Nina Korać
Archaeological Institute Belgrade
Korac.nina@gmail.com

Ilija Mikić
Archaeological Institute Belgrade

UDK: 902.2:572.7”652”(497.11) ;
904:726.8”652”(497.11)
ID BROJ: 196124172

Original research article

Received: July 15, 2011
Accepted: September 5, 2011

FINDS OF CAUSA MORTIS ON THE SKELETONS AT VIMINACIUM IN CONTEXT OF AMPHITHEATRE DISCOVERY

ABSTRACT

At ancient Viminacium, bone trauma as direct cause of death (causa mortis) are very rare. Even though some 10.000 skeletons were discovered in graves, only on eight of them, traumatic injuries were observed, which can be understood as direct causes of death. Regardless of the amfitheatre discovery at Viminacium we consider that most of these specific finds should not be brought in conection with happenings in the amphiteathre itself.

KEY WORDS: CAUSA MORTIS, BONE TRAUMA, SKELETON, SEX, AGE, CASE RECONSTRUCTION.

INTRODUCTION

From the seventies of the 20th century to the first decade of the 21st century, at Viminacium, Roman city and military fort with cemeteries, some 10.000 inhumated graves were discovered and archaeologicaly excavated. Out of this huge number of skeletons, only eight showed reliable traumatic traces visible on skulls or post-cranial bones, which caused death. These are skeletons number 1987, 2158/B, 3155, 3260/A and 3260/B from the “Pećine” necropolis, further on graves number 1163 and 1772 from the “Više grobalja” necropolis and skeleton number 152 from the “Pirivoj” site.

It is interesting that all of the eight skeletons are male ones, while at the moment of death, their bilogical age was between 20 and 40 years.

Considering on one hand characteristics of the traumas and on the other hand the context connected to the discovery of the amphitheatre in 2003, we consider that the skeletons should be separated, obsevered and explained.

MATERIAL AND METHOD

Our observation shall most of all concern features of *causa mortis*, meaning that not all of the data standing at our disposal shall be given, only the primary anthropological elements.

* The article results from the project: *IRS - Viminacium, Roman city and military legion camp – research of material and non material culture of inhabitants by using the modern technologies of remote detection, geophysics, GIS, digitalisation and 3D visualisation* (*no 47018*), funded by Ministry of Education, Science and Technological Development of the Republic of Serbia.

The mentioned eight skeletons shall be presented within Viminacium cemeteries, according to their archaeological contexts. Our study begins with the "Pećine" skeletons, continues with the "Više grobalja" skeletons and ends with the find from "Pirivoj".

Since all the skeletons belonged to adults only, the methods for determining sex and age shall concern only them (Ferembach, Schwidetzky and Stloukal 1980, Buikstra and Ubelaker 1994, Brothwell 1981, Lovejoy 1985). Still, when it comes to paleopathological traces, actually bone traumas as direct causes of death, the situation is much more complicated. Apart from the fact that these were deliberate traumas made man to man, we made a global rather than a detailed division, since they differ from case to case. In paleopathological literature, descripitons of individual cases on small number of samples prevail. In accordance to this, data in literature can be found on decapitation (Wells 1982, Bennike 1985, Smith 1993), facial injuries, like upper and lower jaws or nose (Hussain et al. 1994) or about injuries with arrow-heads (Lewis and Lewis 1961). Still, in conection to our cases, we were forced to give lots of authors' observations and interpretations.

In some cases, when we considered it necessary, we used radiography. Radiographic pictures are added to photographs in the same projections and on the same scale.

VIMINACIUM - NECROPOLIS "PEĆINE" – GRAVE G-1987

Archaeological context

Grave number G 1987 was discovered in sondage 290. It was technically documented on sketch 756. Its detailed descripition is in field diary on page 1692. We notice that it was found in the extension of profile AB (sondage 290), at the depth of 0,67 m. It was a simple pit in which the deceased was lying on his back in a stretched position. Arms were bent in the elbows, hands placed upon the pelvis. The preserved length measures 1,65 m. It was orientated south - north, with a deviation of 10° of the northern part towards the west. Right part of this skeleton was placed over the right half of skeleton from grave G 1988. Right lower leg lies over the right upper leg of skeleton G 1988. Right arm of G 1987 lies over the right lower leg of G 1988. This indicates that these graves were dug simultaneously.

Neighboring graves G 1988 and G 1989 were in direct connection to the previous grave and skeleton. Grave G 1988 was discovered at the depth of 0,70. It was also a simple pit in which the deceased was lying on his back in a stretched position. It was orientated north - south, with a deviation of 14° of the southern part towards the east. The preserved length was 1,64 m. Right half of this skeleton was placed under the right half of the skeleton G 1987, orientated opposite to each other. Still, skull of skeleton G 1999 was placed over the lower skull part and the left shoulder, indicating an inner connection. The skeleton from grave G 1989 was discovered at the depth of 0,60 m. It was also a simple pit with a deceased lying on his back in a stretched position. The preserved length is 1,65 m. In was orientated west - east, with a deviation of 20° of the eastern part towards the north.

During achaeological excavation , in neither of the three graves connected to each other, grave goods were discovered. Only fragmented bricks of the grave covering were discovered.

Anthropological elements

Anthropological analysis showed that all of the three skeletons were robust males. Their individual age was about 40 years. Not all of the skeletons were fully preserved, but still in a rather good condition.

Figure 1. Mandible from grave G-1987

All of the skeletons showed *intra vitam* loss of some teeth from both of the jaws. Only skeleton from grave G 1987 showed a specific mandibula trauma.

Description and analysis of the trauma

A trauma was observed at the mandibula of skeleton G 1987. From the left angulus edge, aproximately parallel to the corpus, in the length of some 6 cm and 3 mm thick, a part of the mandibula was cut off. The cut did not cause any further bone cracking, also showed on the X-ray (taken from: Lovrinčević i Mikić 1989). Direction of the weapon which caused this injury went from the left angle of the mandibula towards the chin. Since the weapon was cut deep into the bone, due to the pressure, aprt of the cut-off bone fell off some 6 cm apart from the angulus (see fig. l). Still, the cut-off part of the mandibula was not found during the excavation, most likely separated from the body at the moment when the injury was made.

There are no traces of regeneration of bone tissue, i.e. osteoplastic reaction at the surface of the cut. If we consider that at that moment, also several vital structures of the neck anatomy (arteria carotis communis and vena iugularis interna, both on the left side) were injured, it can be concluded that this man died instantly, by deliberately caused death.

VIMINACIUM - NECROPOLIS "PEĆINE" - GRAVE G-2158/B

Archaeological context

According to the field diary from 1982, page 1692, garve G 2158 was discovered in the extension of the profile AB of sondage 290 (sketch nr.756). It is actually a mass grave of nine skeletons, buried at two levels (more details in this edition, by Golubović and Mikić). At the first (upper) level, there were three skeletons, marked A, B and C. The lower level contained the remaining six skeletons, marked from D to I. We shall study only the skeleton 2158/B from the upper level, because only it showed skull trauma. It was discovered to the south from skeleton 2158/A and to the north from 2158/C. It was lying on its back

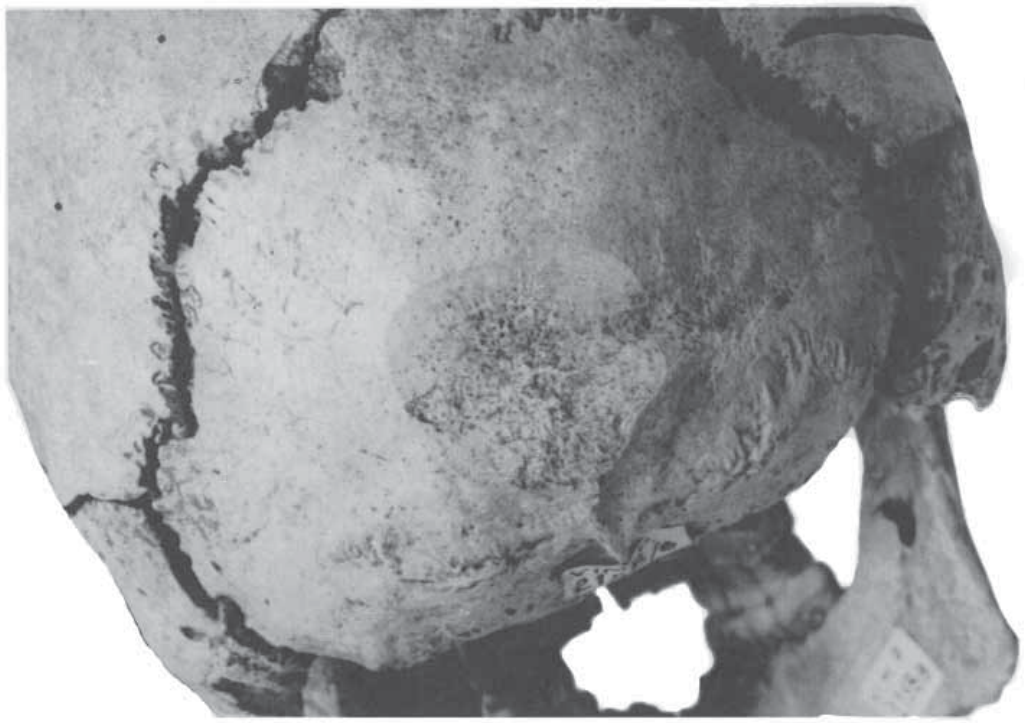

Figure 2. Viminacium, Pećine 2158B

in a stretched position, arms bent in the elbows. Right hand was placed on the left pelvis half, left hand was placed upon the right upper arm and the left lower leg of skeleton 2158/G. A fragmented brick was laced at the lower leg, also placed on the lower legs of skeleton 2158/C.

Length of skeleton 2158/B measured *in situ* was 1,54 m. It was orientated west - east, with a deviation of 6° of the eastern part towards the south.

In this mass grave, two bronze coins were discovered from the second half of the 3rd century AD, indicating time of burials of these skeletons.

Anthropological elements

On skeleton B from the mass grave 2158 of the "Pećine" necropolis, robusticity was noticed on skull and on the postcranial part. Skull was fragmented, but after the reconstruction, it was put in its anatomic context. Facial part was not fully reconstructed, although primary anthropological measures were obtained.

Robust male is confirmed also through morphology. Modelation of the skull indicated a shorter, wide and tall morphostructure, with relief-shaped face.

Apart from the trauma which shall be described, on both alveolar ridges of this skull parodonthosis was noticed. Still, the missing teeth were lost *post mortem*.

Time of death of this man was certainly before the age of 40.

Description and analysis of the trauma

On the occipital bone, in the *protuberantia occipitalis externa* region which was cut off, a cut of irregular semi-circular shape, some 4 cm in diameter was noticed (see fig. 2). At the whole surface, showing parts of the inner bone (*supstantia spongiosa*), no traces of regenerating bone tissue were noticed. Apart from the bone, also vital soft tissues of the neck were injured, we consider that this man died instantly. Still, it is not quite clear whether a strong hit with a blade also caused separation of the occipital bone from the rest of the cerebral skull part, since traces of mineralization are visible exactly on severely separated sutures of the occipital zone (see fig. 2). Powerful hit was also transponed to the nearest skull region, causing separation and cracking of the neighbouring sutures (which did not grow together at the age younger than 40 years).

Cervical spine vertebra showed no pathological changes, therefore we consider that death was not caused by decapitation of this man.

VIMINACIUM - NECROPOLIS PEĆINE - GRAVE G-3155

Archaeological context

Grave G 3155 was described ni field diary on page 2382 and drawn in sketch 1151. It was lying at the depth of 1,70 m and at the distance of 30 cm from point D of sondage 342. It was orientated south-north, with a deviation of 23° of the northern part towards the east. The deceased was buried in a wooden coffin, out of which iron nails remained preserved. According to the position of the nails, coffin width was about 55 cm. Skeleton length measured *in situ* was 166 cm.

The skeleton from this grave was missing its left lower leg, while the right foot showed traces of burning. It was partly damaged with cremation grave G_1-792. The deceased was lying on its back in a stretched position. Arms were bent in the elbows and placed over the stomach, right hand over the left one. Over the left lower arm, there was a pelvis half of another deceased. Above skull 3155, a fragmented iron needle was found (possibly disturbed from its original position due to devastation).

Anthropological elements

Skeleton from grave G 3155 was poorly and incompletely preserved. Still, there were elements enough to determine it as a male skeleton. Individual age at the moment of death was about 21 to 23 years.

On the preserved parts of this skeleton, only a trauma on its left pelvis half was noticed. There were no other pathological traces on bones or teeth.

Description and analysis of the trauma

A. Lovrinčević and Ž. Mikić (1989; pages 178 and 179) stated for this case that it was most likely a case of inflamatory process or a post-traumatic fracture of a wing of *os ilium*. Still, after our analysis, we were able to conclude that there were actually both processes, which do not exclude each other. First there was a truama caused by a stab into the left pelvis part. When the stab was performed, certainly with some kind of metal weapon, the *os ilium* was pierced twice. After 4 or 5 cm of the first stab, the weapon went out of the pelvis, so that was actually a double stab (see figure 3), because there was also an exiting wound. Sharp flat blade did not remain in the pelvis and it was certainly drawn out immediately (by its user).

The situation caused after the injury can be reconstructed. There was no instant death, shown by a degree of osteoplastic reaction of the injured bone. But, since the injury was deep, an infection developed. Since this person died soon after the age of twenty, there was no complete healing. High degree of inflamatory process, regardless of inital degree of bone regeneration, resulted in death after a short period of time.

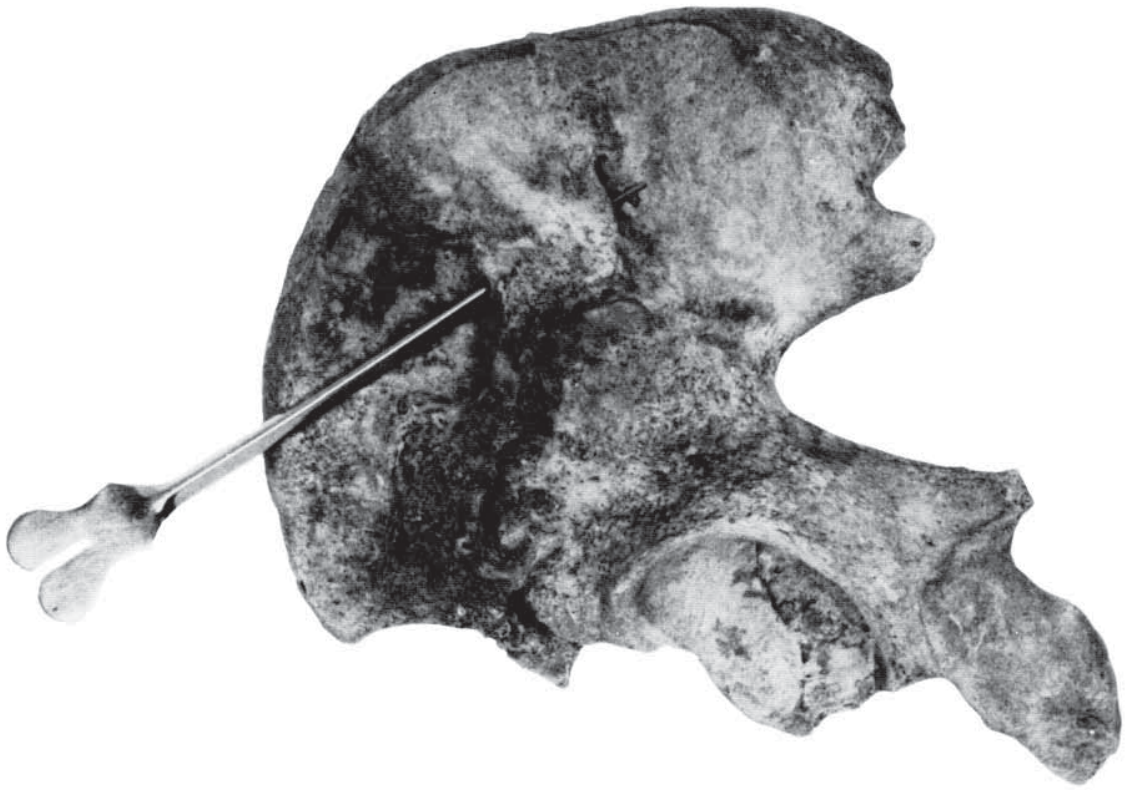

Figure 3. Pećine G-3155

VIMINACIUM - NECROPOLIS PEĆINE - GRAVE G-3260 (SKELETONS A AND B)

Archaeological contex

In field diary of the Pećine necropolis for 1983, on page 244-7 there are data about this grave. It was in sondage 3^5 and it was technically documented on sketch nr. 1172. It was at the depth of 1.30 and in the profile B-F, but the biggest part of it was in sondage 332. It was evident that it was a double burial in the same pit. They were marked as A and B. They were buried in the so-called sacrificial area.

Skeleton A was buried in a simple pit, lying on its back in a stretched position. Left arm was stretched next to the body. Right arm was bent in the elbow, hand upon the pelvis and over the left arm of skeleton B. Skull fell on the right shoulder. It was orientated northwest-southeast with a deviation of 13° of the southeastern part towards the east. The preserved length was 160 cm.

Skeleton B was also buried in a simple pit, lying on its back in a stretched position. Right arm was bent in the elbow, hand placed upon the pelvis, while the left one was next to the body. It was orientated west-east with a deviation of 14° of the eastern part towards the south. The length measured *in situ* was 165 cm.

There were no grave goods discovered in this grave.

As it was buried, skeleton 3260/B damaged grave G 3261.

Figure 4. Pećine G-3260A (Hošovski, 1995)

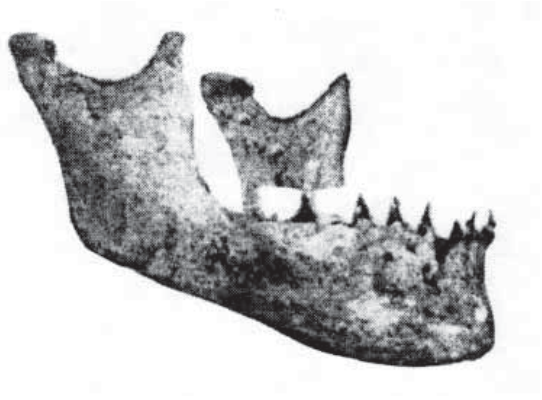

Figure 5. Pećine G-3260B (Hošovski, 1995)

Anthropological elements

As already mentioned in the archaeological context, this is a double burial, in which skeletons marked as 3260/A and 3260/B were discovered. Both of them were incompletely preserved, still with enough elements for determining their sex and age.

Both of the skeletons are male. The age of skeleton A was over 30 years, while skeleton B was younger than 30 years of age.

Description and trauma analysis

On skeleton 3260/A two changes were noticed causing violent death. One of them is a cut of the right mandibula angle (*angulus mandibulae*), some 30 mm long, during which a part of the angulus was separated from the mandibula. The other one is also a cut of the third neck vertebra, with which the body was separated from *arcus vertebrae* (Hošovski 1995). As seen on figures 4a and 4b (outer and inner mandibula sides), co-related to figure 3 (third neck vertebra), this trauma was most liekly caused with a sharp metal blade. By cutting the right *aorta carotis communis* and *vena iugularis interna*, spinal cord was damaged or cut off. Since the third neck vertebra is completely cut in halves (see figure 4c), this person died of instant death. Regeneration traces of the bones should not even be mentioned, since it is completely clear why they did not appear in this case.

Skeleton 3260/B also has a trauma on its mandibula. It was cut at the right forntal edge of *ramus* in the length of 12 mm (see figure 5). This trauma was also caused with a sharp blade, with which the mouth-hole was cut opened. There were no traces of bone regeneration and this person also did not survive these face injuries. Unfortunately, the skeleton was poorly preserved and the right cheekbone was not found (*os zygomaticus*). This is why only the deepest part of the cut was noticed. It was also evident that this person was standing upright as it was injured, while the trauma itself had a vertical direction downwards. In other words, it was not a piercing cut.

VIMINACIUM - NECROPOLIS VIŠE GROBALJA - GRAVE G-1163

Archaeological context

Grave nr. 1163 was described in detail on page 1339 of the field diary of the necropolis "Više grobalja". It was discovered in l984, in sondage 64. It was drawn on sketch 408.

It was a simple burial with the deceased lying on its back in a stretched position. The skull was lying on the right side of the back of the head, facing southeast. Right arm was bent in the elbow, hand under the pelvis. Left arm was also bent in the elbow, hand placed on the right half of the abdomen. Left leg was stretched, while the right one was bent in the knee.

The length measured *in situ* was 1,62 m. It was orientated north-south, with a deviation of 11° of the northern part towards the west.

There were no grave goods in this grave. As it was buried, this grave damaged the cremation grave G_1-972. It was at the depth of 1,29 m.

Anthropological elements

Regardless of the unusual position of arms and legs, there were still enough elements to determine sex and age of this person. It was of robust structure, especially at the post-cranial skelton, indicating a male.

Individual biological age was not higher than 40 years.

It should be mentioned that all of the teeth from the maxilla were lost *post mortem*. Mandibula is incomplete, so nothing can be said about dentition. Still, there were evident traces of parodonthosis.

Description and trauma analysis

As seen on photograph and X-ray (Fig. 6), there are three cuts of different shapes and sizes

Figure 6. Viminacium, Više grobalja 1163

on the frontal bone of this skull. The middle one is some 4 cm long and goes almost vertically across the middle of the forehead bone. The left cut is some 1 cm away from the middle one. It is about 2 cm long, but it is very difficult to determine its shape, since it is irregular. The right cut is the longest one, some 10 cm and it goes from the middle part of the forehead bone to the middle of the right maxillar sinus. In other words, all of the three cuts have their upper edges at the middle part of *os frontale*, slightly curved but then separated and with different lengths.

After the analysis and interpretation, we consider that these cuts were not made separately but simulatenously, only with a very specific weapon. It surely had a tridental or ray-shaped blade at its top. When it touched the face of this deceased, the weapon itself was slightly diagonally placed. Its lowest part made the deepest and the lowest cut, all the way to the cheek bone. The weapon then slightly rotated it the hands of its user, leaving a ray-shaped trace on the face of the skull nr. 1163.

Since there are no traces of osteoplastic reaction of the bone and since a cut of this kind over the right eye and the right maxillar sinus was a deathly one, it certainly resulted in death.

VIMINACIUM - NECROPOLIS VIŠE GROBALJA - GRAVE G-1772

Archaeological context

Grave G 1772 was excavted in 1985. It was described in field diary on page 1915, where it is written that it was discovered at the depth of 1 m. It was drawn on sketch 537.

According to the field diary, it was a simple pit, placed in a stretched position on its back. Arms were bent in the elbows, placed upon the stomach, left hand over the right one. The skeleton is incomlete. It is missing its left pelvis half and both legs. It was damaged by mechanisation of the strip-mine.

Its length *in situ* was not measured. It was orinetated east-west, with a deviation of about 20° of the eastern part towards the north.

There were grave goods discovered in this

grave, including a bronze coin, a bracelet made of iron tin, three glas pearls, a small pot (without rim) and a fragmented pot. Still, these grave goods did not indicate the sex of the deceased.

Anthropological elements

Regardless of the poor state of preservation, there were enough elements to determine its sex. According to the typical morphostructure on the preserved postcranial part of the skull, it was easily ascribed to a male of robust structure.

On the other hand, his individual age was between 30 and 35 years. The teeth missing from the maxilla were lost *post mortem*. Mandibula was not fully preserved. Traces of initial parodonthosis were evident.

Description and analysis of the trauma

The middle of the left part of *os frontale* of the skull nr. 1772 is a region of a huge traume. There is a cut which goes slightly diagonally, its lower part towards the middle of the eye-bow, its upper part towards the *bregma*. Its length is about 5 cm (see figure 7). The cut went all the way through the frontal bone, so most likely the *dura matris* was hurt as well. The hit was so strong that it caused cracking of the cerebral skull part in two directions, connected to the cut. The lower direction goes aproximately from the middle of the right eyebow and it is irregular in shape. The upper direction goes over the left half of the *suturae coronalis* and branches afterwards in the length of about 5 cm.

This heavy trauma, certainly causing instant death, must have been made with a very sharp and massive blade. At the moment of being injured, the deceased nr. 1772 was either in a vertical or in a horizontal position, facing the person who made this lethal hit.

VIMINACIUM - NECROPOLIS PIRIVOJ – GRAVE G-152

Archeological context

In comparison to other cases named above, only this one was published in detail. Grave nr. 152 was excavated in 2003 at the site Pirivoj, belonging to the area of the eastern Viminacium cemeteries. More precisely, it is located 400 m to the east from the military camp of the VII legion, very close to the mausoleum. It was found at the depth of 1,25 m. It had a construction measuring 195 X 70 X 27 cm, made of bricks (each measuring 38 X 26 X 5 cm). The skeleton itself was orientated west-east.

According to the grave goods, this grave was dated into the middle of the 4th century (more details in: S. Golubović, N. Mrdjić and C. Scott Speal 2009).

Anthropological elements

In the mentioned paper (Golubović, Mrdjić and Speal 2010), in the "Anthropological summary" (pages 56 - 60), sex, age, markers of muscular stress and pathological factors were analyzed. It was concluded that it was a man who was certainly younger than 30 years at the moment of death.

Description and analysis of the trauma

There were two regions of violent traumas on this skeleton. These are the pelvis –femoraine region and the brain region of the skull. In the first region, there are two traumas. One is piercing the middle part of the right pelvis half, above the *acetabulum* (see figure 8). The other one is the upper edge of the right femur (figure 9), with the remained iron blade of the weapon with which the injury was made.

These two traumas of the pelvis area did not cause instant death, so that this person also

Figure 7. Viminacium, Više grobalja 1772

suffered a third trauma over the right half of the cerebral skull part, resulting in death. The authors who published this grave (Golubović et al. 2009) consider that the first two traumas were made with arrows with triangular arrow-heads. The leathal trauma was caused with a massive metal blade, resulting in instatnt death (see figure 10).

DISCUSSION AND CONSLUSION

Compared to some ten thousand graves discovered at Viminacium, only in eight cases of traumas resulting in death were discovered and examined, which is a result which can be expressed in promiles. Still, since only bones stood at one's disposal, the number was certainly much

higher. Out of the eight cases, five of them can be understood as traumas resulting in instant death (Pećine G - 1987, Pećine G - 2158/B, Pećine G - 3260/A, Više grobalja G - 1163 and Više grobalja G - 1772). It was evident that these were cuts which left clear traces on bones, without traces of regeneration of the bone tissue. The traumas were heavy and complex, resulting in fatal ending.

Skeleton from grave nr. 3155 of the "Pećine" necropolis had a pierced pelvis with both entering end exiting wound. As radiography showed, there were traces of regeneration. It turns out that this piercing wound also injured soft tissues, but did not cause instant death. The intensity of osteoplastic reaction of the surrounding bone part, it can be concluded that this person died several weeks after being injured, but certainly because of this injury.

Skeleton from garve nr. 3260/B of the "Pećine" necropolis shows clear traces of cutting the frontal part of mandibular *ramus*. During this injury, the mouth hole was certainly cut opened and the whole zygomatic region was damaged. Since the trace on the bone is rather small, it is possible that this person also did not die immediately, but after the trauma, under the condition that there were no other injuries of soft tissues.

The case of the skeleton G-152 from Pirivoj is a specific one. First of all, a weapon which caused the injury was found. Further on, traumas were present on two parts of the body. One is the pelvis, wounded with arrows (E arrow-heads) and the other one is the cerebral head part, hit with a heavy blade. In this case, death was caused with a hit on the head, since brain mass was injured. Still, the question remains open if both traumas were caused by the same person, or there were several persons involved in this "case".

Finaly, after all the descriptions and interpretations, we should say something about wepons and occassions in which they were used. It was evident that in all of the cases, weapons for direct contact were used, except one case, when arrows

Figure 8. Right pelvis from grave G-152 (Golubović, Mrđić and Speal 2010.)

were used. But, when it comes to occassions in which such weaponswere used, we consider that these were duel-fights. Since Viminacium was a city and a military camp with an amphitheatre, we think that most of the cases here presented and explained should be brought in connection to the fights performed at the amphitheatre. The amphitheatre was discovered in 2003 and its excavation begun in 2007. Question remains wheather killed in public duels were buried in a separate area of

Figure 10. Scull from grave G-152 (Golubović, Mrđić and Speal 2010.)

cemetery or in a common way. This can be determined only by discovery of separate cemetery or parts of already known cemeteries with group burials of combat victims.

Figure 9. Right femur from grave G-152 (Golubović, Mrđić and Speal 2010.)

BIBLIOGRAPHY

Bennike, P. 1985.
Paleopathology of Danish Skeletons: A Comparation Study of Demography, Disease and Injury, Copenhagen: Akademisk Forlag.

Brohtwell, D. R. 1981.
Digging up Bones, London: British Museum (Natural History and Oxford: Oxford University Press.

Buikstra, J. E. and Ubelaker, H. D. 1994.
Standards for data Collection from human skeletal remains, *Arkansas Archaeological Survey Research Series,* No 44, Pagettville, Arkansas; Arkansas Archaeological Survey.

Hošovski, E. 1995.
Nekoliko nalaza Causa mortisa sa Viminacijuma, *Glasnik srpskog arheološkog društva* 10: 53-57.

Ferembach, D. , Schwidetzky, I. and Stloukal, M. 1980
Rekomondation for Age and Sex Diagnoses of Skeletons, J. Hum. Evol. 9: 517-549.

Golubović, Mrđić and Speal 2010.
Golubović, S. , Mrdjić, N. and Speal, S. C., Killed by the arrow: grave No. 152 from Viminacium. *Xantener Berichte 16: Waffen in Aktion: Akten Des 16. Internationalen Roman Military Equipment Conference (ROMEC), Xanten, 13.-16. Juni 2007*: 55-63. Mainz am Rein. 2010. Philipp Von Zabern.

Hussain, K. Wijeringe, D. B. , Grubnic, S. and Jachson, I. T. 1994
A comprehesive analysis of craniofacial trauma, *Journal of trauma* 36: 34-47.

Lewis, T. M. N. and Lewis, M. K. 1961.
Eva; An Archaic Site, Knoxville: University of Tennessee Press.

Lovejoy, C. O. 1985.
Dental Wear in the Libben Population: Its Functional Patterns and Role in the Determination of Adult Skeletal Age at Death. *A. Jour. Phisical Anthropology* 68: 4-7-56.

Lovrincević, A. and Mikić, Ž. 1989.
Atlas of osteopathological changes of the historical Yugoslav Populations, Svjetlost, Sarajevo.

Smith, M. O. 1993
A probable case of Decapitacion of the Late Archaic Robinson Site (40SM4), Smith County, Tennessee, *Tennessee Anthropologists* 18: 131-142

Wells, 0. 1982.
The human burials. In: *Romano-British Cemeteries of Cirencester* (Ed. A. Mc. V/hirr, L. Viner and C. Wells), 135-202. Cirencester: Cirencester Excavations Committee, Corinium Pluseum.

REZIME
NALAZI CAUSA MORTIS NA SKELETIMA VIMINACIJUMA U KONTEKSTU OTKRIĆA AMFITEATRA

Nina Korać, Ilija Mikić

U prilogu su obrađene traume koje se pouzdano mogu tumačiti kao direktan uzrok smrti (*Causa mortis*). Na Viminacijumu skeleti sa ovakvim tragovima su izuzetno retki. Ukupno do sada ih je pronađeno osam. Sa nekropole Pećine to je pet skeleta (br. 1987, 2158/B, 3155, 3260/A i 3260/B). Nekropola Više Grobalja sadrži dva ovakva skeleta (br.1163 i br. 1772), a Pirivoj samo jedan (br.152).

Za nanošenje smrtnih povreda najčećće je korišćeno oružje za direktne duele. Povrede oružjem sa distance konstatovali smo samo u jednom slučaju (Pirivoj G 152). Svih osam nađenih i analiziranih slučajeva je i ilustrovano na odgovarajući način (videti slike od 1 do 10).

Najveći broj ovih smrtnih slučajeva ne može se dovesti u direktnu vezu sa otkrićem amfiteatra na Viminacijumu, koji je bio rimski grad i vojni logor.