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A UNIQUE ACCUMULATION OF HUMAN SKULLS IN AN ARCHAEOLOGICAL PIT OF THE MIDDLE BRONZE AGE

ABSTRACT: During archaeological excavations the most varied types of archaeological features are usually discovered, with various types of pottery or human and animal remains. Quite unique is the find of a pit at Velim in Bohemia, made in 1992, during the systematic excavation of this important Bronze Age site. The oval pit of rather small dimensions, yielded skulls of children, juvenile and adult individuals together with some animal bones.

There were three complete skulls without mandibles (Nos. I, II, III), frontal bones and some fragments of facial skeleton of other (child and juvenile) individuals (Nos. IV, V). During laboratory treatment other fragments were reconstructed into a braincase (No. VI). Traces of violence were found on the remains of the child (No. V) and on the tibia of an adult individual. As to the animal bones found in the pit, there was a broken skull and a few other bones (iliac bone, sacrum) of a cow.

KEY WORDS: Middle Bronze Age (Tumulus Culture) – Bohemia – Velim site – Accumulation of human skulls – Traces of violence

INTRODUCTION

The ninth season of archaeological research at Skalka ("Little Rock") site at Velim was realised by staff members of the Archaeological Institute of the Czech Academy of Sciences J. Hrala, M. Vávra and Z. Sedláček as a rescue research. In the course of previous research seasons, this site yielded more than 15,000 registered items, numerous individual human and animal bones and 34 human skeletons on the excavated area of 7,950 m² (Hrala, Sedláček, Vávra 1992).

The object of the present contribution is an anthropological analysis of the content of the pit No. 154 (Figure 1). Its length was of 0.87 m, width 0.70 m, depth 0.43 m and diameter 0.39 m. The content was uncovered in three levels (Figure 2–A, B, C):

In the surface level (A) (Figure 2) the following human and animal remains were found:

- a fragment of the right tibial diaphysis, a distal part of a right femur, an iliac bone and two isolated teeth from the skull No. III (I₂, M₁);
- fragments of the frontal, occipital and parietal bones of the right side of another skull and a fragment of the left parietal bone of the same sub-adult individual (No. VI);
- a maxilla of a juvenile individual (No. V);
- a broken skull of a cow (two parts of the frontal bone with horn cores, the occipital bone and the left half of the mandible), other bones of a cow (sacrum, iliac bone) and an ulna of a pig.

The middle level (B) contained the main accumulation of human skulls (Figures 2, 3):

- a skull of an adult male (No. I), a skull of an adult female

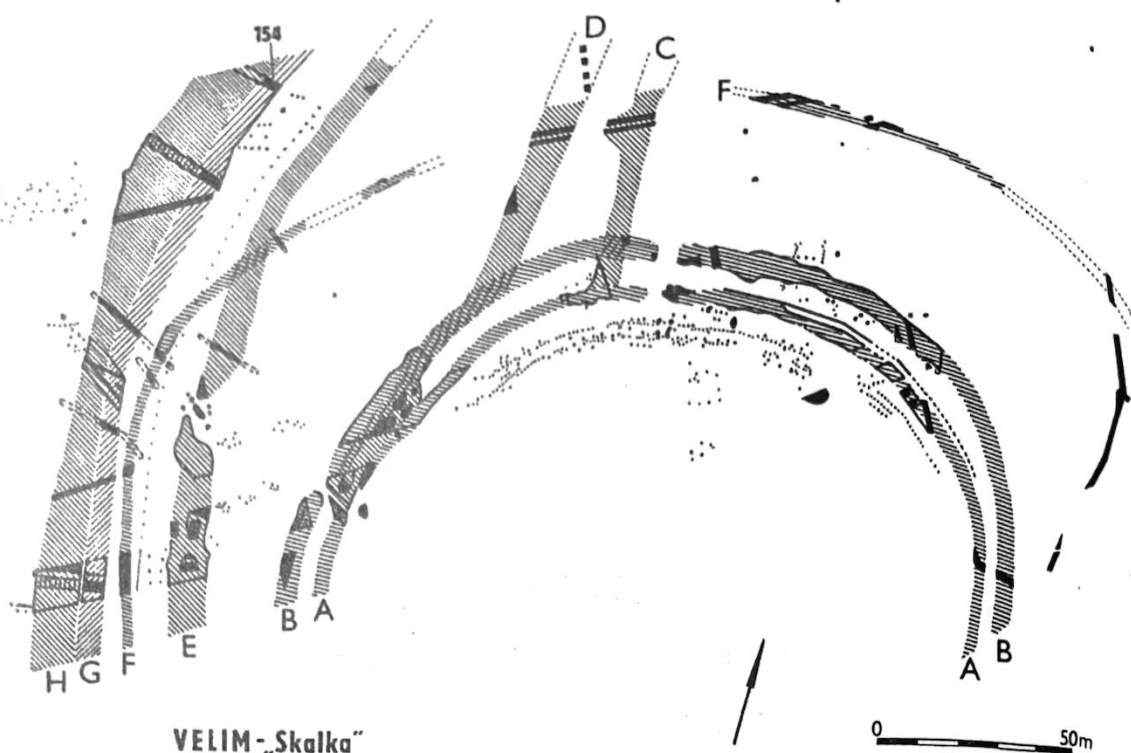


FIGURE 1. "Skalka" site near Velim (Bohemia). Plan of 1984-1992 excavation. Pit No. 154 is in the NW part of the excavations. The excavated trenches are designed black and the reconstructed position of the ditches (A, B, C, D, E, F, G, H) is grey. (After to J. Hrala, M. Vávra and Z. Sedláček).

- (No. III), frontal and facial parts of a skull of a child
- (No. IV), a frontal bone and cranial fragments of a sub-adult individual
- (No. V), a skull of a child
- (No. II), and fragments of another juvenile skull
- (No. VI);
- small fragments and broken pieces of animal bones.

At the **bottom of the pit (level C)** there were fragments of potsherds and stones of various size with a few cranial fragments (No. VI) above the bottom.

ANTHROPOLOGICAL OBSERVATIONS

Skull I (Figure 4)

A well preserved skull of a robust adult individual with damaged cranial base. The front is broad and vaulted with marked temporal lines and with well developed supraorbital arches and glabella of the 3rd degree. Nasal bones and part of the left orbit are missing. The right orbit is low. Malar bones are robust, with marginal tubercles. On the temporal bones there are robust mastoids and a well developed supramastoid crest. The occiput is vaulted with a marked occipital protuberance and with a rough relief of muscle insertions on the nuchal plane. Cranial sutures are partly obliterated, only the sagittal suture is completely closed. The teeth are strong with an unequal degree of wearing and in most of them the dentine is uncovered. Both permanent premolars and the first molar on the left side, as well as the second premolar and first molar on the right side have damaged crowns on their buccal sides.

The skull bears all the features of a male individual. According to the degree of dental abrasion and obliteration

of cranial sutures the man must have died at the age of 45-50 years. The general shape of the skull is dolichocrane.

Skull II (Figure 5)

The skull of a gracile child with a vertical front. The shape of the face and the size of the orbits were postmortally deformed. Nasal bones are lacking. The occiput is slightly protruding with several wormian bones in the lambdoid suture. The dentition includes two deciduous molars (m_1 , m_2) and the first permanent molar (M_1). The crowns of the second permanent molar are still in alveoli and the stage of dentition corresponds to 9-10 years. The skull bears traces of extensive healed lesions. The frontal bone was broken and healed on the right side in the length of 1.5 cm. On the right parietal bone the skull is broken twice in the length of 6 cm. At the place of the parietal boss there is a radial opening of 0.5-1 cm in width and at 2 cm from the boss there is another smaller damage of 0.5 cm, turning into a fissure reaching up to the occipital bone. These serious lesions are healed, which means that the child must have survived to these multiple fractures of the skull and died later. The skull is mesocrane, orthocrane, metriocrane and eurymetopic.

Skull III (Figure 6)

The skull of an adult individual is secondarily deformed, with a damaged cranial base. The front is flat and broad with a weak glabella of the first degree. Orbits are medium large with sharp superior edges, their asymmetric shape being caused by ground deformation. The nose is broad, with a deep rooted nasal root. The face and facial bones



FIGURE 2a. The surface layer A in pit No. 154.



FIGURE 2b. The middle layer B with the main accumulation of human skulls in pit No. 154.

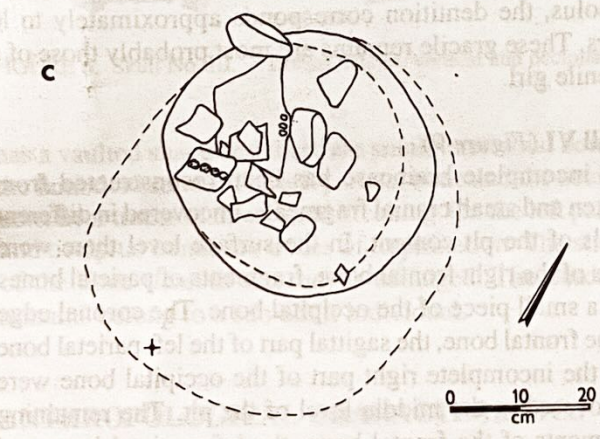
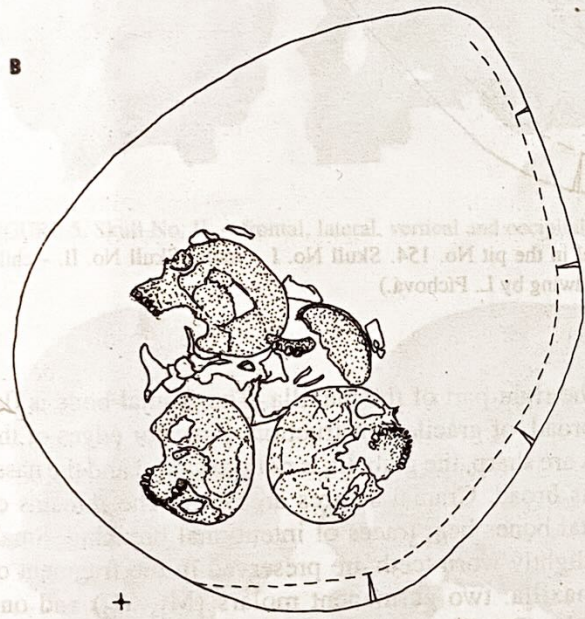
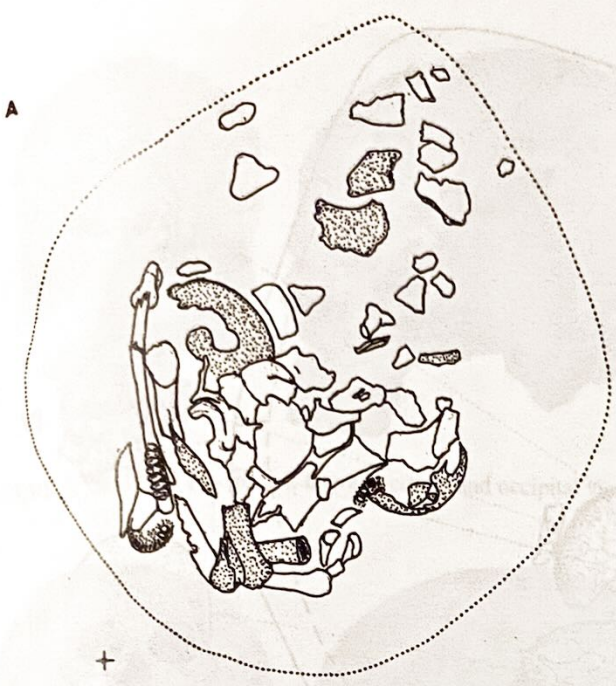


FIGURE 2. Pit No. 154. Uncovered levels: A – surface level, B – middle level, C – bottom of the pit.

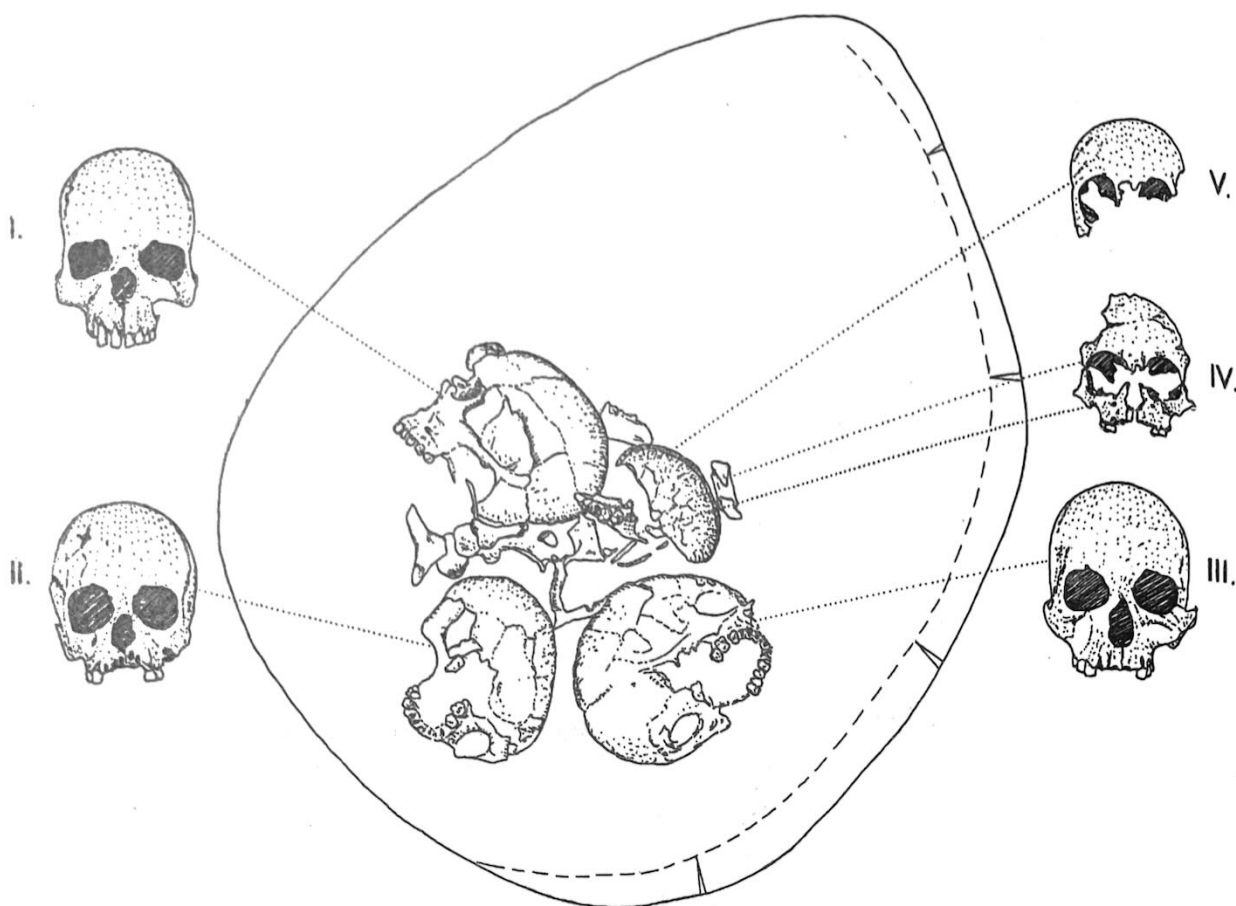


FIGURE 3. Reconstruction of the location of human remains in the middle level in the pit No. 154. Skull No. I – male. Skull No. II. – child. Skull – No. III – female. Skull No. IV – child. Skull No. V – individual (girl). (Drawing by L. Píchová.)

are quite broad, of robust construction, the mastoids are of medium size. The occiput is rounded and vaulted, slightly protruding with an indistinct muscle relief. Cranial sutures are medium obliterated with small interstitial bones in the lambdoid suture. Teeth are medium-sized and only slightly worn, one tooth (P_2) having the buccal part of the crown damaged. According to characteristic morphology it is clear that these are remains of an adult female deceased at the age of 30-35 years. The skull is acrocrane, long, narrow and high.

Skull IV (Figure 7)

Part of a child's frontal bone, with sharp superior orbital edges. In the central part the frontal squama is split-off, similar traces of splitting being found on an isolated fragment of the skull belonging to the same individual. Cranial bones are very gracile. The maxilla of this child was lying near the frontal bone, with preserved deciduous molars (m_1, m_2), the apparent cutting of the first permanent molars and the fact, that the crowns of I_2 and M_2 are situated in alveoli prove that this child died at 5-6 years of age.

Skull V (Figure 8)

Preserved parts of the skull are only the frontal bone, part of the malar bone, small fragments of the left parietal bone

and the right part of the maxilla. The frontal bone is flat and broad, of gracile construction. Superior edges of the orbits are sharp, the glabella is not preserved and the nasal root is broad. Cranial sutures are open. The remains of parietal bones bear traces of intentional breaking. Small and slightly worn teeth are preserved in the fragment of the maxilla: two permanent molars (M_1, M_2) and one premolar (P_1). The crown of the third molar (M_3) is in the alveolus, the dentition corresponds approximately to 16 years. These gracile remains are most probably those of a juvenile girl.

Skull VI (Figure 9)

The incomplete braincase has been reconstructed from broken and small cranial fragments, uncovered in different levels of the pit content. In the surface level there were parts of the right frontal bone, fragments of parietal bones and a small piece of the occipital bone. The coronal edge of the frontal bone, the sagittal part of the left parietal bone and the incomplete right part of the occipital bone were discovered in the middle level of the pit. The remaining fragments of the frontal bone, the left parietal bone and part of the occiput were above the bottom of the pit.

Although the frontal bone is incomplete, the braincase is evidently elongated in the vertical view. The occiput



FIGURE 4. Skull No. I – frontal, lateral, vertical and occipital views.



FIGURE 5. Skull No. II. – frontal, lateral, vertical and occipital views.



FIGURE 6. Skull No. III. – frontal, lateral, vertical and occipital views.

has a vaulted shape and there are small interstitial bones in the lambdoid suture. The left parietal bone and the occipital bone bear traces of intentional breaking. On the left parietal and occipital bones are traces of trephination. The surface of the bone (*lamina externa*) is damaged. The described remains belong to a sub-adult individual.

ANTHROPOLOGICAL CHARACTERISTICS

From the anthropological point of view, we have to deal with remains of six human skulls out of which only the child's skull No. II and adult skulls I and III show more

numerous anthropometric data (Martin, Knußmann 1988). The child's skull is medium long, medium high and medium broad. Medium dimensions are also obvious in the female skull No. III which surprisingly has a broad and rather robust facial skeleton. The skull is long and medium high. The skull No. I is robust and has well developed supraorbital arches, broad facial bones and well marked muscle relief. The skulls of adult individuals are long, rather robust, high, with marked relief and thick cranial bones.

Since only some anthropometric data can be published in this preliminary report (*Table 1*), their importance should be considered of informative value only due to their small number. A detailed comparative anthropological study is

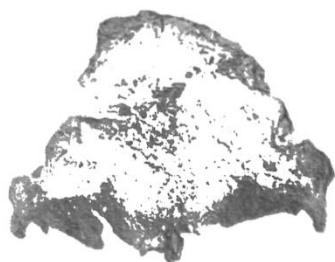


FIGURE 7. Skull No. IV – frontal view.

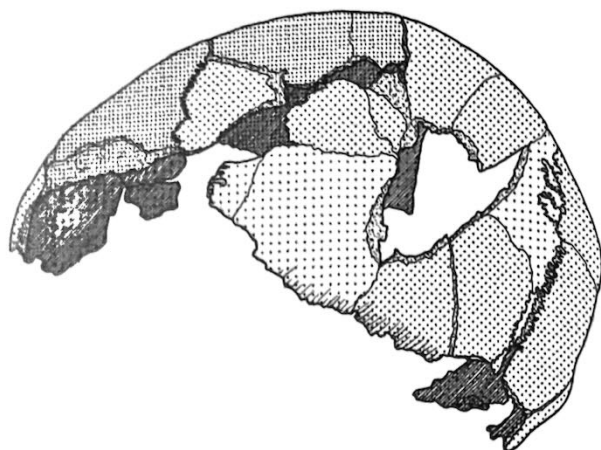
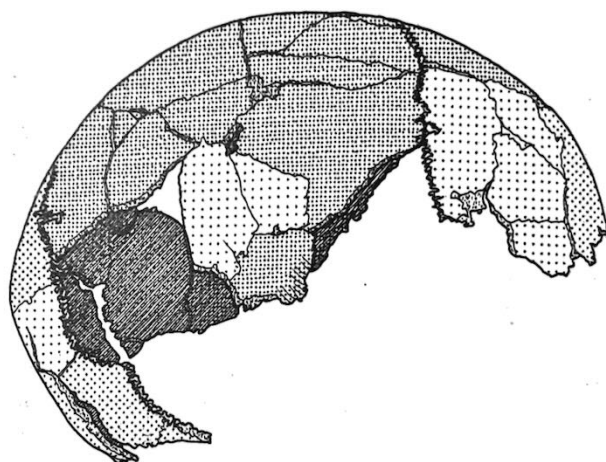


FIGURE 8. Skull No. V – frontal view.



still to be carried out during complex treatment of other anthropological finds from the Velim site Skalka (Hrala, Vávra 1986, Hrala, Vávra, Sedláček 1991).

SUMMARY

The Middle Bronze Age pit No 154 yielded an accumulation of skulls or parts of skulls of six human individuals and one cow. They belonged to one adult male (No. I), one adult female (No. III), one juvenile female (No. V) another juvenile individual (No. VI) and two children at the age of 5-6 and 9-10 years (Nos. IV, II). Traces of intentional breaking were discovered on the skull of the child (No. IV), the juvenile female (No.V) and the other juvenile braincase (No. VI). The most heavily damaged was the reconstructed braincase (No. VI) which was purposefully broken, and trephinated. The position of these fragments proves that this male skull must first have been broken, and only then thrown or swept down into the pit, since individual fragments of cranial bones were dispersed in various depths and all over the content of the pit. In three skulls – those of a male, a female and a child (Nos. I, III, II) no traces of violence were found, however, excavated remains of the adult individuals have damaged cranial bases and it therefore cannot be assessed whether the occipital foramina were purposefully damaged or not and which was their original condition.

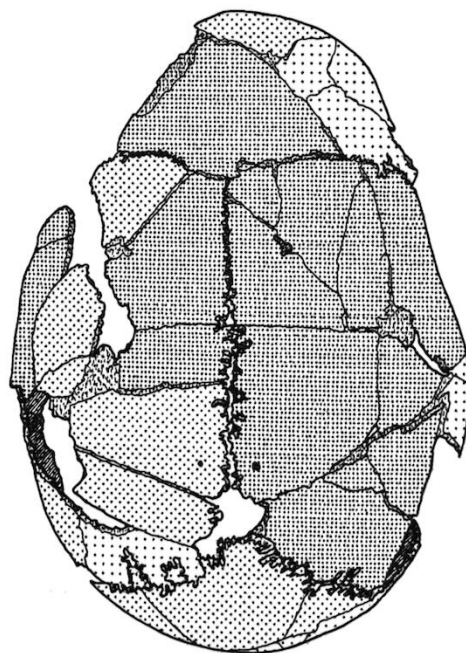


FIGURE 9. Skull No. VI – left lateral, right lateral and vertical views. The braincase is reconstructed from fragments dispersed in the whole content of the pit. Different designs of the fragments represent different levels of the content of the pit.

TABLE 1. Cranial dimensions and indices

Velim	Man /No. I	Woman/ No. III.	Child/No. II
1 Maximal cranial length	195	193	178
5 Nasion-basion length	–	–	96
8 Cranial breadth	135	142	138
9 Minimal frontal breadth	101	104	93
10 Maximal frontal breadth	119	115	112
11 Biauricular breadth	121	130	111
12 Occipital breadth	107	108	99
17 Basion-bregma height	–	–	135
23 Cranial circumference	539	545	408
24 Transversal cranial arc	320	323	308
25 Sagittal cranial arc	389	?	372
26 Nasion-bregma arc	123	138	116
27 Bregma-lambda arc	137	128	141
28 Lambda-opisthion arc	128	108 ?	112
29 Nasion-bregma chord	110	117	102
30 Bregma-lambda chord	120	117	122
31 Lambda-opisthion chord	104	92	91
43 Upper facial breadth	101	104	94
44 Biorbital breadth	100	99	86
51 Orbital breadth	41	40	39
52 Orbital height	28	32	30
54 Nasal breadth	23	25	19
55 Nasal height	47	55	41
M (1) Cranial index	70.2	73.9	77.0
MI (2) Length height index	–	–	74.3
MI (3) Breadth height index	–	–	96.3
MI (12) Frontal index	88.5	82.3	85.2
MI (13) Frontoparietal index	73.7	67.3	73.3
MI (42) Orbital index	68.2	80.1	76.9
MI (48) Nasal index	48.9	45.4	46.4

In the find of the proximal part of a tibia from the surface level of the pit traces of violent breaking were found. The distal part of this bone was broken-off and laid separately in the middle level of the pit. Damaging by violence was found also in five teeth in the male skull No. I, and in one tooth in the female skull No. III.

Interesting is the deposition of a broken cow's skull and other animal bones among the human remains.

DISCUSSION AND CONCLUSION

In 1953 the archaeologist K. Tihelka, when excavating a Middle Bronze Age site of Blučina, has found a pit with human and animal remains. Exact dating of this find is not available, only the time span from the Neolithic to the Bronze Age. What is important, though, is the overall situation: the bottom of the pit was 360 cm under the ground, and 30cm above the bottom of the pit there were animal metapodia and children's long bones. In the middle of the pit there was an accumulation of split bone material and four human skulls belonging to sub-adult individuals (1.5 years, 3-5 years, 7 years and 16-17 years) deposited

one beside the other with no special orientation. Numerous traces of cutting were discovered on the mandible of the oldest individual (Jelínek 1957). A big pointed stone was found nearby, and in the vicinity of the four skulls there was a scattering of adult and children bones with obvious traces of cutting. Among the human bones there were also animal ones, bearing comparable traces of intentional splitting and breaking.

A specific find situation is known also from the site Obřany-Hradisko ("Obřany-Fort-hill") of the Hallstatt period: during the 1945 excavations a human skull was discovered (Adámek 1961) in feature H (LXXII) in the depth of 1.20 m on a strongly rammed layer of earth, sand and cobblestones. Behind the skull were a left humerus, radius and ulna. The right hand and phalanges of the left hand were missing. Under the rammed layer of ground another part of the skeleton was deposited: the thorax and lower extremities. F. Adámek described in that find situation traces of intentional interventions on the skull and mandible represented by thumping.

During the research at the Velim site scattered skulls were discovered even before the studied find (Hrala, Sedláček, Vávra 1992). In feature No. 27 three isolated skulls were situated around a huge stone, another group of broken skulls was discovered in feature No. 23, and an isolated skull with pottery and traces of fire was excavated in feature No. 47.

The described find of human skulls with an animal one found in pit No 154 is one of the important discoveries in that site, supporting the idea of the existence of rituals the meaning of which will be the object of further studies.

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