Memoirs of the Scientific Sections of the Romanian Academy Tome XLI, 2018

ANTHROPOLOGY

THE DISTURBED SARMATIAN GRAVES FROM MEDELENI–UNGHENI. PALAEOANTHROPOLOGICAL DATA

ANGELA SIMALCSIK and ROBERT DANIEL SIMALCSIK

"Olga Necrasov" Centre for Anthropological Research, Romanian Academy – Iași Branch

In 2015, five graves belonging to a plane Sarmatian cemetery dated in the 1st-2nd centuries AD were discovered at Medeleni-Ungheni. At least four of the five graves discovered at Medeleni were disturbed in antiquity. Four skeletons belonged to adult individuals (only women) and one skeleton comes from a child. Life expectancy at birth for this demographic batch is 33.8 years. Paleopathological analysis revealed dental diseases, metabolic disorders, joint diseases, traumas and occupational markers. All cracks and breakages that have led to fragmentation, also all disarticulations occurred *postmortem*, in antiquity. The traces of carnivores or rodents teeth are missing. No signs of burning. No skeletal element has any traces of cutting, which excludes intentional defleshing or excarnation. No skeletal elements from the vertebral column discovered in situ and analyzed anthropologically support decapitation theory. During the disturbance of graves and manipulation of bones, in the privacy of the primary context, they were no longer covered with soft tissues, being completely skeletonised. The skeletal elements were deliberately disturbed, manipulated and disarticulated, some of them were taken and probably subsequently buried elsewhere, in a still undiscovered place. At the present state of research, we cannot know for sure what happened in these five documented graves, but the fact that at least four of them were disturbed in antiquity, and skeletons have been troubled, cannot be a hazard.

Keywords: Medeleni, 1st-2nd centuries AD, Sarmatian plane disturbed graves, palaeoanthropological data

1. ARCHEOLOGICAL CONTEXT

The existence of the Sarmatian cemetery from Medeleni was reported in 2015, when the first grave was accidentally discovered. The National Archaeological Agency of the Republic of Moldova, with the National History Museum of Moldova and the Museum of History and Ethnography from Ungheni begin quickly the rescue excavations in the site of Medeleni [71–73].

Besides a worship complex, five graves were discovered in the perimeter of the excavation, marked from G.1 to G.5. All these funeral complexes belong to a plane Sarmatian cemetery, dated in the $1^{st}-2^{nd}$ centuries AD. The ritual of these five graves discovered in Medeleni is inhumation. Orientation of the complexes is generally in the north-south direction, with some small deviations towards the west. The deceased were laid in stretched position on the back, with the upper limbs lying along the body [71–73].

It should be highlighted that the Sarmatian plane cemetery from Medeleni is located on a relatively flat promontory, on the surface of which eight tumuli of different sizes were identified [71], the largest of which in the immediate proximity of the plane necropolis.

The inventory of these five Sarmatian graves is a special one, comprising three hand-made ceramic vessels and several ornaments, among which: an amphora shape golden pendant, with a gripping torch and 13 gold chains, with glass beads at the ends (G.1); a prismatic shape pendant with an embedded elongated piece made of mountain crystal (G.1); a greenish-glass cylindrical tube with a dusty white content, with the ends attached to a golden mount (G.1); a bronze cylindrical pendant (G.3); a bronze bell of pyramidal shape with a grip ring; a bronze wire ring with close ends (G.3); 106 pieces of glass beads of different colours, simple or ornamented, agate pearls, limestone, amber, chalcedony and coral beads (G.1, G.2, G.3 and G.4); 11 gold (G.1) and two bronze plaques (G.2 and G.3) [71–73].

At least four of the five graves discovered at Medeleni were disturbed in antiquity. The skeletons from G.1 and G.3 were in partial anatomical connectivity, their upper parts being destroyed, remaining *in situ* being only the bones of the lower limbs. The skeletons from G.2 and G.5 were completely disturbed, and no skeletal segment was connected anatomically at the time of the discovery. Regarding the skeleton of G.4, the situation is somehow unclear, due to the young age of the deceased and to the fragile bones, that could have been "consumed" by the soil [71–73]. For this reason, the lack of skeletal components cannot be explicitly attributed to exhumation, disturbing and ravaging.

2. MATERIAL AND METHODS

The analyzed material is represented by the human skeletons discovered in the five graves of the Sarmatian plane necropolis from Medeleni–Ungheni (Republic of Moldova), noted G.1, G.2, G.3, G.4 and G.5. All these human remains were analyzed in 2015 in the laboratories of the National Archaeological Agency of Chisinau (Republic of Moldova).

After cleaning and reconstruction of the skeletal parts, the conservation [21] and representation statuses [20] were recorded, and later on the taphonomic changes [20] were noted. After age at death estimation and sex determination [20, 48, 68, 78], biometric, conformational and morphoscopic data [20, 47] were collected and categorized [2], the skeletal stature was estimated [5, 19, 45, 56, 66–67], and the anthropological type was determined [15]. The presence of traumas, pathologies, skeletal abnormalities and non-metric features was appreciated [3, 6, 44, 51, 75]. The skeletal particularities appreciated in the literature as functional adaptations or occupational stress markers [49–50, 52, 57] were evidenced.

3. BIOLOGICAL DATA

3.1. GRAVE 1 (DISTURBED IN ANTIQUITY). FEMALE, OVER 60 YEARS (OLD ADULT)

State of preservation and representation. The cranial segment is present, but extremely fragmented and incomplete. The missing parts are: the right half of the frontal, the temporals, the facial bones on the left side, the right ramus of the mandible and the left mandibular condyle. Reconstruction of the skull succeeded in proportion of 70% (Figs. 1–4). The postcranial skeleton is almost complete, but fragmented *postmortem*. The following parts are missing: the cervical spine, the left radius and the left ulna, the right talus, the right calcaneus and the right fibula.

Biomorphometric data (Figs. 1–4): short and wide neurocranium; brachycephalic index; very wide forehead; moderately wide and rather curved occipital; rectangular and quite high orbits; high and gracile zygomatics; gracile mandible, with a very high body, a high and broad ramus; gracile postcranial bones; eurybrachyc humerus; platymeric femur, with pilastry; mesocnemic tibia; tall skeletal stature (162 cm); Eastern-Europoid, Mediterranid and Nordoid typological features.

Cranial pathologies: porotic hyperostosis (*cribra orbitalia*), inactive at the time of death.

Dental pathologies: eight *antemortem* tooth losses (two on the upper and six on the lower arcade); molar edentation; one abscess (right upper first molar); supragingival dental plaque on the front teeth, on the vestibular surface; advanced dental wear (attrition and abrasion) (Fig. 1).

Postcranial pathologies: generalized degenerative osteoarthritis, more pronounced on femora (Fig. 5), patellae, vertebrae and pelvic girdle; reactive periosteal changes / reaction on the diaphyses of the tibiae and the femora.

Occupational markers: weak muscle insertions on the upper limbs and pronounced on the lower limbs (especially on the femora); femoral diaphyses deviation from the normal antero-posterior axis; supratrochlear aperture, bilateral; preauricular sulcus; parturition(s) scars on the dorsal surface of the pubic symphysis.

> 3.2. GRAVE 2 (DISTURBED IN ANTIQUITY). FEMALE, 35–40 YEAR-OLD (MIDDLE ADULT)

State of preservation and representation. The cranial segment is represented only by its movable bone – the mandible (Fig. 6). The rest of the components was missing from the grave. The postcranial skeleton is relatively well represented, the missing parts being: the left clavicle, the mesosternum, the right fibula, the hand and the foot bones. The spine is incomplete.

Biomorphometric data: moderately robust mandible, with high body, moderately high and relatively narrow ramus (Fig. 6); postcranial gracile and slender bones; eurybrachyc humerus; platymeric femur, with incipient pilastry; eurycnemic tibia; tall skeletal stature (160 cm); undeterminable anthropological type in the absence of the skull (the mandible shows Nordoid features).

3

Dental pathologies: moderate physiological dental wear (attrition); one *ante-mortem* tooth loss (from the lower arcade, produced long before death); supragingival plaque on molars and premolars on the lingual side; partial resorption of the lower alveolar margin (Fig. 6).

Non-metric dental traits: lower tertiary molars with five cusps (Fig. 6).

Postcranial trauma: spondylolysis of the 5th lumbar vertebra (fracture of the vertebral arch) (Fig. 7).

Occupational markers: weak muscle insertions on the upper limbs and pronounced on the lower limbs; multiple parturition scars on the dorsal surface of the pubic symphysis.

3.3. GRAVE 3 (DISTURBED IN ANTIQUITY). FEMALE, 35–40 YEAR-OLD (MIDDLE ADULT)

State of preservation and representation. The cranial segment is represented only by the left half of the mandible (Fig. 8) and five isolated teeth from the upper arch. The rest of the components were missing from the grave. The postcranial skeleton is relatively well represented. The missing parts are: the C1–C3, T12 and L5 vertebrae, part of the sacrum, femora, and the right patella.

Biomorphometric data: gracile mandible, with high body, short and wide ramus (Fig. 8); postcranial gracile bones; platybrachyc humerus; mesocnemic tibia; tall skeletal stature (160 cm); undeterminable anthropological type in the absence of the skull (the mandible, along with the postcranial bones, suggests Nordoid features).

Dental pathologies: moderate, physiological dental wear (attrition) (Fig. 8); one incipient cavity on the left lower tertiary molar; supragingival plaque on molars and premolars on the lingual side.

Postcranial pathologies: intervertebral disc hernia (Schmorl's nodes) on the thoracic T8–T12 and the lumbar L1–L2 vertebral bodies (Fig. 9).

Occupational markers: weakly developed muscle insertions; squatting facets on the tibiotalar joints; supratrochlear pronounced aperture, bilateral.

3.4. GRAVE 4. SEX-UNDETERMINABLE INDIVIDUAL, 4 YEAR ± 12 MONTH-OLD (CHILD)

State of preservation and representation. From the cranial segment there are present only 10 fragments coming from the frontal, parietals and occipital. To these we add three dental units, namely the temporary superior central incisor, the bud of a definitive (almost calcified crown) primary molar, and the bud of a definitive secondary (uncalcified crown) molar. The postcranial skeleton is represented by three fragments from the diaphyses of the femora. Most likely, the rest of the bones were consumed by soil acidity. None of the 13 skeletal fragments shows any visible (with the naked eye) anomalies or pathologies. 5

47

3.5. GRAVE 5 (DISTURBED IN ANTIQUITY). FEMALE, 20–30 YEAR-OLD (YOUNG ADULT)

State of preservation and representation. The cranial segment is completely missing. The postcranial skeleton is represented by: five fragments from the left coxal, the left ulna (without epiphyses), the left radius (two diaphyseal fragments), the proximal epiphysis of the left humerus, two fragmentary metacarpals and 30 small fragments attributed to the same individual, but anatomically indeterminable.

Biomorphometric data: postcranial gracile bones; medium to tall skeletal stature (appreciated morphoscopically); undeterminable anthropological type; poorly developed muscle insertions. No visible with the naked eye abnormalities or bone pathologies.

4. PALEOPATHOLOGICAL DATA

The dental diseases (three cases) are present through cavities, supragingival calculus, abscesses, periodontitis, and *antemortem* tooth loss (sometimes up to edentation). The presence of caries in tandem with bacterial plaque deposition suggests a diet based on high consumption of hard fibrous foods of vegetable origin, rich in carbohydrates [43, 48]. Dental crowns are physiologically worn by attrition, but the old female from G.1 has some abraded teeth – which is occupational wear, often caused by the use of teeth as a supporting or cutting tool.

The metabolic disorders occur in a single case – at the old female from G.1, in the form of porotic hyperostosis (*cribra orbitalia*), inactive at the moment of death. Anyway, the presence of porotic hyperostosis itself suggests poor living conditions, possible chronic health problems and food deficiencies (especially iron deficiency) [76].

The infectious diseases were identified only at the female from G.1, in the form of slight hypertrophic periosteal changes on the diaphyses of the tibiae and femora. The most frequent causes are acute or chronic inflammatory processes, microbial infections, microtrauma or nutritional deficiencies [3].

The joint diseases were identified in two cases. As expected, the symptoms are severe in the case of the old woman (G.1) and moderate in the case of the middle-aged woman (G.3). Degenerative joint changes may indicate: spine overloading, frequent lifting of weights, keeping the body in vertical posture, with the burden on back, repetitive bending of the spine [44, 52, 58].

Traumas. At the last lumbar vertebra of the G.2 skeleton bilateral spondylolysis was identified (Fig. 7) – a trauma produced by cracking or fracture of the posterior vertebral arch. One of the causes of this trauma is the long overload of the spinal vertebral segment [44].

The occupational markers have been detected at the limbs and girdles bones, by changes of the joint surfaces, the ossification of the ligaments and tendons [44, 58]. The upper limbs are less marked compared to the lower ones, more pronounced on

femurs and tibias. We can deduce, *e.g.* prolonged walking on long distances, on uneven / rough terrain [17, 52, 57, 77].

The preauricular (paraglenoid) sulcus was observed only in the case of the female from G.1, but the parturition scars on the dorsal surface of the pubic symphysis are present in two cases (G.1 and G.2), due to the excessive stretching of the ligaments and sometimes even their breakage during parturitions [30, 44, 61].

The supratrochlear / septal aperture of the humerus was recorded in two cases. One of the determinant causes can be the repetitive flexion-extension movements of the forearms [44, 60].

The squatting facets on the tibiotalar joint appear only in case of G.3. Among the causes of the remodelling of these joint surfaces is the mechanical stress, *i.e.* the hyperdorsiflexion of the distal epiphysis of the tibia on the talus, resulting from the habit of standing in a crooked position during daily activities [18, 44].

5. PALAEODEMOGRAPHIC DATA

The demographic batch from Medeleni consists of five skeletons, four of which belong to adults (only women) and one comes from a sub-adult. Life expectancy at birth is 33.8 years. If we take into consideration only the adult segment, the mean age at death is 41.2 years. The structure of this skeletal miniseries includes representatives of four generations of age.

E.F. Batieva, in his monograph on human communities from the lower basin of the Don, in the population of the Middle Sarmatian period $(1^{st}-2^{nd}$ centuries AD), mentions a similar demographic situation, namely, a high proportion of women (but also of children), a relatively high average age of death, a maximum woman's mortality around the age of 30, arguing that such a situation can illustrate demographic stability and an improvement in living conditions in migrant communities, compared to the Early Sarmatian period [7].

6. TYPOLOGICAL DATA

Despite the poor representation of the skeletons discovered at Medeleni, we can distinguish some common traits for this segment – a mixture of Nordoid, Mediterranid and East-Europoid features. The general typological picture, valid for the Medeleni mini-series (obviously at least in one case – G.1) (Fig. 1–4), can be scored as follows: short, wide and not too high skull, cephalic meso-brachycephalic index, wide and relative high facial skeleton (especially the upper floor), high orbits, moderate to pronounced profiled face and nose, slender and tall skeletal stature.

This typological complex is valid for the Sarmatians buried in the necropolis from Bocani (Fălești, Republic of Moldova), dated between 2nd-3rd centuries AD,

49

or for the Sarmatians from Ukraine, especially those from the Astrakhan group [70]. The Sarmatians from the North-West Pontic area have the same Europoid typology, with its well-known subtypes (Nordoid, Proto-Europoid, Mediterranid and Alpinoid). This mixture is common for the populations of the Middle Sarmatian period from Ukraine, the Lower Basin of the Don, the regions of the Volga and the Urals [7–8, 25, 37–38, 59, 65], but also to some Sarmatian communities from Hungary [36].

7. TAPHONOMIC DATA

All analyzed osteological remains suffered subaerial *postmortem* changes. If we refer to adults skeletons, the fact that these were disturbed in antiquity adds additional changes suffered in the soil after skeletonization. The conservation status of the remains discovered in G.1, G.2 and G.3 is satisfactory, while those from G.4 and G.5 are precarious. Of the five skeletons, none is 100% represented. Calcareous deposits are thin and poorly adherent to the surface of the bones. All cracks and breakages that have led to fragmentation occurred *postmortem*, in antiquity, when the bones were "dry", partially mineralized, collagen-reduced and relatively fragile. Some breakage lines are covered with a thin calcareous layer.

With the exception of the sub-adult individual from G.4 (in which case the situation is somewhat uncertain), in other cases the skeletal elements have either partial anatomical connectivity (G.1 and G.3) or this is completely missing (G.2 and G.5). All disarticulations are produced *postmortem*, most likely during the disturbance of graves.

The traces of carnivores or rodents teeth are missing, which means that when the graves were disturbed, the bones were already skeletonised, without any "significance" for these agents. This situation may also suggest that after disturbance these bones were quickly reburied, covered with a consistent layer of loam. On the surface of some bones appears a dendritic pattern left *postmortem* by plant's roots. There are no visible signs of burning. No skeletal element has any traces of cutting, which excludes intentional defleshing or excarnation.

During the disturbance of the graves and the manipulation of bones, in the privacy of the primary context, they were no longer covered with soft tissues, being completely skeletonised. Recall that the skeletons from G.2, G.3 and G.5 were found without skulls. In G.2 and G.3, intentionally or accidentally, mandible (or parts thereof) was left. The presence of the mandible in tandem with the absence of the skull shows that the temporomandibular joint was completely decomposed at the time of the intervention and the skulls were removed without its movable bone.

No skeletal elements from the vertebral column discovered *in situ* and analyzed anthropologically support the decapitation theory. Concerning G.2, from

the osteological inventory some vertebrae are missing, including the C4–C7 cervical segment. From the G.3 skeleton cervical vertebrae C1–C3 are missing, and from G.5 – all seven neck vertebrae. These three skulls were taken away from the graves after completion of the natural process of decomposition of soft tissues and cartilage, along with the other skeletal components, including some vertebrae of the neck. The skeletal elements were deliberately disturbed, manipulated and disarticulated, some of them were taken and probably secondary buried elsewhere, in a still undiscovered place.



Fig. 1. Grave 1, F, > 60 Y.O., *cranium*, *norma facialis*



Fig. 2. Grave 1, F, > 60 Y.O., neurocranium, norma lateralis



Fig. 3. Grave 1, F, > 60 Y.O., neurocranium, norma verticalis



Fig. 4. Grave 1, F, > 60 Y.O., neurocranium, norma occipitalis



Fig. 5. Grave 1, F, > 60 Y.O., femur, distal epiphysis, osteoarthritis



Fig. 6. Grave 2, F, 35–40 Y.O., mandible



Fig. 7. Grave 2, F, 35–40 Y.O., 5th lumbar vertebra, spondylolysis



Fig. 8. Grave 3, F, 35–40 Y.O., mandible, left half



Fig. 9. Grave 3, F, 35–40 Y.O., lower vertebrae, Schmorl's nodes

8. ANALOGIES FROM THE PALEOANTROPOLOGICAL PERSPECTIVE

A particular character of these five funeral complexes from Medeleni is the disturbance and disarrangement's of the bones, through the partial or total exhumation. At least four of the five graves were disturbed in antiquity, the skeletons being discovered without or in a partial anatomical connectivity (only in the lower limbs). Quite interesting, out of the five skeletons discovered in Medeleni, only the old woman from G.1 and the child from G.4 have a relatively complete "osteological inventory", from where the skull is not missing, even if fragmentary. In the other three cases (G.2, G.3 and G.5) – no trace of skull or cranial fragments, only the mandible – the single movable bone from the cephalic segment.

In the 1st century and the first half of the 2^{nd} century AD, on the vast area inhabited by the Sarmatians an economic and social development of these migratory communities was recorded. Most of the funeral discoveries attributed to the Middle Sarmatian period spread in the area between Don and Prut rivers. During this period the burials in old age mounds prevail, but the number of Sarmatian tumuli significantly increased, which sometimes form smaller or larger compact necropolises. For this period, plane graves / necropolises are also documented [10–11].

There are many atypical graves attributed to the Sarmatians, especially for the middle and late periods, such as the deposition of the dead in unusual positions (sometimes beheaded), or the deposition of parts of human skeletons [27]. Most often, these atypical situations are attributed to a certain *exhumation ritual*, or *partial burial*, or *reburial*, or to a certain ritual which involves *disturbing the anatomical connectivity*.

In the Prut–Dniester area, a situation similar to that of Medeleni was mentioned in the Sarmatian plane necropolis from Petrești (Ungheni), dated in the $2^{nd}-3^{rd}$ centuries AD [40, 42, 71], or in the Sarmatian cemetery from Bădragii Noi – *La Stâncă* (Edinet), where eight inhumation graves were discovered, of which seven were disturbed in antiquity; some skeletons were completely scattered, others only in the upper part, the lower half remaining in anatomical connectivity [41, 71].

The ritual of exhumation of the dead, the disturbance of graves and the removal of some skeletal elements was documented also on the territory of Romania, but in later Sarmatian cemeteries, such as the necropolis from Foeni (Timiş County), dated between 180/190 – the first half of the 3^{rd} century AD, where there are several atypical graves. In G.4, only the skull, the pelvis and the upper limbs bones were found [26, 28, 64], in G.7 – several cranial and / or post-cranial bone fragments [26, 64], a similar situation being in the case of G.9, G.11, G.12, G.13, and G.17 [26, 28]. From the G.6 the upper limb bones and the ribs were missing [26, 28, 64]. In the G.15 a sub-adult skeleton, in a partial anatomical connectivity, with destroyed and moved to the chest skull, without the right upper limb, the left tibia and fibula, and the right femur was discovered [26, 28].

In G.1 of the cemetery from Dudeștii Vechi – Mogila (Timiș County), dated in the $2^{nd}-3^{rd}$ centuries AD, female skeleton was found, without the lower limbs bones; only the mandible was present in the cranial segment [24, 39, 55].

In the necropolis Giarmata – *Sit 10* (Timis County), dated in the $2^{nd}-3^{rd}$ centuries AD, there are many interesting situations. In G.2 only bone fragments from upper limbs and isolated teeth attributed to an adult woman were discovered, in G.7 – the skull, mandibular and vertebral fragments, in G.10 – the mandible and isolated teeth, in G.17 – only fragments from an adult mandible [28].

Atypical and intriguing situations are also documented in the necropolis from Arad – *Bariera* (Arad County), dated in the 4th century AD, namely in G.2 and G.5 [28].

At Pecica–Nădlac (Arad County), the Sarmatian complex no. 325 from the site no. 3 contained a disturbed adult skeleton, only lower limbs being found *in situ* [29]. In the Sarmatian cemetery from Dudeștii Vechi – *Movila lui Dragomir* (Timiş County), dated in the second half of the 4th–5th centuries AD, in the G.2 a disturbed / ravaged in the upper half skeleton was found [63]. Other similar situations have been documented at Cioinagi–Bălintești (Galați County) [14, 79], Vaslui (Vaslui County) [13], Râmnicelu (Brăila County) [32], Zimandu Nou (Arad County) [14], Mitoc – *Malul Galben* and Albești (Botoșani County) [62]. The disturbed grave from Sânnicolau Mare–Seliște (Timiș County) evidenced another situation, where parts of the forearm of a woman were moved to the head area [12].

We cannot neglect the discoveries from Serbia or Hungary, even if they are from later Sarmatian cemeteries. The plane necropolis from Pančevo–Vojlovica (Vojvodina, Serbia), dated in the 3rd–4th centuries AD, abounds in atypical burials, as follows: G.3 – only the lower limb bones (from the knee down) were found in situ; G.5 - only the lower half of the skeleton remains in anatomical connectivity; G.9 – only the upper limb bones were found in situ; in the G.11 and G.37 the upper half of the skeleton (the skull and the thorax) was missing; in the G.8, G.12, G.23, G.26, G.31, G.41, G.44, G.45, and G.52 in situ we found only the lower limb bones; in the G.15 and G.49 only the skull (accompanied by other skeletal components) was discovered; in the G.16, G.17, G.19, and G.21 the skeletons did not have the inferior part of the lower limbs; from the G.34 only the skull was missing; in the G.25 only a part of the left lower limb remained in situ [9]. In the G.1 from Banatski Despotovac (Ernőháza)–Pape föld (Vojvodina, Serbia), a necropolis dated at the end of the 2^{nd} – the middle of the 3^{rd} centuries AD, the bones of the lower limbs were missing, while in the G.4 only the lower part of the skeleton was found. In the G.5 from Banatski Despotovac (Ernőháza)-Kollinger kertek (Vojvodina, Serbia), dated in the 3rd-4th centuries AD, the skeleton was discovered without a skull [28, 53].

In the Deszk-A necropolis from Csongrád (Hungary), dated between $3^{rd}-4^{th}$ centuries AD, the skeleton from the G.70 did not have the inferior part of the lower limbs [28, 39, 55]. In the G.3 from Deszk–Újmajor (Csongrád, Hungary), dated to the end of the $3^{rd}-4^{th}$ centuries AD, the skeleton was deliberately cut exactly from

the middle [28, 54]. In the G.1 from Újszentiván–Iván téglagyár (Csongrád, Hungary), dated in the 3^{rd} century AD, the skull was not found *in situ* [28]. In the necropolis from Szeged–Szőreg-homokbánya (Csongrád, Hungary), dated in the $4^{th}-5^{th}$ centuries AD, the female skeleton had *in situ* only the bones of the lower limbs [28, 74].

The ritual of the disturbance of graves is more frequently reported in the Sarmatian communities from the North Pontic area. We mention such situations at Zavetnoye (Rostov Oblast, Ukraine) [16, 31] or at Nizhny Djulat (Kabardino–Balkar Republic, Russia) [1]. The most prominent in this regard is the Sarmatian necropolis from Tzarsky, from Don River's delta (near Tanais, Russia), where all discovered graves were disturbed / robbed in antiquity [34].

In the Sarmatian graves from the south-east of the Don River basin, especially in those arranged in the burial mounds, very interesting situations are documented. At Vysochino (Rostov Oblast, Russia), near the Kagalnik River, in the series of discoveries attributed to the Middle Sarmatian period, 16 graves (from 19) were disturbed / robbed. Most of them are attributed to women or probably women. Only one grave was not touched – an infant grave. The early Sarmatian discoveries near the Ilovlya River (Russia) proved that the graves in which the old women were buried were never disturbed / robbed. The same situation is valid for the infant and juvenile inhumations [33].

Another interesting case is the G.3 from the tumular necropolis near Ivanovka (Orenburg Oblast, Russia), where it was discovered an intriguing skeleton, the skull shows typical male characters, while postcranial bones were typically female. The grave was not disturbed, the skeleton being discovered in anatomical connection, but the neck vertebrae were missing... DNA analysis confirmed that the cranial segment belonged to a man, and the postcranial bones to a woman, the owners being related. The conclusion is that the replacement of the deceased's head was intentional, made for ritual purposes, at the moment of the primary inhumation. The male's postcranial bones or the female's skull were not found [22–23].

We also mention the disturbed extremely rich grave, discovered in the tumulus no. 14 from Sladkovka (Rostov Oblast, Russia), dated during the Middle Sarmatian period. The bones come from an adult female; only the inferior part of the lower limbs was found *in situ* [33].

In the mound burials discovered between Sal River and Manych River (Rostov Oblast, Russia), attributed to the Middle Sarmatian period, there are many cases when only the bones of the lower limbs and the pelvis were discovered *in situ*. In the graves discovered near Ilovlya River (Russia), attributed to the Early Sarmatian period, *in situ* (untouched) the lower limb bones and the skull were found; in those from the Middle Sarmatian period – the skull and bones from the one of the upper limbs; in those from the Latter Sarmatian period – the lower limb bones and sometimes bones of the forearm or skull. Similar situations are also documented in the tumulus no. 3 from Chertovitsy-II (Voronezh Oblast, Russia), attributed to the Middle Sarmatian period [33].

According to E.V. Vdovcenkov and S.M. Iljiaschenko, most often grave robbers were devastating and disturbing the eastern half of the skeleton, *i.e.* the skull, the thorax, the upper limbs and the pelvis bones. The lower limbs, including the inventory placed in this region, were not touched [69].

According to S.A. Iatzenko, in the tumuli from the Don River basin, dated in the Middle Sarmatian period (until the 2^{nd} century AD) and the first part of the Late Sarmatian period (middle of the 2^{nd} – middle of the 3^{rd} centuries AD), grave-robbers raved only some parts of the body / skeleton, but they did not touch the graves in which deceased by a certain sex or age, with a certain social status were buried. They had a particular attitude towards the head / skull region. It is believed that in the graves attributed to the Middle and Late Sarmatian periods, the skull / head of the deceased with a high social status was separated from the other bones... sometimes the skull was buried in another place. *E.g.*, in mound no. 1 from Oktyabrsky (Rostov Oblast, Russia), almost an entire adult female skeleton was found in the grave, with the exception of the skull and the right upper limb bones [35].

9. CONCLUSIONS

At the present state of research, we cannot know exactly what happened in these five documented graves from Middle Sarmatian cemetery from Medeleni-Ungheni. Yes, these graves are a small part of the necropolis, but the fact that at least four of the five tombs were disturbed in antiquity, and skeletons have been troubled, cannot be a hazard. Due to the somewhat isolated situation, we cannot generalize, at least for now. But we cannot overlook the fact that, in the case of women from G.5 (young adult) and G.2 and G.5 (middle-aged adults), the skull was subjected to special "treatment", being taken from graves, in a skeletonised state, without a mandible. It remains unclear, for now, what treatment we are talking about, invoking, however, the probability of using certain parts of the body (head / skull) for ritual purposes. Maybe this way of disturbing the deceased is a manifestation of a specific funeral ritual, in which the upper half of the body, with the skull in the "leading role", was targeted by the community members to be manipulated [4]. In fact, the disturbance of the graves, disarrangement of bones, and even the removal of certain skeletal elements are "chapters" of a ritual practised by the Sarmatian populations and should not be regarded as a graves-desacralisation [46].

Authors' contributions: Both authors had equal contributions to this study.

REFERENCES

- 1. ABRAMOVA M.P., Novyje pogrebenija sarmatskogo vremeni iz Kabardino-Balkarii, Sovetskaya Arheologija, 1968, **3**, 114–130.
- 2. ALEXEEV V.P., DEBETZ G.F., Kraniometriya, Nauka, Moskva, 1964.

- 3. AUFDERHEIDE A.C., RODRIGUEZ-MARTIN C., *The Cambridge Encyclopedia of Human Paleopathology*, Cambridge University Press, Cambridge, 1998.
- BABEŞ M., MIRITOIU N., Practici funerare birituale prelungite în spațiul carpato-dunărean în secolele V–III a. Chr., Arheologia Moldovei, 2011, XXXIV, 103–149.
- 5. BACH H., Zur Berenchnung der Körperhöhe aus den langen Gliedmassenknochen weiblicher Skelette, Anthropologhischer Anzeiger, 1965, **29**, 12–21.
- 6. BARNES E., Atlas of Developmental Field Anomalies of the Human Skeleton: A Paleopathology Perspective, Wiley-Blackwell, Hoboken, 2012.
- BATIEVA E.F., Naseleniye Nijnego Dona v IX v. do n. e IV v. n. e. (paleoantropologiceskoye issledovanije), Iujnyi Naucinyi Tzentr Rosiiskoy Akademii Nauk, Rostov na Donu, 2011.
- 8. BATIEVA E.F., Gheografiya antropologiceskih tipov drevnego naselenija Nijnego Podoniya (epoha bronzy srednevekovije), Arheloghiceskiye Zapiski, 2013, **8**, 129–144.
- BATISTIĆ POPADIĆ D., Sarmatska nekropola Vojlovica Pančevo, Rad muzeja Vojvodine, 1984–1985, 29, 59–83.
- 10. BARCA V., Istorie și civilizație. Sarmații în spațiul est-carpatic (sec. I a.Chr.- începutul sec. II p.Chr.), Cluj-Napoca, 2006.
- BÂRCĂ V., SYMONENKO, O., Călăreții stepelor. Sarmații în spațiul nord-pontic, Mega, Cluj-Napoca, 2009.
- 12. BEJAN A., MARUIA L., TANASE D., Un mormânt cu podoabe de aur din epoca sarmatică timpurie descoperit la Sânnicolau Mare Selişte (jud. Timiş), Analele Banatului, S.N., 2011, XIX, 161–180.
- 13. BICHIR GH., Sarmații și pătrunderea lor la Dunărea de Jos, Peuce, Studii și Note de Istorie Veche și Arheologie, 1971, II, 135–146.
- 14. BICHIR GH., Sarmații la Dunărea de Jos în lumina ultimelor cercetări, Pontica, 1972, 5, 137–176.
- 15. BOEV P., Die Rassentypen der Balkanhalbinsel und der Ostagaischen Inselwelt und deren Bedeutung fur die Herkunft ihrer Bevolkerung, der Buglarischen Akademie der Wissenschaften, Sofia, 1972.
- 16. BOGDANOVA N.O., Mogylinyk I st. do n. e. III st. n. e., bilja s. Zavitne, Bahcysarajskogo rayona, Arheologhija Kiev, 1963, XV, 95–109.
- 17. BORGOGNINI TARLI S., PACIANI E., I resti umani nello scavo archeologico. Metodiche di recupero e studio, Bulzoni Editore, Roma, 1993.
- BOULLE E. L., Evolution of two human skeletal markers of the squatting position: A diachronic study from antiquity to the modern age, American Journal of Physical Anthropology, 2001, 116, 50–56.
- 19. BREITINGER E., Zur Berenchnung der Korperhohe aus den langen Gliedmassenknochen, in Anthropologhischer Anzeiger, 1938, 14, 249–274.
- 20. BUIKSTRA J.E., UBELAKER, D.H., Standards for Data Collection from Human Skeletal Remains, Arkansas Archaeological Survey Research Series, No 44, Fayetteville, 1994.
- CONNELL B., Preservation and aschaeological data, in: POWERS, N. (ed.), Human osteology method statement, Museum of London, London, 2008, 9.
- FRIZEN S.IU., BORUTZKAJA, S.B., Antropologhiceskije materiali Ivanovskogo kurgannogo moghilinika lujnogo Priuralija sabromatskogo vremeni, Vestnic antropologhii, Naucinij alimanah, 2006, 13, 36–45.
- 23. FRIZEN S.IU., BORUTZKAJA S.B., Neordinarnoje pogrebenije rannesarmatskogo bremeni: kazus ili tratitzija?, Istoriko-Arheologhiceskij alimanah, 2009, 9, 50–52.
- GÁLL E., TĂNASE D., CIOBOTARU D., Kisléghi Nagy Gyula Archaeológiai Napló, Szeged-Timişoara, 2010.
- GHERASIMOVA M.M., Antropologhiceskije dannije k voprosu ob etniceskih otnoshenijah v severo-vostocinom Pricernomorje (Bosporskoje tzarstvo), Antropologhija anticinogo i srednevekovogo naselenija Vostocinoj Evropi, Moskva, 1987, 9–82.
- GRUMEZA L., Sarmatian necropolis from Foeni (Timiş county), Analele Banatului, S.N., 2011, XIX, 181–205.
- 27. GRUMEZA L., Animal inhumations within settlements during the Sarmatian period on the western plain (end of the 2nd century first half of the 5th century AD), Arheovest, 2013, I, 413–435.

- 28. GRUMEZA L., Sarmatian cemeteries from Banat (late 1st early 5th centuries AD), Mega Publishing House, Cluj-Napoca, 2014.
- GRUMEZA L., URSUȚIU A., Amenajări funerare circulare descoperite pe tronsonul autorstrăzii Nădlac-Arad, siturile Nădlac 3 M şi 4 M, Arheologia Moldovei, 2016, XXXIX, 195–213.
- 30. GULEKON I.N., TURGUT H.B., The preauricular sulcus: Its radiologic evidence and prevalence, Kaiboguku Zasshi, 2002, **76**, (6), 533–535.
- 31. GUSCINA I.I., O sarmatah v iugo-zapadnom Krymu, Sovetskaya Arheologija, 1967, 1, 40-51.
- 32. HARȚUCHE N., Descoperiri sarmatice din zona Brăilei, Istros, 1980, I, 191–251.
- IATZENKO S.A., O sarmatskich ograblenijach sinhronnych kurganov, Teoriya i praktika, 2013, VIII, 25–41.
- IATZENKO S.A., Nekotoryje problemy arheologhiceskogo izucenija pogrebalinoj obrjiadnosti, Novoye proshloye / The New Past, 2016, 4, 42–48.
- 35. IATZENKO S.A., Character drevnih ograblenij dvuh grupp sarmatskoj elity I–II vv. n. e., in: Trudy IIMK RAN, St. Petersburg, 2016, **46**, 147–156.
- KIRICENKO D.A., Sarmati Vengrii po dannym antropologhii, Vestnik arheologyi, antropologyi i etnografyi, 2013, 3, (22), 103–112.
- KIRICENKO D.A., Sarmati Rumynii po dannim antropologhii, Vestnik arheologyi, antropologyi i etnografyi, 2015, 1, (28), 89–97.
- 38. KONDUCTOROVA T.S., Antropologiya drevnego naselenija Ukraini, MGU, Moskva, 1972.
- 39. KULCSÁR V., A kárpát-medencei szarmaták temetkezési szokásai, Aszód, 1998.
- KURCEATOV S.I., Novije materiali iz raskopok sarmatskogo i cerneahovskogo moghilinikov vs. Petreshti MSSR, Problemi skifo-sarmatskoj arheologhii Severnogo Pricernomorja, 1989, 74–75.
- 41. KURCEATOV S., BUBULICI V., Necropola de la Bădragii Vechi și problema fazei finale a culturii sarmatice, Vestigii arheologice din Moldova, 1997, 220–234.
- KURCEATOV S., BUBULICI V., Morminte de nobili în necropola de la Petreşti, Pyretus, 2001, 1, (1), 33–37.
- LUKACS J.R., Dental Palaeopathology. Methods for reconstructing Dietary Patterns, in: ISCAN, M.Y., KENNEDY, K.A.R. (eds), Reconstruction of Life from the Skeleton, Wiley-Liss Publisher, New York, 1989, 261–286.
- 44. MANN R.W., HUNT D.R., Photographic Regional Atlas of Bone Disease: A Guide to Pathologic and Normal Variation in the Human Skeleton, Charles C. Thomas Publisher, Illinois, Springfield, 2005.
- 45. MANOUVRIER L., *Determination de la taille d'apre`s les grands os des members*, Revue Ecole Anthopologie, 1892, **2**, 227–233.
- 46. MARE M., Banatul între secolele IV-IX, Excelsior Art, Timișoara, 2004.
- 47. MARTIN R., SALLER K., Lehrbuch de Anthropologie, Fischer Stuttgart, Stuttgart, 1957–1966.
- 48. MAYS S., The archaeology of human bones, Routledge, London-New York, 1998.
- 49. MOLLESON T., A method for the study of activity related skeletal morphologies, Bioarchaeology of the Near East, 2007, 1, 5–33.
- MYSZKA A., PIONTEK J., Variation of Musculoskeletal Stress Markers in the Medieval Population from Cedynia (Poland) – Proposal of Standardized Scoring Method Application, Collegium Anthropologicum, 2012, 36, (3), 1009–1017.
- 51. ORTNER D.J., *Identification of Pathological Conditions in Human Skeletal Remains*, Academic Press, Oxford, 2003.
- 52. PÁLFI GY., DUTOUR O., Activity-induced skeletal markers in historical anthropological material, International Journal of Anthropology, 1996, 11, (1), 41–55.
- 53. PÁRDUCZ M., Ernőházai jazig leletek, Archaeologiai Értesitö, 1940, III, (1), 261–269.
- 54. PÁRDUCZ M., Deszk-Újmajori szarmatakori temető, Folia Archaeologica, 1945, V, 74–94.
- 55. PARDUCZ M., A szarmatakor emlékei Magyarországon (Denkmäler der Sarmatenzeit Ungarns), Budapest, 1950, III.
- PEARSON K., Mathematic contributions to the theory of evolution. V. On the reconstruction of stature of prehistoric races, Philosophical Transactions of the Royal Society, ser. A, 1899, 192, 169–244.

- 57. ROBB J.E., *The interpretation of skeletal muscle sites: a statistical approach*, International Journal of Osteoarchaeology, 1998, **8**, (5), 363–377.
- 58. ROGERS J., SHEPSTONE, L., DIEPPE, P., Bone formers: osteophyte and enthesophyte formation are positively associated, Annals of the Rheumatic Diseases, 1997, 56, (2), 85–90.
- SCHEVCENKO A.V., FIRSHTEIN B.V., Paleoantropologhija naselenija Kobiakova gorodishja I–III vv. n. e. (po materialam rascopok 1956–1962 gg.), Muzei Antropologyi i Etnografyi, 1991, 44, 5–41.
- SINGHAL S., RAO V., Supratrochlear foramen of the humerus, Anatomical Service International, 2007, 82, 105–107.
- 61. SPRING D.B., LOVEJOY C.O., BENDER G. N., DUERR M., *The radiographic preauricular groove: Its non-relationship to past parity*, American Journal of Physical Anthropology, 1989, **79**, 247–252.
- 62. ŞOVAN, O.L., CHIRICA V., Noi descoperiri sarmatice în Câmpia Moldovei, Hierasus, 1983 (1984), V, 79–88.
- 63. TANASE D., Două morminte din secolele IV-V p. Chr. descoperite la Dudeștii Vechi (jud. Timiş), Analele Banatului, 2004, X-XI, 233-244.
- TĂNASE D., MARE, M., Pătrunderea sarmaților în vestul Banatului în lumina noilor descoperiri arheologice, Studii și Cercetări de Istorie Veche și Arheologie, 2000, 51, (3–4), 193–208.
- 65. TOT T.A., FIRSHTEIN B.V., Antropologhiceskije dannije k voprosu o Velikom pereselenii narodov: Avari i sarmati, Nauka, Leningrad, 1970.
- 66. TROTTER M., GLESER G., *Estimation of stature from long bones of American whites and Negroes*, American Journal of Physical Anthropology, 1962, **10**, 469–514.
- TROTTER M., GLESER G., A Reevaluation of Estimation of Stature Based on Measurements of Stature Taken during Life and of Long Bones after Death, American Journal of Physical Anthropology, 1958, 16, 79–123.
- 68. UBELAKER D.H., Human Skeletal Remains: Excavation, Analysis and Interpretation, Taraxacum, Washington D. C., 1979.
- 69. VDOVCENKOV E.V., ILJASCHENKO S.M., *Drevnije ograblenija necropolja Tanaisa (k postanovke problemy)*, Drevnije nekropoli i poselenija: postpogrebalinyje ritualy, simvoliceskije zahoronenija i ograblenija, Trudy IIMK RAN, 2016, **46**, 157–168.
- 70. VELIKANOVA M.S., Paleoantropologhija Prutsko-Dnestrovskogo mejdurecija, Nauka, Moskva, 1975.
- VORNIC V., BUBULICI V., POPOVICI S., Date preliminare privind necropola sarmatică de la Medeleni (com. Petreşti, r-nul Ungheni, Republica Moldova), Arheologia Preventivă în Republica Moldova, 2015, II, 59–72.
- 72. VORNIC V., BUBULICI V., POPOVICI S., Sarmatian necropolis from Medeleni (com. Petrești, Ungheni district), Journal of ancient history and archaeology, 2016, III, (3), 20–48.
- 73. VORNIC V., BUBULICI V., POPOVICI S., Necropola sarmatică de la Medeleni, com. Petrești, Pyretus, 2017, III-IV, 64–92.
- VÖRÖS G., Hunkori leletek a szeged szőregi homokbánykból (Funde der Hunnenzeit aus der Sandgrube von Szeged-Szőreg), Móra Ferenc Múzeum Évkönyve – Studia Archaeologica, 1986, 1, 15–30.
- 75. WALDRON T., Palaeopathology, Cambridge University Press, Cambridge-New York, 2009.
- WALKER P.L., BATHURST R.R., RICHMAN R., GJERDRUM T., ANDRUSHKO, V.A., *The causes of porotic hyperostosis and cribra orbitalia: a reappraisal of the iron-deficiency-anemia hypothesis*, American Journal of Physical Anthropology, 2009, **139**, (2), 109–125.
- 77. WESCOTT D.J., The relationship between femur shape and terrestrial mobility patterns, in: CARLSON, K.J., MARCHI, D. (eds.), Reconstructing mobility: environmental, behavioral, and morphological determinants, Springer Science, Business Media, New York, 2014, 111–132.
- 78. WHITE T.D., FOLKENS P.A., The Human Bone Manual, Academic Press, Amsterdam-Boston, 2005.
- ZAHARIA E., Morminte sarmatice descoperite la Cioinagi în 1949, Materiale şi cercetări arheologice, 1959, VI, 897–900.