infant burials, identified during numerous archaeological excavation campaigns starting from 2003 to present day in the sector, that can be interpreted as a community cemetery of the Late Medieval town, 41 are analyzed in the present study. It is important to note that sector VII has been divided into two macro-areas: sector VII A, excavated since 2003, and sector VII C whose excavation began in 2017. It is therefore evident that the greatest amount of evidence is recorded in VII A while VII C is still under excavation.

On the basis of anthropological studies carried out, it was possible to deduce the age at death; the great majority of the burials fall within the age range 7-12 years followed by a good number of burials of 1-6 years: depositions which are less than one year old are rather rare instead. Their presence, though not numerous, could indicate that they had received baptism sacrament without which they would have had to be buried elsewhere¹³³ (Tab. 2).

Non-adult age classes in the Late Medieval cemetery	N.
Perinatal (< 1 year)	5
Infant I (1-6 years)	14
Infant II (7-12 years)	22

Tab. 2. Table showing non-adults age classes of Late Medieval necropolis

Most of the burials are laid in earthen grave, a type of burial very common in Cencelle and in line with the adult burials found¹³⁴.

These pits are dug in a layer generally with a sandy-loam matrix, whose original limits are rather complex to establish since the pit opening and filling took place in such a way that it was not possible to determine the original limits and have happened in a sudden way that make reading difficult.

In some cases pits are excavated in the rock. The depositional pit was often hewed and worked specifically to accommodate burials, denoting a certain care in the preparation of the pits¹³⁵. Individuals' position, in some particular cases, takes into account rock characteristic: the lower limbs are bent or particularly forced.

Other typology recorded are burials in lithic coffin, particularly used for adults burials and infants burials (the little one) (Fig. 5). These are earthen graves whose walls are covered with small to medium sized tuff or trachyte blocks, arranged with drywall or sometimes bedded with mortar and earth, with the aim to isolate and protect the burial itself from the rest of the area. Very rarely were found covers (unfortunately lost or intentionally removed) generally built with the same coffins material. From the excavations carried out over the years, it emerged that lithic coffins have been reused over and over again, in line with the phenomenon of intensive exploitation of the sacred space, often not taking into account the other burials¹³⁶.

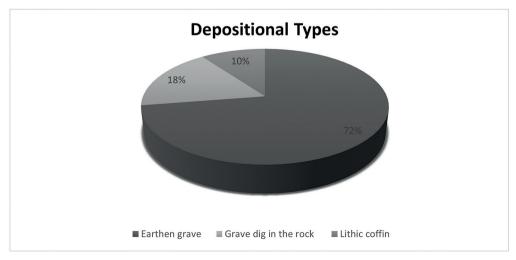


Fig. 5. Plan of Late Medieval necropolis (Sector VII) with the placement of infant burials.

This aspect makes it rather complex to establish a clear correlation between inhumed and this particular type of deposition, thus not allowing any hypothesis of a particular deceased isolation (an infant, from another deposition) as instead appears rather evident in the Early Medieval church.

With regard to the orientation of the burials, the majority of the depositions is arranged following the classic West-East orientation, with the skull facing West. However, there are exceptions; in 5 cases the orientation is South-North and in 4 cases it is East-West with the skull facing East.

This particular orientation could have been conditioned by the course of the imposing wall structure made of large blocks of cineritic tuff and smaller blocks of red tuff that encloses the cemetery area. These burials, together with those of adults with the same orientation could constitute *terminus ante quem* in relation to the reduction of the original necropolar space¹³⁷.

All the burials analyzed were deposited in dorsal decubitus except for 4 cases in which the decubitus was lateral. The decomposition of the bodies seems to have taken place in a full space mediated by the presence of a shroud¹³⁸. The inhumations analyzed were almost always deposited with the lower limbs extended except for some whose lower limbs were slightly flexed, often in correlation with the particular conformation of the geological bench while the upper limbs were either extended along the body or flexed at chest level.

A noteworthy case is related to the discovery of a burial of an infant with a West-East orientation, in a bisoma earthen grave. The individual, in fact, shared the deposition pit with a burial of an adult individual. It is almost complex, given the total absence of grave goods, to establish if there was a family link between the individuals.

The important fact that emerges from this overview is the apparent absence of a special space for children. They, in fact, overlap with the other depositions.

This consequently results in clear limits to the frequentation of all tombs, which are often completely inaccessible to visitors. Through a detailed comparison of the child burials with the adult burials identified, it is possible to state that there are no particular differences with respect to sex or individual age in either the type of deposition or the manner and orientation (fig. 6). In addition, the disposition of the burials does not seem correlated to social status, since burials with grave goods were found together with burials with trousseaus.

We are therefore facing a late medieval age community cemetery, whose burials were buried without interruption and without any particular sex or age distinction. The absence of special spaces for children today could be the confirmation of how this space was used in a massive and intensive way. The numerous cuts made to accommodate other burials and the constant presence of bone reductions (redepositions) scattered throughout the area define this as a real community cemetery.

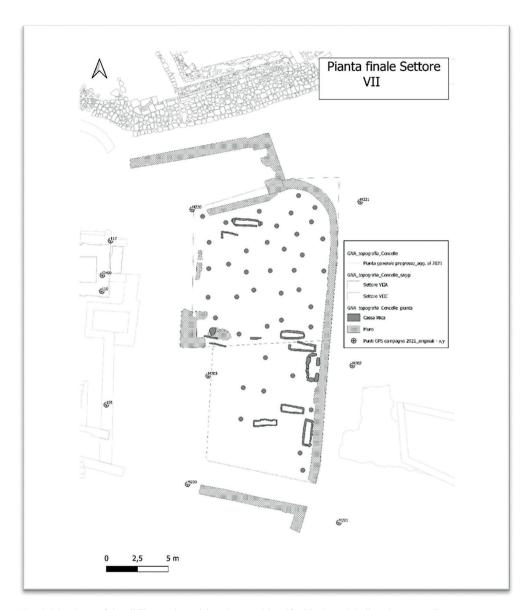


Fig. 6. Pie chart of the different depositional types identified in Late Medieval necropolis.

5. Discussion

In this paper, we have tried to reinterpret the aforementioned 96 infantile burials materiality also in the light of their contemporary regulatory framework^{139,140}, bearing in mind that not all actions or individual gestures, especially those funeral rites celebrated in private form, leave precisely material traces¹⁴¹. Nevertheless, we have identified visible "expressions of care and grief"¹⁴² in perinatal burials familial concern for including young infants (under 2 years) inside the Early Medieval cathedral

(in particular in the central nave and near the baptistery): as reported in the literature (Crow M, Zori C, Zori D,) sometimes this funerary practice contravened ecclesiastical regulations as in the cases of the burial of pregnant women in hallowed ground (always that of the cathedral), despite the presence of unbaptized infants still within their wombs, or in the cases of stillbirths or very young infants buried near the Early Medieval baptistery or following the outside walls of Low Medieval church.

From the sample analysis presented, some common traits and some divergences in the funeral practices of the two Cencelle life *facies* (Early and Late Medieval) can be highlighted.

First of all, is noted a uniformity in the sepulchral typology that favors burials laid in earth or dug in the rock: it is almost exclusive (90%) for the Late Middle Ages (with the exception of some burials in lithic coffins in the cemetery and one in sarcophagus placed outside the east wall of the basilica) while it is only prevalent for the Early Medieval period. In fact, compared to 64% of earthen graves the remaining 36% are depositions in lithic coffin (5 specimen) or in sarcophagies (3 specimen) which sometimes receive bisome infantile depositions (in 2 cases) or redepositions (not analyzed in this work). There are also three multiple depositions, a Low Medieval earthen grave bisome (a 3 year old infant and a foetus in Sector IX), another Low Medieval bisome inside the cemetery (a female adult and a 1-6 year old infant) and a trisome in the Early Medieval cathedral dug in rock (2 infants and a foetus). Another continuity between the Early and Late Middle Ages concerns treatment of bodies deposited in dorsal decubitus except for a few cases in which the decubitus was lateral, that indicates care and consideration were given to their eternal fate; also, they were mostly wrapped in shrouds. Graves simplicity is associated to the almost complete absence of grave goods and material signs leading back to known funerary rituals, apart from 3 Early Medieval burials in the cathedral which have returned two bone rings and iron fragments possibly pertaining to a cross or a nail (the 'privileged' burial under the later bell tower) or three blue beads or small fragments of red plaster.

A marked diversification can be seen, in current research status, in the topographical choice of child burial sites, given that we partially know the extent and articulation of the Early Medieval necropolis while the Late Medieval one excavation is still underway. If for the two *facies* the infant's burials (mainly from 7 to 12 years old) took place in the respective necropolar areas (Sectors VI and VII) where were absence of a 'special space', less than six-year-old depositions are rather rare in both necropolises instead. This fact allows to postulate a will in setting out a 'plan' by the community choosing burial spaces, together with social and ritual reasons. This 'planned marginalization' is flanked, especially in the Early Middle Ages when the legislation was less stringent, by a 'spontaneous' and 'clandestine' marginalization. Infact, there are several clues that show how religion and concern on soul salvation played a central role in foetuses and infants burial, even when those contradicted the Catholic Church's eschatology of unbaptized

children (Crow M, Zori C, Zori D,). We therefore have a discrepancy between regulatory texts and operational practices that an Archaeology of Marginality¹⁴³ can help outline. In the Early Middle Ages, infant graves (under 6 years old) are placed inside the cathedral, in particular in the central nave and around the baptistery. The differentiated use of burial areas is connected to privileges offered to specific individual's classes, especially in relation to worship places. This relationship is expressed by the will to reserve spaces in the church exclusively, or in large part, to subadults who had not received communion or confirmation^{144,145} previous research already reported that as noted by Gilchrist, "burial of the very young in this locale may have been considered to extend the sacramental efficacy of baptism"¹⁴⁶ or, as Hausmair notes, "to bestow the holy rite's transformative powers on unbaptized children"¹⁴⁷. In particular as already observed by Crow et al., associations between baptismal fonts and infant burials have been observed elsewhere, including Northern¹⁴⁸, Central¹⁴⁹ and Southern Europe including Italy (see below).

We also assist, again inside the cathedral, to a "clandestine burials"¹⁵⁰ in that active cemetery as in the case of the 3 foetuses placed in the central nave or the interment of pregnant women despite unbaptized foetuses were still in utero (e.g. Imola¹⁵¹, VII-VIII century, Villa Magna¹⁵², end XIII-XV, San Nicolao di Pietra Colice¹⁵³, end XIV, and the friary churches at Hartlepool and Hull¹⁵⁴).

A higher social rank within the society may account for the foetuses and pregnant women inclusion in hallowed ground¹⁵⁵, that of the High Medieval cathedral around the baptistry or in the central nave: as reported by the authors the respect of the Ecclesiatic requirements of avoiding young individuals' burials may have been also dependent on social hierarcy. It is also possible that the baptismal font 'topographical attraction' was stronger in papal foundation places, as visible in the coeval churches of the *domuscultae* (also of papal foundation) of Mola di Monte Gelato¹⁵⁶ and S. Cornelia¹⁵⁷ where fetal, infant, and child remains were buried near the decommissioned baptistries (Crow M, Zori C, Zori D₃).

Also in Late Medieval necropolis, as already mentioned, there is little evidence of burials no older than 6 years and there are only 5 under the year of life: at the moment the foetuses are completely absent. Stillbirths or very young individuals were buried in peripheral physical locations, i.e. aligned with the outside walls or with the facade of the Romanesque Basilica. Recalling their 'marginal' position within Christian theology, in particular foetuses and young individuals in the first years of life were buried at the 'margins' of sacred spaces¹⁵⁸: as also reported in previous studies (Cootes K, Thomas M, Jordan D, Axworthy J, Carlin R, Blood,) the 'eaves-drip burials' are documented starting from the Early Medieval Period, whereby burials of perinatals and neonates were disposed around the northern walls of a church such as *ad exemplum* S. Cornelia, Villa Magna, SS. Vitale e Agata near Rovio¹⁵⁹ and Miranduolo¹⁶⁰. These burials are commonly interpreted as a posthumous baptisms through the water drops

falling from the roof (*sub stillicidio*)¹⁶¹ but the interpretation comes from nineteenth-century folk-myth¹⁶²: certainly the choice of these particular spaces will also have contributed to being passage places that ensured easy access to the burial as well as its easy identification. The excavation *continuum* of this great necropolis will surely provide us with new data and maybe it will give us another 'selected' and 'planned' burial site of very young infants into the Late Medieval necropolis.

Another small burial area (Sector IX only partially excavated) deliberately reserved to perinatal and childhood aged individuals (3 foetuses, 2 perinatals less than a year old and 4 infants between 1 and 6 years old) is located in a 'liminal' space, topographically marginal to the town, attached to the northern wall perimeter: the individuals are buried (around mid-14th century) in the bare earth with no grave goods and most often without respect to the canonical orientation.

Reason for these isolated infant depositions *extra cimiterium* is currently unclear. It could have been a 'planned' choice perhaps linked to the presence of a neighboring church, as would suggest the presence of fragments of painted plaster, currently attested in Cencelle only in the religious sphere. In the case of a planning, fully medieval legislation linked the burial right (*ius sepeliendi*) to the belonging parish^{163,164}, associating family groups in life and in death. In any case, it is not uncommon for a community choosing to isolate infant burials from those belonging to adults for different reasons, mainly connected with hygiene¹⁶⁵ or violent death¹⁶⁶ (as for aborted foetuses) also linked to calamitous or epidemic events¹⁶⁷. In other cases separation is connected only to practical, social or ritual reasons, as in Piazza Duomo cemetery in Pisa¹⁶⁸.

In the case of Cencelle, this topographical 'marginalization' ('planned' or 'clandestine') perhaps relating to unbaptized infants or to infants who had not received the 'emergency baptism'¹⁶⁹ or, again, to social marginalization forms in life, such for orphans placed under non-family protection. Two evidences would lead in this direction: first, the infant (5 years old) buried in a bisome earthen grave has traces on teeth that may suggest a prolonged working activity. The second evidence is a large tile fragment, placed to cover the skull of another child burial: it could be a deceased individual *sine baptisma*¹⁷⁰ and the folk burial tradition *substillicidio* (o *suggrunda*)^{171,172,173,174} it may have been used, outside of the Christian canon law, to improve passing away of the deceased and their non-permanence in a liminal state.

All of these fetal and infant burials remains "serve as vivid reminders that laypeople – possibly with the tacit approval of local clergy – reinterpreted the Church's eschatology of unbaptized babies and occasionally took actions countervailing the exclusionary boundaries of Christian mortuary spaces" ¹⁷⁵.

In conclusion, social practices in relation to infant mortality and its rituals have always had a strong variation in the funeral scene. This will for differentiation is made explicit in Cencelle in several choices related to the use of dedicated spaces to infants. All areas, for different reasons, seem to occupy peculiar spaces, showing a clear will,

not just related to planning, but also aiming at separating and therefore distinguishing those individuals from the rest of the community, following social and ritual motivations, but, above all, affective motivations of compassion, care and love of parents towards their children ripped away by *mors immatura*, however incapable to tear the immortal parental bond.

Bibliography and notes

Acknowledgements: G.M.A. author of paragraphs 1. Premises and 5. Discussion; M.B. author of paragraph 2. Anthropological analysis methodology on infants; G.P. author of paragraphs 3. S. Pietro church burials; A.d.A author of paragraphs 4. Late Medieval cemetery burials. The authors thank eng. Mauro Antico and eng. Marco Crescentini for the English revision of the manuscript and dr. Federica Vacatello for plan design.

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