

DEATH IN UTERO. A PALÆOANTHROPOLOGICAL AND PALÆOMEDICAL APPROACH¹

Angela SIMALCSIK,
Robert-Daniel SIMALCSIK

Abstract

The grave from Fîrlădeni-*La Văleanu* (Căușeni District, Republic of Moldova), which is part of a still unexplored medieval necropolis, was discovered in 2015 and dated, according to the funeral ritual, in the 17th-18th centuries CE. The skeleton belongs to a female, with a biological age at death of approx. 17-18 years. Biomorphometric characteristics indicate Europoid and Mongoloid phenotypic features. The analysis of the dentition revealed several dental anomalies, and among the indicators of physiological stress, the linear enamel hypoplasia. *Cribra cranii*, *cribra orbitalia*, and periosteal changes/reactions on some limb bones diaphyses have been identified. Regarding the occupational indicators, we mention the septal aperture on the humeri and the squatting facets on the tibiae. On the coxae is well marked the preauricular sulcus, which is type 3 to 4. The detail that makes this discovery special is the presence of skeletal remains from another unborn individual, a *fœtus* with an intrauterine age between 5-7 months. No pathologies or abnormalities visible to the naked eye were identified on the skeletal elements of this unborn child. For the Prut-Dniester area, the discovery from Fîrlădeni-*La Văleanu* is the first case of a pregnant woman discovered in an archaeological context and anthropologically documented.

Keywords. Fîrlădeni-*La Văleanu* cemetery, 17th-18th centuries CE, death *in utero*, preauricular sulcus.

Archaeological data

In 2015, a seemingly banal burial grave was accidentally discovered at Fîrlădeni, at the place

named by locals *La Văleanu* (Căușeni District, Republic of Moldova), a site that was investigated and documented by the specialists of the National Archaeological Agency of Chișinău (Republic of Moldova). According to the funeral ritual, this is a closed complex, situated in an elongated rectangular pit, dug at a shallow depth, with the deceased lying in supine position, the lower limbs straight, the upper ones lying next to the body, the skull oriented to the west, facing south-east (Fig. 1/1). It is a late medieval funerary complex with no grave goods, which can be probably assigned to the Asian communities (most likely Mongol) having settled down in this areal. Based on the elements of funeral rite and ritual, the authors of the discovery established that it could have been built up in the 17th-18th centuries CE².

So far, in the Republic of Moldova, in the National Archaeological Repertory, recently updated by the specialists of the National Archaeological Agency, two archaeological sites are reported on the administrative territory of Fîrlădeni (Căușeni district), namely a Roman necropolis dated to the 2nd-3rd centuries CE at *Șesul Popii* (coordinates: 46°47'25.5"N 29°23'25.4"E), and a medieval necropolis of the 16th-18th centuries CE in the *La Văleanu* point (coordinates: 46°47'01.3"N 29°21'01.9"E)³. According to archaeological data, the grave analyzed in the present study is part of the medieval necropolis.

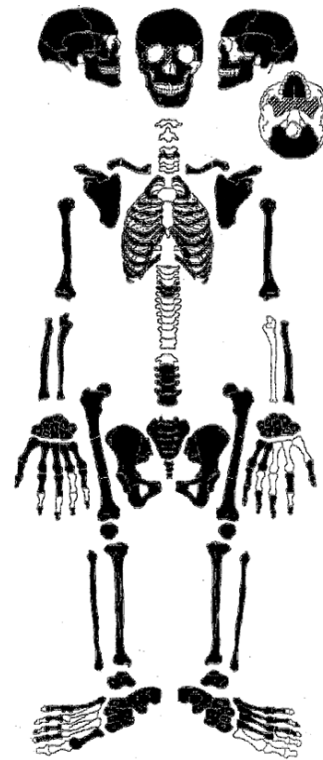
² Sergiu Popovici, „Morminte medievale târzii descoperite recent pe teritoriul Republicii Moldova” in Volumul de rezumate al Conferinței Internaționale *Cercetarea și valorificarea patrimoniului arheologic medieval*, 4 noiembrie 2021, ed. Sergiu Musteață et al. (Chișinău: Universitatea Pedagogică de Stat „Ion Creangă”, 2021).

³ The information regarding the sites listed on the territory of Fîrlădeni locality was taken over from the National Archaeological Repertory (“Fondul național de date geospațiale,” Google, <http://www.geoport.md/>). Access to this source was kindly provided by Dr. Vlad Vornic, director of the National Archaeological Agency of the Republic of Moldova, to whom we are grateful for his openness and receptivity.

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Fig. 1. 1. In situ photo of the skeleton from Firlădeni-La Văleanu (taken by the authors of the excavation); 2. Representation state of the skeleton (white – absent elements; black – present and complete elements; hatching – present but incomplete elements). (Diagram drawn by the authors of anthropological analysis)

Biomorphometric data

The skeleton discovered in the grave from Firlădeni, in the *La Văleanu* point, is well represented⁴, showing a good state of preservation⁵. The cephalic segment is almost complete, reconstituted by restoration. Some *postmortem* damages are located in the left zygomatic, zygomatic arches, and lower orbits. Also, the postcranial segment is almost complete. Only a few skeletal elements are missing, which were most likely destroyed *in situ*, in the process of bones cleaning, namely: six cervical vertebrae, 10 thoracic and two lumbar vertebrae, the mesosternum, a few ribs, the left ulna, and some components of hands and feet (Fig. 1/2).

The thin upper edge of the orbits, the pronounced gracility of the entire skeleton, the attenuated muscle insertions (barely identifiable), the

characteristics of the skull, coxae, and sacrum indicate the **female sex**⁶.

The dental condition, the absence of cranial sutures obliteration, incomplete ossification (of the iliac crest, sciatic *ramus*, distal epiphysis of the ulna, humeral head, distal epiphysis of the radius, clavicles ends, and thoracic and lumbar vertebral plates), almost complete ossification shortly before the death of the femoral head, the tibial plateau and the proximal fibular epiphysis, and also the incipient wear of the permanent dental crowns indicate a biological age at death of approx. **17-18 years** (*juvenis* or adolescent)⁷.

⁴ Jane E. Buikstra and Douglas H. Ubelaker, *Standards for data collection from human skeletal remains* (Fayetteville: Arkansas Archaeological Survey Research Series, No 44, 1994), 5-8.

⁵ Brian Connell, „Preservation and archaeological data” in *Human osteology method statement*, ed. Natasha Powers (London: Museum of London, 2008), 9-11.

⁶ Buikstra and Ubelaker, *Standards*, 16-21; Jaroslav Bruzek, „A method for visual determination of sex, using the human hip bone” *American Journal of Physical Anthropology* 117 (2002): 157-68. <https://doi.org/10.1002/ajpa.10012>; Dana E. Walrath, Paul Turner, and Jaroslav Bruzek, „Reliability test of the visual assessment of cranial traits for sex determination”, *American Journal of Physical Anthropology* 125 (2004): 132-7. <https://doi.org/10.1002/ajpa.10373>; Brenna Kay Blanchard, „A study of the accuracy and reliability of sex estimation methods of the human pelvis” (Ph.D. diss., Faculty of California State University, 2010), 6-27.

⁷ B. G. Smith and J. K. Knight, „An index for measuring



Fig. 2. 1. Skull, frontal/facial view; 2. Skull, right side view; 3. Skull, vertical view; 4. Skull, occipital view. (Photos taken by authors)

The following morphometric characteristics of the *neurocranium* and *viscerocranium* should be mentioned (Fig. 2/1-4): neurocranium with moderate length, width, and height, ovoid shape (seen in vertical plane); mesocranic cephalic index (at the upper limit of the category); fairly wide forehead; moderately sized, curved occipital, with pronounced curvature; weak cranial muscle insertions; moderately high to short facial skeleton; probably round, high orbits (their lower edge is destroyed *postmortem*); short and quite wide nose; moderately developed zygomatic bones, without relief, arranged

in the same plane as the temporals; superficial canine fossa; narrow and low, yet robust mandible, with moderate height body, short and wide vertical ramus, pronounced pyramidal symphysis and weak muscle insertions⁸.

The postcranial skeletal elements are gracile. The skeletal stature ranges between 155 and 159 cm (average, 156 cm⁹), at the lower limit of the middle female category. All morphometric characteristics of this individual suggest a mixture of typological/

the wear of teeth”, *British Dental Journal* 156 (1984): 435-8. <https://doi.org/10.1038/sj.bdj.4805394>; Buikstra and Ubelaker, *Standards*, 21-38; Krista E. Latham and Michael Finnegan, *Age estimation of the human skeleton* (Springfield: Charles C. Thomas, 2010).

⁸ Rudolf Martin and Karl Saller, *Lehrbuch der anthropologie* (Stuttgart: Fischer, 1956-1966).

⁹ Mildred Trotter, „Estimation of stature from intact long limb bones” in *Personal identification in mass disasters: National Museum of Natural History*, ed. Thomas Dale Stewart (Washington, DC: Smithsonian Institution, National Museum of Natural History, 1970), 71-84.

phenotypic features of Mediterranean and Dinaric type, with Mongoloid elements¹⁰.

Dental state

Dentition was analyzed on both arches (Fig. 3/1-2). Missing teeth in the alveoli are lost *postmortem*. Crown wear is weak (attrition type), caused by the physiological process of mastication¹¹. No teeth fell out during her lifetime. Calculus, cavities, or abscesses are missing.

The only pathological condition, which is actually a marker of the acute physiological stress produced in childhood, was identified in the lower permanent canines. On their surface, the crowns show two quantitative linear, hypoplastic, structural defects, placed horizontally on the vestibular face of the crowns (Fig. 3/3), and resulting from a temporary disturbance of amelogenesis (formation of tooth enamel). For permanent dentition, amelogenesis begins at birth and continues up to the biological age of 6-7 years (or up to 13 years for the tertiary molar) while, in the particular case of the permanent canine, in the postnatal age interval – namely between 4-5 months and 6-7 years of age¹². The biological age at which the first episode occurred is approx. 3.5-3.7 years and approx. 4.1-4.2 years, respectively, for the second¹³.

Several dental anomalies and epigenetic/non-metric traits have been identified (Fig. 3/1-2), as follows: congenital absence/hypodontia of the permanent second upper premolar and of all third

molars¹⁴; horizontal rotation, by approx. 90°, of the permanent first upper right premolar; persistence of the deciduous second molars, respectively retention/inclusion of the permanent second lower premolars in the alveolus¹⁵.

Bone pathologies

Active porotic hyperostosis (*cribra cranii*) was identified on the bones of neurocranium, and *cribra orbitalia* of porotic type (Fig. 4/1), inactive at the time of death, on the roof of both orbits. Both types of porosity are the result of an abnormal growth of bone tissue on the outer surface of the neurocranial bones, being caused by bone hyperplasia and hypertrophy¹⁶.

On the tibial shafts, periosteal changes may be observed (Fig. 4/2), namely reactions of the bone system, through the *periosteum*, to acute or chronic inflammation or infection, equally a marker of physiological stress. Periosteal changes may indicate, for example, the presence of osteitis, *i.e.* an active microbial infection at the time of death, or avitaminosis¹⁷.

Occupational markers

Muscle insertions on the skeletal elements responsible for movement are not pronounced, which translates into reduced ground mobility and a sedentary lifestyle.

The humerus, which is platybrachic, has a supratrochlear foramen (Fig. 5/1), an opening most likely caused by the atrophy produced after ossification, due to mechanical pressure exerted by the ulnar olecranon process on the humeral supratrochlear area, and by repetitive flexion-extension

¹⁰ Peter Boev, *Die Rassentypen der Balkanhalbinsel und der Ostägaischen Inselwelt und deren Bedeutung für die Herkunft ihrer Bevölkerung* (Sofia: Verlag der Bulgarischen Akademie der Wissenschaften, 1972).

¹¹ Smith and Knight, „An index,” 435-8; Martin Addy and Robert Peter Shellis, „Interaction between attrition, abrasion and erosion in tooth wear” *Monographs in Oral Science* 20 (2006): 17-31. <https://doi.org/10.1159/000093348>.

¹² Alan H. Goodman, George J. Armelagos, and Jerome C. Rose, „Enamel hypoplasias as an indicator of stress in three prehistoric populations from Illinois” *Human Biology* 52, no. 3 (1980): 515-28. <https://digitalcommons.wayne.edu/humbiol/vol52/iss3/14>; William R. Proffit, Henry W. Fields, and David M. Sarver, *Contemporary Orthodontics*, 5th ed. (St. Louis: Mosby, 2012), 66-88. <https://doi.org/10.1177%2F08959374890030021101>.

¹³ Goodman, Armelagos, and Rose, „Enamel hypoplasias,” 515-28; Alan H. Goodman and George J. Armelagos, „Factors affecting the distribution of enamel hypoplasia within the human permanent dentition” *American Journal of Physical Anthropology* 68 (1985): 479-93. <https://doi.org/10.1002/ajpa.1330680404>.

¹⁴ Ecaterina Ionescu, *Anomaliile dentare* (București: Cartea Universitară, 2005), 15.

¹⁵ Ionescu, *Anomaliile*, 73.

¹⁶ Patty Stuart-Macadam, „Porotic hyperostosis: representative of a childhood condition”, *American Journal of Physical Anthropology* 66, no. 4 (1985): 391-8. <https://doi.org/10.1002/ajpa.1330660407>; Donald J. Ortner, *Identification of pathological conditions in human skeletal remains* (Oxford: Academic Press, 2003), 102-107; Arthur C. Aufderheide and Conrado Rodriguez-Martin, *The Cambridge encyclopedia of human paleopathology* (Cambridge: Cambridge University Press, 1998), 348-351; Simon Mays, *The archaeology of human bones* (London, New York: Routledge, 1998), 142-145.

¹⁷ Aufderheide and Rodriguez-Martin, *The Cambridge encyclopedia*, 310-311; Tony Waldron, *Palaeopathology* (Cambridge, New York: Cambridge University Press, 2009), 114-116.



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Fig. 3. 1. Upper dental arch, persistence of the deciduous molar on the left side and dental rotation of the permanent first right premolar; 2. Lower dental arch, persistence of the deciduous first molars (bilateral); 3. Left mandibular canine, linear enamel hypoplasia (Photos taken by authors)



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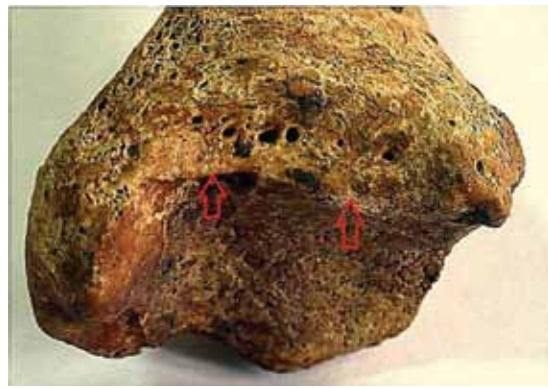


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Fig. 4. 1. *Cribrra orbitalia* on the roof of the left orbit, inactive; 2. Diaphysis of the tibia, active periosteal reactions, and new bone tissue (Photo taken by authors)



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Fig. 5. 1. Humerus, distal epiphysis, supratrochlear foramen; 2. Tibia, distal epiphysis, squatting facet. (Photo taken by authors).



Fig. 6. Skeletal remains of the foetus (intrauterine age: 5-7 months). (Photo taken by authors).

movements of the forearm¹⁸. The femur is flat, with no trace of pilastry. On its distal epiphysis, the tibia, which is eurycnemic, evidences additional joint facets (Fig. 5/2), also named squatting facets, which are bone remodeling elements. These facets may indicate mechanical stress caused by subject's preference for the hyperdorsiflexed/crouching position during daily activities¹⁹.

¹⁸ Suruchi Singhal and Vani Rao, „Supratrochlear foramen of the humerus”, *Anatomical Science International* 82 (2007): 105-7. <https://doi.org/10.1111/j.1447-073x.2007.00172.x>; Anupama Mahajan, „Supratrochlear foramen: Study of the humerus in North Indians” *Professional Medical Journal* 18, no. 1 (2011): 128-32. <http://dx.doi.org/10.29309/TPMJ/2011.18.01.1879>.

¹⁹ Ilknur Ari, Hakan Oygucu, and Erdogan Sendemir, „The squatting facets on the tibia of Byzantine (13th) skeletons” *European Journal of Anatomy* 7, no. 3 (2003): 143-6. <https://eurjanat.com/v1/journal/paper.php?id=03030143>; Ismail Baykara et al., „Squatting facet: A case study Dilkaya and Van-Kalesi populations in eastern Turkey” *Collegium Anthropologicum* 34, no. 4 (2010): 1257-62. <https://hrcak.srce.hr/62822>.

Corpus in corpus

The detail brought to light during this investigation, namely the presence of skeletal remains from another, unborn individual, differentiates the discovery made at Firlädeni from the multitude of other medieval funerary complexes. Among the skeletal remains of the young woman there were identified femurs, a tibia, fragments of the fibula, humeri, radii, ulnae, two fragments of ribs, a scapula, an ilium, and fragments of neurocranial bones, all these belonging to a single individual – a foetus. (Fig. 6).

Intrauterine age, estimated by the length of the whole bones of the foetus, based on biometric radiological data²⁰, is:

²⁰ Maureen Schaefer, Sue Black, and Louise Scheuer, *Juvenile osteology: A laboratory and field manual* (Elsevier, Academic Press, 2009). <https://doi.org/10.1016/B978-0-12-374635-1.X0001-X>; István Gyula Fazekas and Ferenc Kósa, *Forensic fetal osteology* (Budapest: Akadémiai Kiadó, 1978); Philippe Jeanty, „Fetal limb biometry”, *Radi-*



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Fig. 7. 1. Right coxal bone, preauricular sulcus; 2. Preauricular sulcus, detail. (Photo taken by authors).

- between 23 and 28-30 weeks, according to the length (47.5 mm) of the femoral shaft;
- between 23 and 27-28 weeks, according to the length (41 mm) of the tibial shaft;
- between 23-24 and 26-28 weeks, according to the length (44 mm) of the humeral shaft;
- between 24 and 28-30 weeks, according to the length (37 mm) of the radial shaft.

The *fœtus* the teenager from Fîrlădeni-La Văleanu was carrying *in utero* at the time of death had an age framed between 23-24²¹ and 27-29²² intra-uterine weeks, which translates into 5-7 months of pregnancy. The skeletal elements of the *fœtus* do not show visible pathologies or abnormalities.

Preauricular sulcus – a controversial indicator

A characteristic feature identified on the iliac bone of the juvenile from Fîrlădeni, which we will discuss in detail, is the preauricular sulcus, also called paraglenoid sulcus – an elongated groove/trench, located at the lower level of the auricular surface of the ilium (Fig. 7/1-2). The sulcus is present on both coxae and, depending on its morphology, it could be indicative, as stated by many authors, of at least one birth delivery before death. The ventral sacroiliac ligament is inserted in this anatomical region, known as relaxing during the hormonal changes induced by pregnancy, and sometimes becoming inflamed, imprinting the sulcus²³.

ology 147 (1983): 601-2. <https://doi.org/10.1148/radiology.147.2.6836145>.

²¹ Jeanty, „Fetal limb,” 601-2.

²² Fazekas and Kósa, *Forensic*.

²³ Walter G. J. Putschar, *Entwicklung, Wachstum und Pathologie der Beckenverbindungen des Menschen, mit beson-*

However, opinions on the skeletal changes associated with parturition are divided, including those relating to the preauricular sulcus. The subject was and still remains in the attention of specialists concerned with fertility and demographic reconstruction of ancient populations.

One of the first literature reviews on this topic was published in 1978²⁴, followed, in 2012, by a more complex one²⁵, debating the skeletal changes caused by pregnancy, childbirth and parity, in pros and cons ways.

The association between the preauricular sulcus and the female sex, from parturition's perspective, is put forward for the first time by Douglas E. Derry²⁶. A decade later, T. Wingate Todd mentions the difficulty of detecting parity in skeletal collec-

derer Berücksichtigung von Schwangerschaft, Geburt und ihren Folgen / Development, growth and pathology of pelvic joint of the people with special reference of pregnancy, birth and its consequence (Jena: Fischer, 1931); Thomas Dale Stewart, „Distortion of the pubic symphyseal surface in females and its effect on age determination”, *American Journal of Physical Anthropology* 15 (1957): 17. <https://doi.org/10.1002/ajpa.1330150109>.

²⁴ Mahmoud Y. El-Najjar and K. Richard McWilliams, *Forensic anthropology: the structure, morphology, and variation of human bone and dentition* (Springfield: Charles C. Thomas, 1978).

²⁵ Douglas H. Ubelaker, Jade S. De La Paz, „Skeletal indicators of pregnancy and parturition: A historical review”, *Journal of Forensic Sciences* 57, no. 4 (2012): 866-72. <https://doi.org/10.1111/j.1556-4029.2012.02102.x>.

²⁶ Douglas E. Derry, „Note on the innominate bone as a factor in the determination of sex: with special reference to the sulcus preauricularis” *Journal of Anatomy and Physiology* 43 (1909): 266-76. <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc1289186/>.

tions, which rendered him quite skeptical about any association²⁷. Other studies show that parturition can sometimes cause infection, hemorrhage, and laceration of the inserted ligaments of the ilium, ischium, and pubis²⁸.

Over time, the subject has rightfully received increasing attention. Many authors believe that the preauricular sulcus with grooves, pits, folds, or bone growths (enthesophytes), along with scars on the dorsal and/or ventral surface of the peripubic area, oversizing/elongation of the pubic tubercle, changes in the area of fixation of the sacroiliac ligament on the sacrum, and sacral preauricular extension sometimes occur as a result of obstetric trauma during childbirth, rarely individually, more frequently in association²⁹.

²⁷ T. Wingate Todd, „Ages changes in the pubic bone” *American Journal of Physical Anthropology* 4 (1921): 39-40. <https://doi.org/10.1002/ajpa.1330040102>.

²⁸ B. F. Boland, „Rupture of the symphysis pubis articulation during delivery” *Surgery, Gynecology and Obstetrics* 57 (1933): 518; Leon L. Wiltse and Charles H. Frantz, „Non-supportive osteitis pubis in the female”, *Journal of Bone and Joint Surgery* 38 (1956): 500-16.

²⁹ Putschar, *Entwicklung*; Stewart. „Distortion,” 9-18; John Lawrence Angel, „The bases of paleodemography” *American Journal of Physical Anthropology* 30 (1969): 427-38. <https://doi.org/10.1002/ajpa.1330300314>; John Lawrence Angel, *The people of Lerna: analysis of a prehistoric Aegean population* (Princeton: American School of Classical Studies at Athens, 1971); Herbert Ullrich, „Estimation of fertility by means of pregnancy and childbirth alterations at the pubis, ilium, and sacrum”, *Ossa* 2 (1975): 23-39; Herbert Ullrich, „Methodische Erfahrungen Zur Beurteilung der Fertilität a Menschlichen Beckenknochen” *Anthropologie* 14 (1976): 125-30; Joel Thomas Ashworth et al., „The pubic scars of gestation and parturition in a group of pre-Columbian and colonial Peruvian mummies” *American Journal of Physical Anthropology* 45 (1976): 85-90. <https://doi.org/10.1002/AJPA.1330450111>; Marc A. Kelley, „Parturition and pelvic changes” *American Journal of Physical Anthropology* 51 (1979): 541-6. <https://doi.org/10.1002/ajpa.1330510405>; Vladimír Novotný, „Pohlavní rozdíly a identifikace pohlaví pánevní kosti” (PhD diss., Purkyně University, Brno, 1981); Douglas W. Owsley and Bruce Bradtmiller, „Mortality of pregnant females in Arikara villages: osteological evidence” *American Journal of Physical Anthropology* 61 (1983): 331-6. <https://doi.org/10.1002/ajpa.1330610307>; Wilton Marion Krogman and Mehmet Yasar İşcan, *The human skeleton in forensic medicine*, 2nd edition (Springfield: Charles C. Thomas, 1986), tab. 1; David B. Spring et al., „The radiographic preauricular groove: Its non-relationship to past parity”, *American Journal of Physical Anthropology* 79 (1989): 247-52. <https://doi.org/10.1002/ajpa.1330790212>; Frank P. Saul and Julie M. Saul, „Os-

Moreover, some studies have staged bone changes in the pelvic bones, assigning to each change a number of parturitions/births³⁰.

At the other end of the spectrum, mention should be made of the studies performed on coxae of women with known documented parity/number of parturition, which established no definite correlations between *preauricular sulcus* (regardless of its morphological characteristics), pubic scars (regardless of their depth), pubic tubercle (regardless of its size) and parturition³¹. Some authors believe that

teobiography: A Maya example” in *Reconstruction of life from the skeleton*, ed. Mehmet Yaşar İşcan and Kenneth Kennedy (New York: Alan R. Liss, 1989), 287-302; Tracy Rogers and Shelley Saunders, „Accuracy of sex determination using morphological traits of the human pelvis” *Journal of Forensic Sciences* 39, no. 4 (1994): 1047-56. <https://doi.org/10.1520/JFS13683J>; Drew Schemmer, Philip G. White, and Lawrence Friedman, „Radiology of the paraglenoid sulcus”, *Skeletal Radiology* 24 (1995): 205-9. <https://doi.org/10.1007/bf00228925>; Bruzek, „A method,”; Tatum A. McArthur et al., „Parturition pit: The bony imprint of vaginal birth” *Skeletal Radiology* 45 (2016): 1263-7. <https://doi.org/10.1007/s00256-016-2418-3>; Lukas Waltenberg et al., „The association of parturition scars and pelvic shape: A geometric morphometric study”, *American Journal of Physical Anthropology* 174 (2021): 519-31. <https://doi.org/10.1002/ajpa.24196>.

³⁰ György Acsádi and János Nemeskéri, *History of human life span and mortality* (Budapest: Akadémiai Kiadó, 1970); Kelley, „Parturition,” 541-6; Ullrich, „Estimation,” 23-39; Yuriko Igarashi, „Pregnancy bony imprint on Japanese female pelvis and its relation to pregnancy experience” *Journal of Anthropological Society of Nippon* 100 (1992): 311-9. <https://doi.org/10.1537/ase1911.100.311>; Schemmer, White, and Friedman, „Radiology,” 205-9.

³¹ Stewart. „Distortion,” 9-18; C. Adams Holt, „A re-examination of parturition scars on the human female pelvis” *American Journal of Physical Anthropology* 49 (1978): 91-4. <https://doi.org/10.1002/ajpa.1330490114>; Judy Myers Suchey et al., „Analysis of dorsal pitting in the Os pubis in an extensive sample of modern American females”, *American Journal of Physical Anthropology* 51 (1979): 517-39. <https://doi.org/10.1002/ajpa.1330510404>; Spring et al. „The radiographic,” 247-52; Barbara Cage Andersen, „Pelvic scarring analysis-parturition or excess motion” *American Journal of Physical Anthropology* 75 (1988): 181. <https://www.ncbi.nlm.nih.gov/pubmed/31697408>; Margaret J. Cox, „An evaluation of the significance of „scars of parturition” in the Christ Church Spitalfields sample” (Ph.D. diss., vol. 1, Institute of Archaeology, University College London, 1989), 292-294. <https://discovery.ucl.ac.uk/id/eprint/1318037>; Margaret J. Cox and Andrew Scott, „Evaluation of the obstetric significance of some pelvic characters in an 18th-century British sample of known parity status” *American Journal of Physical Anthropology* 89 (1992): 431-40. <https://doi.org/10.1002/ajpa.1330890404>; Clare McFadden and Marc F. Oxen-

only certain changes can be considered indicators of childbirth or of number of births, such as pubic scars in young women, and/or in those with a high body mass index³², or with a certain morphology of the preauricular sulcus³³.

Skepticism about the correlation between parturition and parity/number of childbirth and preauricular sulcus has its roots in studies documenting this feature in some male or nulliparous female pelvises. Thus, the preauricular sulcus comes to be categorized into two distinct types. The former is of "ligament" type, involving insertion of the muscular ligament, the latter is of "parturition" type, considered the result of the tension of the ventral sacroiliac ligaments during birth, being most often associated with inflammation of the peripubic area³⁴.

The most appropriate attitude remains caution and multivariate analysis, taking into account all skeletal changes that may be caused by parturition, such as: presence and morphology of the preauricular sulcus, presence of dorsal and ventral pubic scars, oversizing/elongation of the pubic tubercle, appearance of the interosseous iliac groove, presence of *margo auricularis* on the sacrum, sacral auricular extension or any other change that occurs in the regions where the muscles responsible for pelvic flexibility attach³⁵.

Of all the skeletal changes associated with pregnancy, parturition, and parity, none can be used as a safe individual indicator, because no control is pos-

sible over other causal factors, such as: the somatic characteristics of the analyzed subject (biological age, bone degeneration, body size and shape, body mass index, robustness, diameter of the birth canal, intensity of physical activity, terrestrial mobility, hyperdorsiflexion, traumatic episodes, hormonal level, interval between parturitions); fetal characteristics (size, weight, prenatal position *in utero*); *peripartum* factors (the quality of obstetric care, position of the woman during childbirth, rate of bone loss in breastfeeding women); cultural and temporal factors (gender and age structure of the population, population birth rate)³⁶.

Returning to the young woman from Fîrlădeni-La Văleanu, her coxae have a well-defined preauricular sulcus (Fig. 7/1-2). Morphologically, this type of sulcus falls between the 3rd and 4th category/type³⁷, *i.e.* it is well-defined, quite wide, with a depth of less than 0.5 cm, with smooth walls to the auricular surface and undulating towards the sciatic notch, located only in the back/bottom of the auricular surface, with a sharp edge, and extending along the entire lower edge of the notch. The pelvic girdle components provide no indicators that the groove should be associated with to fall into the "parturition type" category. The peripubic area has no signs of inflammation, no scars/pits. The pubic tubercle is not oversized. The sacrum has no changes in the area of attachment of the sacroiliac ligament or preauricular extension.

ham, „Sex, parity, and scars: A meta-analytic review” *Journal of Forensic Sciences* 63 (2018): 201-6. <https://doi.org/10.1111/1556-4029.13478>.

³² J. Josh Snodgrass and Alison Galloway, „Utility of dorsal pits and pubic tubercle height in parity assessment”, *Journal of Forensic Sciences* 48, no. 6 (2003): 1226-30. <https://doi.org/10.1520/JFS2003027>.

³³ Yuriko Igarashi et al., „Pregnancy parturition scars in the preauricular area and the association with the total number of pregnancies and parturitions” *American Journal of Physical Anthropology* 171 (2020): 260-74. <https://doi.org/10.1002/ajpa.23961>.

³⁴ Philip Houghton, „The relationship of the pre-auricular groove of the ilium to pregnancy” *American Journal of Physical Anthropology* 41 (1974): 381-9. <https://doi.org/10.1002/ajpa.1330410305>; Philip Houghton, „The bony imprint of pregnancy” *Bulletin of the New York Academy of Medicine* 51 (1975): 655-661. <https://www.ncbi.nlm.nih.gov/pubmed/1055621>.

³⁵ Kelley, „Parturition,” 541-6; T. Bergfelder and B. Herrmann, „Estimating fertility based on birth traumatic changes in the pubic bone” *Journal of Human Evolution* 9 (1980): 611-3. [https://doi.org/10.1016/0047-2484\(80\)90091-3](https://doi.org/10.1016/0047-2484(80)90091-3).

³⁶ Stewart. „Distortion,” 9-18; Thomas Dale Stewart, „Identification of the scars of parturition in the skeletal remains of females” in *Personal identification in mass disasters*, ed. Thomas Dale Stewart (Washington, DC: National Museum of Natural History, 1970), 127-35; Ashworth et al., „The pubic scars,” 85-90; Kelley, „Parturition,” 541-6; Andersen, „Pelvic scarring,” 181; G. Neil Kent et al., „Human lactation: forearm trabecular bone loss, increased bone turnover, and renal conservation of calcium and inorganic phosphate with the recovery of bone mass following weaning” *Journal of Bone and Mineral Research* 5, no. 4 (1990): 361-9. <https://doi.org/10.1002/jbmr.5650050409>; Alison Galloway, „Determination of parity from the maternal skeleton: an appraisal” *Rivista di Antropologia* 73 (1995): 83-98; Robert G. Tague, „Do big females have big pelvises?” *American Journal of Physical Anthropology* 112 (2000): 377-93. [https://doi.org/10.1002/1096-8644\(200007\)112:3%3C377::aid-ajpa8%3E3.0.co;2-o](https://doi.org/10.1002/1096-8644(200007)112:3%3C377::aid-ajpa8%3E3.0.co;2-o); Snodgrass and Galloway, „Utility,” 1226-30; Petra Maas and Louise Jacqui Friedling, „Scars of parturition? Influences beyond parity” *International Journal of Osteoarchaeology* 26 (2016): 121-31. <https://doi.org/10.1002/oa.2402>.

³⁷ Buikstra and Ubelaker, *Standards*, 18-19.

Death *in utero* in the literature

The literature is not very generous on the topic of death *in utero*, a situation most likely caused by the fragility of skeletal remains of prenatal age. More common are cases of newborns buried with women (with whom they are related or not), and several situations of newborns buried with men or with other children have been reported.

For the medieval circum-Carpathian area, worth mentioning is a discovery made on the left bank of the Mureş River, near Frumuşeni, at *Fântâna Turcului* point (Arad County, Romania). In the grave no. 170, a woman of approx. 25-30 years is buried. Between her thighs, a subadult was placed, oriented in the same way as the woman: her head towards her pelvis. According to the size of the skeletal elements (humerus length – 6.6 cm; petrous pyramid length – 4.03 cm), it is a newborn or a child with a biological age of up to 10 postnatal months. Possible causes of death are the following: birth with complications, puerperal infection, *postpartum* hemorrhage, or other collateral factors³⁸.

Another case, this time situated on the left bank of the Dniester River, has been documented in the Nogai necropolis of Mologa (Belgorod-Dnestrovskii District, Odesa region, Ukraine). In mound 2, a total of 134 funerary complexes were discovered, dating to the 16th-17th centuries CE, assigned to the Late Medieval Turanians – the Nogai tribes (Mongolian Turkishized population). In grave no. 83, the skeleton of a woman and skeletal remains of a *fœtus* (probably full term *fœtus*) in her pelvic area was discovered³⁹.

Cases of death *in utero* discovered in archaeological contexts have been more frequently documented in the circum-Mediterranean area. In 2007, an adult female skeleton from a Muslim grave in Granada (Spain) is presented in literature. The death of the woman occurred in the last weeks of pregnancy (the intrauterine age of the *fœtus* is 38-40 weeks), the cause of death of the mother being directly associated with pregnancy⁴⁰. Another inter-

esting case is that of a Christian grave in the cemetery of Sant Pere (Tarrasa, Barcelona, Spain), dated in the 9th-10th centuries CE, in which the skeleton of an 18-20 year-old juvenile with a 30-34 week-old *fœtus* was discovered⁴¹. In 2008, several cases found out in three Navarrese necropolises are published, namely: a case of death *in utero* at 22-23 weeks and other four cases with full-term fetuses (38-41 weeks). The author lists several possible causes and associated maternal or fetal pathologies⁴². Two other cases in Navarre (Spain), from an Islamic necropolis, analyze two adult pregnant women, one with an intrauterine age of the *fœtus* of approx. 22-23 weeks, the other – 38 weeks⁴³. In 2018, the literature discusses 11 more cases in medieval Navarre (6th-15th centuries CE), of which nine are adult women who died in different stages of pregnancy, and two, adult women who died *peripartum*. The fetuses had between 22 and 42 intrauterine week-old. Dystocia has been documented in only one case of the death *in utero*⁴⁴. Bone changes have been found in several fetuses, due to infections or nutritional deficiencies. The study correlates the age of the mother and of the *fœtus* with the dental and bone pathological data, as well as with the entheopathic changes/reactions resulting from physical overloading, for identifying the harsh living conditions in the community⁴⁵.

A complex study, published in the World Arche-

de la contextualización en los estudios paleopatológicos, ed. Francisco Javier Barca Durán and Javier Jiménez Ávila, vol. 1, Actas del VIII Congreso Nacional de Paleopatología - I Encuentro hispano-luso de Paleopatología (Cáceres 16-17 de Noviembre de 2005) (Cáceres: Fundación Academia Europea de Yuste, Gráficas Luengo, 2007), 381-5.

⁴¹ Xavier Jordana Comin, „Caracterització i evolució d'una comunitat medieval catalana. Estudi bioantropològic de les inhumacions de les esglésies de Sant Pere” (PhD diss., Universitat Autònoma de Barcelona, 2007).

⁴² María Paz De Miguel-Ibáñez, „Gestantes en contextos funerarios alto medievales Navarros” *Lvcentvm XXVII* (2008): 234-42. <http://dx.doi.org/10.14198/LVCENTVM2008.27.19>.

⁴³ María Paz De Miguel-Ibáñez et al., „Dos embarazadas de la maqbara de la Calle Herrerías (Tudela, Navarra) (s. IX-XI)” in *Paleopatología: ciencia multidisciplinaria*, ed. Armando González Martín et al. (Madrid: Sociedad Española de Paleopatología, Universidad Autónoma de Madrid, Universidad Complutense de Madrid, 2011), 587-99. <http://hdl.handle.net/10486/11460>.

⁴⁴ Dystocia is the total abnormal condition of either mother or *fœtus*, which causes abnormal labor.

⁴⁵ María Paz De Miguel-Ibáñez, „En la frontera de lo invisible. Las muertes maternas a partir de la documentación arqueológica en Navarra” *Trabajos de Arqueología Navarra* 30 (2018): 215-35. <https://revistas.navarra.es/index.php/TAN/article/view/179>.

³⁸ Luminița Andreica, „Distocia, posibil diagnostic în decesul unei femei din perioada medievală” *Banatica* 24, no. 1 (2014): 299-303. <http://banatica.ro/media/b24-1/I.299-304.pdf>.

³⁹ Aleksandr E. Malyukevich, Sergey M. Agulnikov, and Sergey S. Popovich, *Kurgany pravoberezhya dnestrovskogo limana u s. Mologa* (Odessa-Kishinev: Lexon-Prim, 2017), 73, 171, Fig. 49.3.

⁴⁰ María Paz De Miguel-Ibáñez et al., „Embarazada en la necropolis de la Puerta de Elvira (Granada)” in *Enfermedad, muerte y cultura en las sociedades del pasado. Importancia*

ology journal in 2013, focused on female fertility and maternal mortality from an archaeological perspective, developing/ revealing an obvious, but previously ignored reality: the cause of death among young or middle-aged women in Anglo-Saxon communities (and not only) is almost always parturition⁴⁶. The authors analyze the skeletal remains of the Early Medieval Anglo-Saxon cemetery (5th-7th centuries CE) in Oakington (Cambridgeshire) and correlate the physiological situation of the pregnant woman with the burial site in the cemetery, the orientation of the pit/skeleton, the grave goods, the funeral practices and woman's and fetuses' pathologies. Grave no. 57 (a 25-30 year-old woman), which is a case of *post-mortem* fetal expulsion⁴⁷, is discussed.

Historical and archaeological data on maternal and child death is also used in a study of 15 cemeteries in Medieval Ireland. The authors identify 30 adult women associated with one or more fetuses or newborns. Palaeomedical data is correlated with the biological age of women⁴⁸.

Other cases discovered in the Anglo-Saxon area should be also mentioned, such as: the pregnant juvenile of approx. 15-20 years, buried at the edge of Abingdon I Cemetery⁴⁹; the 20-30 year-old woman from grave no. 110 in Dover, Buckland, with the *fœtus* in birth position, buried in the middle area of the cemetery⁵⁰; the 35-40 year-old woman from Apple Down, grave no. 175, buried at the edge of the cemetery, with the *fœtus* left in the pelvic cavity⁵¹; the young woman of approx. 15-25 years from grave no. 32 in Great Chesterford, with a 32 week-old *fœtus*⁵²; the 18-20 year-old juvenile from grave

26 in Worthy Park, with the *fœtus* lying between her thighs⁵³.

In the cemetery of San Genesio (San Miniato, Pisa, Italy), chronologically framed between 6th-13th centuries CE, in one of the burial chambers belonging to the early phases of the cemetery, the skeleton of a woman of approx. 30 years and that of a 32 prenatal week *fœtus* laying between woman's femurs were discovered. The unborn child was in cephalic presentation, *i.e.* inversely oriented towards woman's skeleton (with the lower limbs towards her pelvis). Starting from taphonomic data and modern forensic cases, the authors draw the following conclusion: due to the accumulation of gas during the emphysema stage of the decomposition process, the body of the woman expelled the *fœtus* from the pelvic cavity, a phenomenon produced before the body of the deceased was completely covered with soil. The authors cite several circumstances that may result in *postmortem* fetal expulsion. For the *fœtus*, it would be prematurity, hypotrophy, and cephalic presentation while, for the woman, the occurrence of death in a warm period of the year and the laying/burial in a funeral chamber (with space). This finding is defined as a clear and rare case of "coffin birth" documented in an archaeological context⁵⁴.

Another case of "coffin birth" is that of a Medieval grave (15th century CE) discovered at Imola (Bologna, Italy). The skeleton of a *fœtus* of approx. 38 weeks was found between the femurs of a 25-35 year-old woman. The *fœtus* was partially expelled from woman's body, being found *in situ* with the skull and upper skeleton outside and the bones of the lower limbs remaining in woman's pelvic cavity. The possibility that the woman died during childbirth is not excluded. However, being an intentional burial, it is unlikely that the baby was left in the grave between woman's lower limbs. Another

⁴⁶ Duncan Sayer and Sam D. Dickinson, „Reconsidering obstetric death and female fertility in Anglo-Saxon England”, *World Archaeology* 45, no. 2 (2013): 285-97. <https://doi.org/10.1080/00438243.2013.799044>.

⁴⁷ *Postmortem* extrusion/expulsion of the *fœtus* occurs 48-72 hours after the death of the pregnant woman. The formation of gas increases the intra-abdominal pressure, causing uterine prolapse and *postmortem* „birth”, also called „coffin birth” (Sidney Smith, *Forensic Medicine* (London: J. & A. Churchill, 1955), 25).

⁴⁸ Eileen M. Murphy, „The child that is born of one's fair body' – Maternal and infant death in Medieval Ireland” *Childhood in the Past* 14, no. 1 (2021): 13-37. <https://doi.org/10.1080/17585716.2021.1904595>.

⁴⁹ Donald Benjamin Harden and Edward Thurlow Leeds, *The Anglo-Saxon Cemetery at Abingdon, Berkshire* (Oxford: Ashmolean Museum, Government publication, 1936).

⁵⁰ Harden and Leeds, *The Anglo-Saxon Cemetery*.

⁵¹ Alex Down and Martin Welch, *Chichester excavations. Apple Down and The Marden's. Vol. VII* (Chichester: Chichester District Council, 1990).

⁵² Vera Evison, *An Anglo-Saxon Cemetery at Great Chester-*

ford, Essex (York: Council for British Archaeology, 1994), 96. <https://doi.org/10.5284/1081774>.

⁵³ Sonia Chadwick Hawkes et al., *The Anglo-Saxon Cemetery at Worthy Park, Kingsworthy* (Oxford: Oxford University School of Archaeology, 2003), 33; Mary E. Lewis, *The bioarchaeology of children: Current perspectives in biological and forensic anthropology* (Cambridge: Cambridge University Press, 2007), 36.

⁵⁴ Serena Viva, Federico Cantini, and Pier Francesco Fabbrì, „Post mortem fetal extrusion: Analysis of a coffin birth case from an Early Medieval cemetery along the Via Francigena in Tuscany (Italy)”, *Journal of Archaeological Science: Reports* 32 (2020), 102419. <https://doi.org/10.1016/j.jasrep.2020.102419>.

interesting detail, in this case, is the circular trepanation (with a diameter of about 4.6 mm) on the frontal bone of the woman, made approx. one week before death. It is assumed that the trepanation was performed for curative purposes, following a trauma (located about 2 cm above the intentional cranial opening) and the installation of preeclampsia⁵⁵. Other similar cases, even if not archaeologically documented, are mentioned in the historical writings of the 17th century CE⁵⁶.

In the cemetery of San Nicolao in Genoa (Italy), in 2006, a grave dating to the second half - the end of the 14th century CE containing the remains of a pregnant adult woman (with the *fœtus* with prenatal age of 38-40 weeks) and of two born sub-adults was discovered. The authors conclude that they died during the plague epidemic, in the three individuals the *Yersinia pestis* antigen being identified⁵⁷.

We go down chronologically, to remind some cases of death *in utero* discovered in archaeological contexts long before that of Fîrlădeni-La Văleanu.

The grave of a pregnant woman (with a full-term *fœtus*) was documented in the Late Roman necropolis of Mas Rimbau (Tarragona, Spain), the cause of death being dystocia and the vicious position of the *fœtus*⁵⁸.

In the Bronze Age necropolis of Plosca-Cabana de Metal (Romania), assigned to a Žuto Brdo-Gârla Mare community, in the cremation grave no. M.20, in an urn with a lid (a bowl), the cremated remains of two individuals (noted as individual A and individual B) were deposited. Individual A is a woman of 20-30 years (whole skeleton, weight – 1091.02 g, total number of skeletal fragments – 3057). Individual B is a *fœtus* of 24-36 intrauterine weeks (well represented skeleton, weight – 2.74 g, total skeletal

fragments – 44). The combustion temperature was estimated in the range of 550-700°C, the child being, most likely, in mother's womb at the time of cremation⁵⁹.

In an Early Bronze Age cemetery at Unterhautzenthal (Austria), grave no. 38 contained the skeletal remains of a 14-15 year-old girl with her *fœtus* death *in utero*⁶⁰.

Finally, two oldest archeologically documented cases should be mentioned. The former is that of the R11 grave in the Lokomotiv necropolis in southern Siberia (Russia), dated in the Holocene/Aceramic Neolithic (8000-7000/6800 cal BP), in which the remains of three individuals – a woman and two full-term twin fetuses – were discovered. Although it has been reported as a case of death during labor, the funeral circumstances suggest that it may be a case of *postmortem* fetal expulsion, with the twin skeletons partially remaining in woman's uterine cavity⁶¹. The latter case is that of the grave no. 40.1 from Ust'-Ida I cemetery, near the Angara River (Russia), located 150 km north of the Lokomotiv site. The grave no. 40.1, dated to the Early Neolithic – Early Bronze Age (4070-3945cal BP (TO-10347: 3650±60 BP), belongs to a young woman with a *fœtus* death *in utero*⁶².

Conclusions

The topic related to maternal and fetal/infant death is a sensitive one, but it can be scientifically generous when archaeological data is correlated with palæoanthropological and palæomedical information.

In the case of the 17-18 year-old girl from Fîrlădeni-La Văleanu, the information is scarce, compared to other previously mentioned discoveries. This juvenile was buried in a closed funeral complex,

⁵⁵ Preeclampsia is a complication of pregnancy characterized by high blood pressure and signs of damage to other organs (most commonly the liver and kidneys), often causing the death of both mother and *fœtus*.

⁵⁶ Alba Pasini et al., „Neurosurgery on a Pregnant Woman with Post Mortem Fetal Extrusion: An Unusual Case from Medieval Italy” *World Neurosurgery* 113 (2018):78-81. <https://doi.org/10.1016/j.wneu.2018.02.044>.

⁵⁷ Deneb Cesana, Ole Benedictow, and Raffaella Bianucci, „The origin and early spread of the Black Death in Italy: First evidence of plague victims from 14th century Liguria (northern Italy)” *Anthropological Science* 125, no. 1 (2017): 15-24. <https://doi.org/10.1537/ase.161011>.

⁵⁸ Domènec Campillo et al., „Esqueleto de una mujer fallecida por distocia, perteneciente al período tardorromano (Mas Rimbau, Tarragona)” *Empúries* 51 (1998): 251-6. <http://opac.regesta-imperii.de/id/748081>.

⁵⁹ Monica Șandor-Chicideanu and Mihai Constantinescu, *Necropola din epoca bronzului de la Plosca* (Cluj-Napoca: Editura Mega, 2019), 72, 77-78, 84, Fig. 39, 103-104.

⁶⁰ Katharina Rebay-Salisbury et al., „Motherhood at Early Bronze Age Unterhautzenthal, Lower Austria” *Archaeologica Austriaca* 102 (2018): 71-134. <https://doi.org/10.1553/archaeologia102s71>.

⁶¹ Angela R. Lieveise, Vladimir Ivanovich Bazaliiskii, and Andrzej W. Weber, „Death by twins: a remarkable case of dystocic childbirth in Early Neolithic Siberia” *ANTIQUITY* 89 (2015): 23-38. <http://dx.doi.org/10.15184/aqy.2014.37>.

⁶² Andrzej W. Weber et al., „Radiocarbon dates from Neolithic and Bronze Age cemeteries in the Cis-Baikal region of Siberia”, *Radiocarbon* 48 (2006): 1-40. <https://doi.org/10.1017/S0033822200035463>.

dating to the 17th-18th centuries CE, in an elongated rectangular pit, dug to a shallow depth. Her body was laid in supine position, with her head to the west, her face turned to the southeast, her lower limbs straight and upper limbs stretched out next to the body. She was laid into the “world of silence” with no grave goods.

The biomorphometric characteristics (mixture of Mediterranean, Dinaric, and Mongoloid phenotypic features) confirm the assumption of the author of the discovery, who assigned this grave to the communities from the Asian areal (most likely Mongol) that have temporarily settled down in the Middle Ages in the region between Prut and Dniester Rivers.

Palæopathological analysis revealed at least three episodes of acute physiological stress that this young woman had suffered as a child. Two of them were produced at the biological age range of 3.5-4.2 years, the evidence remaining “memorized” in the form of hypoplastic enamel lines. Most hypoplastic enamel defects occur probable during weaning, when baby’s body is subjected to acute physiological stress, favored by harsh living conditions, severe episodes of disease, food deficiencies, or even malnutrition. The third episode of physiological stress occurred shortly before death, *perimortem*, the signs being located on the bones of the neurocranium (*cribra cranii*) and the roof of the orbits (*cribra orbitalia*). In parallels with the hypertrophy of the exocranial bone tissue, the periosteum on the tibial shafts also reacted. The causes of these changes could be a series of acute food deficiencies, inflammatory or infectious processes, the most common being an acute sideropenic anemia/iron deficiency.

The presence of numerous anomalies and epigenetic features on the teeth suggests that this juvenile lived in an endogamous community. Skeletal abnormalities, including dental ones, show a strong genetic determinism, being passed on to offspring, and, when a community is demographically closed, we can detect this *postmortem* by studying anomalies or immeasurable/discrete traits. Subsequent archaeological research on the medieval cemetery from Fîrlădeni-*La Văleanu* (16th-18th centuries CE) will fill the gaps regarding the burial place of the young woman in the cemetery and the type of community she belonged to.

In the beginning of the anthropological analysis, the skeleton discovered in the medieval grave from Fîrlădeni-*La Văleanu* seemed to fit one of the

usual patterns. During the analysis, it proved to be a rare and very valuable discovery, both for anthropologists and for specialists interested in palæo-medicine and, why not, for archaeologists. Unfortunately, during the documentation process *in situ* carried out by archaeologists no detailed images were taken, so that the presence of the *fœtus* cannot be identified in the captured images.

A characteristic identified on the coxae of the juvenile from Fîrlădeni-*La Văleanu* is the preauricular sulcus, which morphologically (according to the classification proposed by Jane E. Buikstra and Douglas H. Ubelaker in 1994) is at the border between type 3 and type 4 of sulci. It is well outlined, fairly wide, less than 0.5 cm deep, with smooth walls towards the auricular surface and undulating towards the notch, located only in the back/lower part of the auricular surface, with a sharp edge and extending along the entire lower edge. Could this situation assume that this type of sulcus indicates at least one parturition during lifetime? The answer is difficult. Considering the details discussed in one of the subchapters of the present paper, it is difficult and risky to give a definite answer, because the components of the pelvic girdle lack the indicators with which the preauricular sulcus should be associated for being classified as a “parturition type” sulcus. The peripubic area has no signs of inflammation and no scars/pits. The pubic tubercle is not oversized/elongated. The sacrum shows no changes in the area of attachment of the sacroiliac ligament or preauricular extension. However, we cannot exclude the hypothesis according to which this young woman had previous pregnancies, interrupted in the early stages of intrauterine development of the *fœtus*, due to reasons related either to the health of the mother or of the unborn child.

The social, biological, and medical situation of this 17-18 year-old girl who, at the time of her death, was carrying a *fœtus* of approx. 5-7 intrauterine months, makes the discovery from Fîrlădeni-*La Văleanu* a very important one for the Prut-Dniester area, being the first anthropologically documented case of a pregnant woman discovered in an archaeological context. However, her story remains obscure.