ANTHROPOLOGICAL DATA REGARDING THE HUMAN CRANIAL FRAGMENT DISCOVERED IN THE DWELLING NO. 4 DURING 1972 ARCHAEOLOGICAL EXCAVATIONS AT RADOVANU-*GORGANA A DOUA*

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Cuvinte cheie: *fragment cranian de frontal, geto-daci, Radovanu-Gorgana a doua.*

Rezumat: *Lucrarea se referă la un fragment cranian uman provenind din osul frontal, descoperit în Locuința nr. 4 de la Radovanu - Gorgana a doua. Sunt prezentate practicile care includ astfel de porțiuni de craniu din lumea geto-dacă, inclusiv unele exemple similare din alte situri arheologice. Pentru acest caz, sunt prezentate condițiile arheologice, studiul antropologic şi paleopatologic. Individul de la care provenea acest fragment cranian a fost de sex masculin, probabil de vârstă juvenis.*

Abstract: *The paper refers to a human frontal cranial fragment discovered in the Dwelling no. 4 at Radovanu - Gorgana a doua. It also presents Geto-Dacian practices involving this particular part of the skull and provides similar examples from other archaeological sites. In this particular case, the paper summarizes the archaeological context of the bone fragment, followed by the anthropological and the paleopathological study. The fragment came from a male individual, probably a juvenile*.

In the Geto-Dacian world there are frequent depositions of isolated human bones, or even skeletons in abnormal positions, found within the living space or its proximity, lacking the grave goods usually associated with regular burials. Such individuals are usually extremely young, mainly newborns, infants or juveniles. The older ages are not represented. The remains of these individuals show traces of blows or even cuts[1]. The conclusion reached based on this kind of information was that the resulted isolated bones or skeletons were the consequence of violent deaths and could speak as evidence for the existence of certain bloody rituals. In favour of this hypothesis are also the finds from the so called „*pit fields*", which served as sanctuaries and contained „*human or animal skeletons, hearths and goods' depositions*"[2]. Such practices, represented by disarticulated human bones or skeletons of individuals killed in a violent manner, in non-funerary contexts, became more frequent beginning with the 2nd century BC and continued until 106 AD. At the same

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[1] Sîrbu 1997, p. 199.

[2] Sîrbu 2006, p. 149.

time, the regular burials decreased in number, until their total disappearance: „*It is obvious that this phenomenon reflects profound shifts in the beliefs of the northern Thracians on the „afterworld", spanning all social categories, from aristocracy to common people, and almost all inhabited territory, allowing us to speak of a genuine „revolution in ideology*"[3].

The archaeological discoveries made so far clearly established that, between the 5th century BC and the 1st century AD, two main periods could be distinguished in what religious beliefs, and also funerary practices of the Northern Thracians were concerned:

a. the first one took place between ca. 500 and 200 BC, when a relative stability of the rites and a certain social distinction among the deceased was observed;

b. the second one comprises the period between ca. 200 BC- and 106 AD, when the number of disarticulated bones and human skeleton depositions in non-funerary contexts increased progressively, in parallel with a proportional decrease of the regular burials, leading to their total disappearance[4].

Given the above mentioned situation, any new discoveries, especially those benefiting of anthropological studies, represent a step forward towards the gradual understanding of the conditions resulting in the profound changes detected by the archaeologists within the Geto-Dacian world.

In a very detailed research published in 2006, Valeriu Sîrbu quoted 30 contexts comprising disarticulated human remains discovered elsewhere than within cemeteries (e.g. underneath dwellings, in pits between the dwellings, inside defence ditches etc.), representing ca.180 individuals of various ages (children, juveniles and matures), both men and women. Most often, the represented body parts were the extremities of the limbs, skull fragments or maxillae[5], frequently buried without any other goods. Some of the respective bones had cutmarks, or traces of splitting.

The archaeological contexts

Within the rectangular complex represented by *Dwelling no. 4* from the 2nd Getic level (the upper one), at Radovanu-*Gorgana a doua* situated in the *Sector A* of the *dava*, in the trenches IV-VI and F, with a NE-SE orientation, two hearths were identified, two halves of buried storage vessels, alongside with various pottery fragments (jars, pyriform urns, fruit stands, cups, mugs, oinochoen), three spindle whorls and a Callatis coin made of bronze. Together with this inventory, uncovered beneath the remains of the floor of a burnt dwelling in trench S.IV, □ 8 -12, a cranial fragment was also recovered. The fragment was a part of the frontal bone, mostly from its right side. The discovery was dated to the 2nd-1st centuries BC[6]. This is not a singular situation, as similar finds occurred in other settlements. We will offer here several examples, some of them from clear contexts, others originating from less securely dated ones.

[3] Sîrbu 2006, p. 151.
[4] Sîrbu 2006, p. 151.
[5] Sîrbu 2006, p. 144.
[6] Şerbănescu 1998, p. 115.

Secure finds within settlements

Brad (Bacău County)

On the bottom of *Pit no. 21*, on its NE side, the skull of a mature person was found; the infill of the pit contained two jars, other ceramic fragments, a bracelet, a fragmentary bronze sheath, and a flint blade[7].

Budeşti (Călăraşi County)

On the bottom of *Pit no. 9*, on its SV side, a cranial vault without the mandible was discovered, while on the NV part several animal bones were exposed. No grave goods were noted[8].

Căscioarele-C*oinea II* (Călăraşi County)

During the 1989 archaeological excavations, in the domestic refuse *Pit no. 3*, three fragments of human skulls were found, together with several ceramic fragments and a part of a bronze bracelet. All of them were dated to the 3rd-2nd centuries BC[9].

In a different area of the settlement another cranial fragments was found, but no further details exist[10].

Coconi (Călăraşi County)

In 1923, eight cylindrical pits were discovered at this site. In one of them, a fragment of a frontal bone with the upper orbital ridges and a maxilla fragment (with four molars preserved) were uncovered. They had been placed in the pit together with two spindle-whorls. On the bottom of the pit was a 10 cm thick layer of ashes. All the pits were found on the southern side of the peak, while the settlement was on its north-eastern side[11].

Grădiştea (Brăila County)

At this site, several La Téne funerary finds were observed[12].

Pit no. 110 contained the burials of three individuals. *Skeleton no. 1* was an adolescent; the second was a child, while the third was an adult.

Skeleton no. 2 was located on the northern side of the pit and was represented by the anterior part of a child skull, with the mandible found underneath the knees of *Skeleton no. 1*. The cranial fragment was associated with ashes, charcoal, ceramic fragments and two river stones[13].

Skeleton no. 3 was represented by a fragment of a cranial vault belonging to an adult individual; it was found mixed within animal bones, two miniature cups, one

[7] Sîrbu 1993, p. 87.
[8] Sîrbu 1993, p. 87.
[9] Sîrbu 1993, p. 88.
[10] Sîrbu 1993, p. 88.
[11] Sîrbu 1985, p. 96.
[12] See, for instance, Sîrbu, Anastasiu 1983, p. 168.
[13] Sîrbu 1993, p. 91.

jar, two other (unbroken) drinking vessels, fragments from 72 to 80 various pots and 9-10 Greek amphorae. The complex was dated to the 1st century BC[14].

The „stepped" dwelling pit contained the cranial vault of a mature individual[15].

Popeşti-*Nucet* (Giurgiu County)

At the respective site, at „*Nucet*", some special burials were found. Among them there were *Burials no. 3* and *4*, containing the skeletons of juvenile individuals, laid in a cross-shape, both in a flexed position. Ca. 25 cm away from them was discovered the skull of another individual (*Burial no. 5*). On the arm of one of the skeletons was found an atypical rusty iron link, while underneath *Burial no.4* was found a fragment of a fruit stand dated to the Geto-Dacian period. Underneath both skeletons wereceramic fragments[16].

Unsecure finds in settlements and other places

Settlements

Bucharest-*Tei*

Skeleton no.2 - discovered just as a cranial vault under the hearth of a dwelling with charcoals etc.

Skeleton no. 3 - cranial vault with ceramics and a fibula[17].

Radovanu (Călăraşi County)

In *Pit no. 189* a fragment of a temporal bone was discovered[18], dated to the 2nd century BC. There are no other published details, nor any anthropological information regarding this cranial fragment.

Defence ditches

Brad (Bacău County)

In infill of the defence ditch of the respective site, was discovered a mandible fragment, belonging to a mature individual. The find was dated between the 1st century BC and the 1st century AD[19].

Pit No. 21

Alongside the usual refuse remains, was found a human skull, placed at the bottom of the pit, toward its NE side. Together with it, there were several objects: a

[14] Sîrbu 1985, p. 91-92; Sîrbu 1993, p. 90. The same finds were published in Sîrbu 1986, p. 91-92 but, , their numbering has been changed.
[15] Sîrbu, Anastasiu 1987, p. 160.
[16] Vulpe, Gheorghiţă 1979, p. 96, 99 with fig. 1/1,2.
[17] Sîrbu 1993, p. 93.
[18] This cranial fragment was mentioned by Valeriu Sîrbu in his volume from 1993, p. 94, but also as personal communication from M. Şt. Udrescu. Done Şerbănescu, who also worked on this site, confirmed that the bone was given to the „*Fr. Rainer*" Institute of Anthropology.
[19] Ursachi 1987, p. 116; Sîrbu 1993, p. 94.

bracelet made of bronze wire, pottery fragments, a flint blade, an iron nail, an iron rivet, and a fragmentary bronze scabbard[20].

Piscu Crăsani (Ialomiţa County)

At this site it was discovered a skull, buried with two other skeletons[21].

Isolated pits

Coconi (Călăraşi County)

In a pit (beta) there were several human bone fragments; among them were mentioned a fragment of a frontal bone with the orbits and a maxilla with four teeth preserved in their alveoli. All these were placed together with fragments of Getic pottery, Greek amphorae and two spindle whorls. On the bottom of the pit was a 10 cm thick layer of ashes[22]. This pit was part of an assembly of eight, grouped on the southern part of the hill top, while the settlement was on its north-eastern side[23].

Vlădiceasca (Călăraşi County)

During one of Barbu Ionescu's several archaeological excavations at „*Ghergălăul Mic*", a skeleton without any grave goods was discovered. In 1982 the research was resumed by Done Şerbănescu, and another skeleton, also without no grave goods was uncovered. In the same trench with the second skeleton, was found a human mandible fragment and other disarticulated bones[24].

*

Some of these finds did not have a clear archaeological context that would allow them to be assigned to a certain ethnical group, but, given that they were discovered within the La Téne settlement on that very spot, as well as the further information provided by some elements of the funerary ritual, the respective burials and disarticulated bones were assigned to the Geto-Dacian period[25].

Unfortunately, as resulted from the presentation of the above finds, no detailed description of the place and position of the cranial fragments exists, and thus the information offered to the specialists, as well as any possible interpretations are partly compromised.

Anthropological characteristics of the cranial fragment from Radovanu-*Gorgana a doua*

This bone is represented by the entire upper margin of the orbit on the right side, but also the area neighbouring the sagittal plan of the left one (Fig. 1). It can be easily noted that the superciliary arches have the 2nd degree, while *glabella* is 4-5. In the proximity of the mentioned area, a small part of the former medio-frontal suture is

[20] Ursachi 1995, p. 261f.
[21] Sîrbu 1986, p. 97.
[22] Turcu 1979, p. 179; Sîrbu 1993, p. 86-100; Sirbu 1985, p. 96.
[23] Sîrbu 1985, p. 96.
[24] Sîrbu 1986, p. 102.
[25] Sîrbu 1985, p. 101.

also present, which connected the two halves of the frontal bone and which, normally, closes around the age of 2. Still, in some cases, it remains open until the adult age - the so called metopic suture[26]. At the present case it is unclear whether a rest of the respective suture or the entire one was preserved, as a part of the remaining frontal is missing.

Sex and age

Due to the emphasized superciliary arches and the *glabella*, most probably, the cranial fragment belonged to a male individual. As we miss the necessary element, we cannot establish for certain the age. On the other hand, the presence of the *cribra orbitalia*, suggests it was a juvenile, as normally this symptom disappears at the adult age through the remodelling of the cranial bone.

Non-metric ("discontinuous") characters

Non-metric traits started to be used several decades ago as distinctive elements and indicators of the endogamy degree present within a certain population. Such features exist both on the skull and post-cranial skeleton. One of them is the modification of the super orbital foramina. These are normal perforations with a rounded outline located above the upper orbital edge, with the role of ensuring the penetration of the vascular and nervous branches irrigating the eye. This formation has two shapes: complete, or incomplete. In the first case, the shape is round, while in the latter case, due to some anomalies, the foramina may open and take the shape of more or less shallow *sulci*. On the discussed individual, the foramina of both orbits were widely opened and *sulcus* shaped.

Porotic hyperostosis

Porotic hyperostosis (also known as symmetrical osteoporosis, *osteoporosis symmetrica*, *hyperostosis spongiosa*, or *cribra cranii)* is a pathological condition of the cranial vault, triggered by the larger hematopoietic demands of the bony tissue and results in the expansion of the diploë spaces. Normally, in compensation, the *lamina externa* gets thinner and acquires a porous aspect.

In anthropology, this problem was interpreted for a long time as the result of anaemia. The latest studies showed its multifactorial aetiology, being thus produced by parasites, infections, cranial trauma and other causes[27].

Cribra orbitalia

Inside the orbit, on the right side of the studied cranial fragment, the presence of some porotic lesions were observed, determined by *cribra orbitalia*. (Fig. 2). For a long time, this condition was associated with porotic hyperostosis, indicated by the presence of some porosities on the skull, both on the outer and inner skull bones. Although cribra *orbitalia* has been almost constantly associated with porotic

[26] Brothwell 1981, p. 93.
[27] Harding 2000, p. 380; Lewis 2004, p. 83.

hyperostosis[28], in 1991 R. Wiggins suggested that no significant correlations existed between *cribra orbitalia* and porotic hyperostosis. Some of the authors still use the term of porotic hyperostosis to describe both ailments, although Mary Lewis and Charlotte Roberts emphasized in 1997 the necessity of having this pathological aspects studied under separate terms, until presence or absence of a correlation could be securely established[29].

Still *Cribra orbitalia* has multiple causes. Initially, around the 5th decade of the 20th century, it was seen as a consequence of anaemia. But, new information resulting especially from various clinic studies carried out on recent populations[30], suggested that several causes induced a similar reaction of the orbital bone, thus, the respective condition had also a multifactorial etiology: nutritional deficiencies, parasite infections, tumours, osteitis, and even hyper-vascularisation induced by periostitis, or osteoporosis. It could also appear following a change of the intra-cranial pressure, through a (cultural) cranial deformation of the head[31].

On this cranial fragment, we observed that *cribra orbitalia* was in a similar stage to that of the closed *trabecular*; the existent trabeculae were not well defined, and on a part of the bone surface of the upper margin of the orbit they were even missing[32]. This indicates that the initial cause which determined a serious anaemia (suggested by the presence of *cribra orbitalia*,) was temporary, or perhaps, permanently removed.

Conclusions

The cranial fragment discussed here, although small, provided interesting information on the individual to whom it belonged. As mentioned above, the individual was probably a juvenile, with traces of c*ribra orbitalia* on the right orbit. It is equally interesting that the respective part of a skull was discovered inside a burnt dwelling, together with some ceramic fragments. As the bone fragment had no traces of cutting or gnawing, there is no indication of cannibal practices. It is possible that the body had been exposed for decomposition, and a cranial part subsequently removed, a symbol of a *pars pro toto*, and preserved in the dwelling. The respective individual might have been a relative, a close relation, or an enemy whose power was desired by the owner of the dwelling. Yet, considering the age of the deceased, we assume that the latter variant is less probable. It is also possible that the respective fragment might have been an element in a ritual practice whose purpose is hard to precisely establish under the circumstances.

[28] Wapler *et alii* 2004, p. 333-339; Walker *et alii* 2009, p. 114.
[29] Lewis, Roberts 1997, p. 581-586.
[30] Wapler *et alii* 2004, p. 333-339.
[31] Vasalech 2001, p. 10f.; Walker *et alii* 2009, p. 115.
[32] Brothwell 1981, p. 165, fig. 6.17.

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Fig. 1.The cranial fragment in *Dwelling no. 4* from Radovanu.

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