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The neolithic skeleton from Zaránk

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ABSTRACT: (The neolithic skeleton from Zaránk.) - Anthropological description of a neolithic skeleton excavated in Northern Hungary is given in full details.

In 1976 the skeleton of a Neolithic (the culture of linear pattern pottery of the Great Hungarian Plain) individual was taken over by the Hungarian National Museum. The quantitative and qualitative representation of the find (ÉRY - KRALOVÁNSZKY - NEMESKÉRI 1963) are equally 0.4. In most of its elements, the wellpreserved skull is a Brünn-Předmost type variation, while in some of its features it is a Combe Capell type variation (a Proto-Mediterranean variant of sapiens). Its genetic connections can be assumed to lie to the north from the west-east direction, since this robust and, in many respects, archaic Proto-Mediterranian variant is not characteristic of the early Neolithic and late Mezolithic population of the Central Balkans. It occurs with greater frequency at the level of the upper reaches of the Danube as well as in East Roumania.

SEX AND AGE AT THE TIME OF DEATH

The determination of sex and sexualisation was carried out on the basis of 15 features in accordance with the procedure elaborated by HARSÁNYI-NEMESKÉRI (1964) and ACSÁDI-NEMESKÉRI (1970). Thus, the representation of the reconstruction is 0.7 (ÉRY-KRALOVÁNSZKY-NEMESKÉRI 1963). The sex of the individual is male; sexualisation: + 1,83 (hypermasculine). The detailed results are presented in Table 1.

The determination of the age at the time of death was carried out in keeping with the instructions given by ACSÁDI-NEMESKÉRI (1970), NEMESKÉRI-HARSÁNYI (1958), NEMESKÉRI-HARSÁNYI-ACSÁDI (1960) and SJØVOLD (1975). The representation of the reconstruction is 0.8 (ÉRY-KRALOVÁNSZKY-NEMESKÉRI 1963). The coefficient of endocranial suture closure is 3.9. With the exception of the sutura sagittalis pars verticis, the sutures are completely ossified (phase V). Tomographs were taken of the proximal epiphysis of the humerus from two views, in 3 planes each. In a medio-lateral view at a distance of 1 cm, 2 cm, and 3 cm from the tuberculum minus (naturally parallel with the medio-lateral plane), and in an anterio-posterior view in a plane at a distance of 1 cm, 2 cm, and 3 cm from the laterally most prominent point of the tuberculum lateralis. For the evaluation of the status corresponding to changes during life-time, the most characteristic picture was provided by the 2nd and 3rd layer of the medio-lateral view as well as the 2nd layer of the anterio-posterior view (Table II.a, b, c). These shots show well that the cone of the medullary cavity almost reaches the epiphysis-line (phase III). In order to save valuable finds, it would be advisable to follow this method in other cases as well. As in demonstrated by the present example as well, changes during life-time can satisfactorily be determined in this way too. The surface of symphysis is of grade IV. The age at the time of death is therefore 66-71 years. The highest and lowest age could be calculated on the basis of the degree of the ossification of sutures and the proximal epiphysis of the humerus respectively. 0.6% of the population of Volni (Soviet Union - Neolithic Age) survived this average age, while this value at Tiszapolgár-Basatanya (Hungary - Copper Age) is 7.7%, and at Alsónémedi (Hungary - Copper Age) 3.0% (cf. ACSÁDI-NEMESKÉRI 1970).

Table 1. - The parameters of sexualisatio
1. Táblázat - A sexualisatio paraméterei

Character - Jelleg	Degree - Fokozat	Value - Érték
Tuber frontale	masculin-hypermasculin	+1.5
Tuber parietale	masculin	+1.0
Glabella	hypermasculin	+2.0
Margo supraorbitalis	hypermasculin	+2.0
Processus mastoideus	masculin-hypermasculin	+1.5
Protuberantia occipitalis externa	hypermasculin	+2.0
Squama occipitalis	hypermasculin-supermasculin	+2.5
Orbita	hypermasculin	+2.0
Arcus zygomaticus	hypermasculin	+2.0
Facies malaris	hypermasculin	+2.0
Corpus mandibulae (M_2)	hypermasculin	+2.0
Trigonum mentale	hypermasculin	+2.0
Angulus mandibulae	hypermasculin	+2.0
Processus condyloideus cap. mand.	masculin-hypermasculin	+1.5
Caput humeri	masculin-hypermasculin	+1.5
SEXUALISATIO	hypermasculin	+1.83

THE QUANTITATIVE EXAMINATION OF THE SKULL

The quantitative (osteometric) examination of the skull was carried out in accordance with the measurement technique given by MARTIN (1928). The values of absolute dimensions and indices are summed up in Table 2.

According to the classifications provided by HUG (1940) and SCHEIDT (1927), the skull is of medium length, narrow, and of medium breadth. The greatest forehead width is medium, similar to the bregma-height of ears. As opposed to the medium length of the horizontal circumference, the transversal curve is short. Skull capacity, determined by means of PEARSON's method (MARTIN 1928), in euencephal. It should be noted, however, that the skull has a sphenoid shape in an occipital view, thus its greatest width is above the processus mastoideus (154 mm). If this is taken into account in determining skull capacity, 1529 cm^3 can be calculated instead of 1407 cm^3. The average of the two values (1468 cm^3 falls on the border of the categories euencephal and aristencephal. Morphological facial height and the upper face are of medium height, the nasal cavity being somewhat wide and of medium height. The orbit is broad and of medium height. The angle of the facial profile and the angle of the alveolar profile are equally prognath. The palate is narrow. The parietal thickness of the skull at the juncture of the linea temporalis and the sutura coronalis is 8 mm on either side, 7 mm at the metopion point of measurement, 9 mm at the bregma point of measurement, 8 mm at the lambda point of measurement, 12 mm at the inion point of measurement, and 7 -(d) or 6 (s) mm on the tuber parietale.

THE QUALITATIVE EXAMINATION OF THE SKULL

The qualitative examination was carried out in accordance with the instructions given by ASHLEY MONTAGU (1960), AUGIER (1931), BERRY (1974), BERRY-BERRY (1967), BROTHWELL (1965), HOOTON (1930), HOWELLS (1941), JONES (1931), KEITER (1935), KLAATSCH (1909), LARNACH (1974), LENHOSSÉK (1920), MARTIN (1928), MARTIN-SALLER (1958), OLIVIER (1960), OSSENBERG (1976), SCHULZ (1933), and SJØVOLD (1973). The results of the analysis are detailed according to anatomical regions.

Os occipitale. The occiput is suggestive of an Upper Paleolithic morphological variant of an archaic type. This mainly manifests itself in the definite angle that bends with a

sharp rim towards the base of the skull at the linea nuchae superior (cca. 125°). See Table III, shot a. The protuberantia occipitalis externa is of grade 4-5 (BROCA). The sulcus sagittalis is wide, but it stands out only a little. The fossae occipitalis superiores are shallow. The lambdoid flatness is slight (+).

Os temporale. The linea temporalis is symmetric and very firm (++++), with a wide incisura parietalis running alongside it (+++). The incisura mastoidea is narrow and deep (+). The sulcus arteriae occipitalis is also deep on either side, and is delimited by a sharp crest at the incisura mastoidea. The latero-profiledness of the sutura supramastoidea is ++. The processus mastoideus has a deeply indented surface. The tori auditivi are ovoid, with a tuberositas-like rim (++). The styloids of the vagina processus are very close and narrow. The processus styloideus is small (+). The foramen caroticus externus is symmetrically wide and hollow on both sides. The canalis musculotubularis, however, is assymetrical, the one on the right being significantly wider and more arched than the one on the left. The fact that the foramen mastoideum interna is narrower on the right side presumably correlates with this. Thus, the eminentia arcuata on the right

Table 2. - Cranial measurements and indices
2. Táblázat - Koponyaméretek és jelzők

Brain case - Agykoponya		Facial skeleton - Arckoponya	
MARTIN N°	Value - Érték	MARTIN N°	Value - Érték
1	181	47	**116**
1/c	173	48	**70**
2	180	51-d	**44**
2/a	173	52-d	**32**
3	177	54	26
8	**138**	55	53
10	**124**	57	8.2
11	**139**	63	35
20	**115**	65	122
22	**94**	68	78
23	**525**	69	26
24	310	69/1-d	31
25/a	308	69/1-s	30
26	**138**	69/3-d	13
27	**113**	69/3-s	13
28/1	57	70-s	**61**
29	121	70/3-d	**15**
30	102	71-d	**34**
31/1	53	71-s	**34**
32/1a	48	71/1-d	36
38	1407 cm^3	72	79°
		73	82°
		74	76°
		75	52°
		79	124°
8:1	76.2	52:51-d	72.7
10:8	89.9	52:48-d	45.7
20:1	63.5	54:55	49.1
20:8	83.3	68:65	63.9
22:2/a	54.3	71:70-s	55.7
22:8	68.1	70/3:71/1	46.7
2/a:25/a	56.2	69/3:69/1-d	41.9
11:24	44.8	69/3:69/1-s	43.3

is also more marked than the one on the left. The fossa subarcuata is wide (+++), resembling a sulcus. The fissura petrosquamosa can only be seen on the right, for it has become ossified on the left. The articular rim of the left fossa mandibularis has a wider and more deeply indented surface. Steeper abrasion (M_1 and M_2) can be observed on outward labial regions on this side, which can presumably be attributed to the fact that M_3 functioned up to the time of death. The slight assymetry of the tuberculum articulare also stands in correlation with this phenomenon.

Os parietale. On both sides, parallel with the margo frontalis, several deep and wide sulci arteriosa can be found. On either side, at the height of the eye-sockets, there runs a parallel sulcus parietalis sagittalis. The most marked sulcus sagittalis, however, is to be found on the sutura sagittalis.

Os frontale. As a continuation of the sulcus sagittalis, one finds the crista sagittalis (+++), which enters the glabella. Glabella: 5 (BROCA). The linea temporalis is firm and projecting up to the back third of os frontale, and is continued in the form of a tuber-like processus zygomaticus (+++). The arcus supercilialis medialis tends towards the linea temporalis (+++), and is interconnected with the glabella. The sulcus sagittalis is shallow (+), the crista frontalis being wide (+++), but only moderately protruding (++). The margo supraorbitalis is rounded and massive (++++).

Os zygomaticum et orbita. The shape of the orbit is rectangular. The orbit axes enclose approximately an angle of 130°. The facies malaris has a rough surface, which is indented and profiled (+++). Tuber malare: +++.

Maxilla et os nasale. The fossa canina is medium deep (BROCA 3). The apertura piriformis is anthropin. Spina nasalis anterior: 4-5 (BROCA). The foramen infraorbitale is symmetrical and wide (+++ - ++++). Torus palatina mediana: +++. The palate is indented, deep and crested at the level of the molars. The tooth arch is parabolic. The foramen incisivum is very great (12 x 7 mm = +++++).

Mandibula. It has a parabolic structure. In relation to the gonion region, the capitulum lies low. (Its incisural height is 10 mm.) The position of the corpus is of KEITER III type. Its anterior point of support coincides with the height of M_1. The curve of the corpus towards the trigonum mentale is marked, while from M_1 to the gonion is slight. The shape of the ramus of the jaw corresponds to form 1. in norma occipitalis (SCHULZ). The trigonum mentale is bilateral, the two tubercula having well-separated peaks, with a distance of 19 mm between the two. This corresponds to grade 6 according to SCHULZ. The mentum considerably protrudes (1.). The protuberantia mentalis is also peaked. On account of the firmness of the trigonum mentale, a sulcus mentalis surrounding the trigonum developed up to the height of the caninus. This is more marked on the left side, which is in correlation with the strong buccalis and labialis abrasio of the left row of teeth. The foramen mentale is assymetric (d.: 2x3,5 mm; s.: 3x5 mm). Its position is P_2. The left linea obliqua is more robust than the right one. The torus lateralis superior sinister is marked, while this anatomic variation cannot be observed on the right side. The angulus mandibulae is variant III of SCHULZ. The tuberositas masetterica is robust and complex (++++). The inner surface of the ventral part of the mandible is very convex. The spina mentalis is of grade 3, and has two peaks. There is a blurred torus transversus superior (+) and a deep sulcus supratoralis (+++) above it. The fossa supraspinata is barely marked (+). The spina m. genioglossi and the spina m. glenohyoidei are conterminous (the latter being stronger than average). The fossa digestrica is meedium (++). The spina interdigastrica is small and pointed. The fossa subalveolaris anterior et posterior is shallow (+), with a fovea of smooth surface. The sulcus mylohyoideus is deep, wide and expressly open (+++). The lingula mandibulae right above the rim of the foramen mandibulare has to form of a small spina (+). The torus linqualis triangularis rami is expressly delimited and connects with the crista endocondylaris. The crista buccinatoria is wide and firm (+++). It runs into the crista endocoronoidea through the torus triangularis, and stands out against the plane of the planum triangulare. The trigonum postmolare dexter is rough and wide (+++). The septa interalveolaria is generally marked (++). The septa interradicularia of teeth having more than one root are generally absorbed.

Teeth. Tooth status was fixed by means of the notation given by BROTHWELL (1965). Abrasion was evaluated in accordance with the grades provided by KÖRBER (1957).

Abr. max	- 2 3 2 2 2 2 -	- - 3 2 2 3 2 -	
(dexter)	- 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8	(sinister)
	8 7 6 5 4 3 2 1	1 2 3 4 5 6 7 8	
Abr. mand.	1 2 4 2 2 3 3 -	- - - 2 2 4 1 -	

The fact that the abrasion is assymetric can probably be accounted for by the falling out of the two M_3. A slight disarrangement (piling) of teeth of (d) I_2 - C - P_1 can be observed on the mandible. The molars slope somewhat inward. The molars of the maxilla exhibit the shape of a parallelogram, i.e. their palatal side lies more distal in comparison with the labial side, which has a relatively mesial position. This is the so-called Bluntschlian regressive form, which acquires greater frequency in the Upper Paleolithic Age (BLUNTSCHLI 1926, cf.: FRISCH 1965).

THE QUANTITATIVE AND QUALITATIVE EXAMINATION OF THE POST-CRANIAL SKELETON

The osteometric examination was carried out in the wake of MARTIN (1928). Its results are summarized in Tables 3 and 4.

The humerus is flat (platybrachien) and medium robust. The ulna is platolen. The vertebrae are convex (koilorachien); they are laterally more convex than dorsally or ventrally.

Besides the above-mentioned points for guidance, the following analytic procedures were also taken into consideration in the qualitative examination: BAINBRIDGE-GENOVÉS(1956), DUPARC (1941), DU-XUAN-HOP (1944), FISCHER (1906), HRDLIČKA (1942), KNUSSMANN (1967), PIEDELIÉVRE-CLAVELIN (1948), STEWART (1952), VALLOIS (1928), and VOLKOW (1903).

Scapula dextra. Robustness is ++++. Plicatedness is +++. The adhesive surface of the ligamentum transversum superior is considerably indented. It is strong and firm (++++). The tuberculum infraglenoidalis is delimited (this muscle adhesion relief is marked throughout the margo lateralis). The spina scapulae is forcefully protruding and massive (++++); the margo lateralis is accompanied by a deep sulcus along the dorsális facies. The shape of the cavitas glenoidalis is piriform, and has an arched labium from the side of the acromion. The incisura scapulae is open. It is OLIVER's 2nd type. The acromion has a quadrangular shape. The collum scapulae is relatively short and thickset. The vertebral rim is straight.

Humerus dexter. The humerus is robust. The tuberculum majus and minus are indented and firm (++++). The tuberculum maius is KNUSSMANN's variant 'a'. Neither tuberculum is continued with a crista towards the diaphysis. Thus, the robust crista tuberculi majoris, and the crista intertuberculi minoris form a self-contained structure. The sulcus intertubercularis is deep and wide, and it has the shape of a triangle under the collum chirurgicum, where it widens out in a plane-like manner. The margo anterior and the crista tuberculi majoris are connected. The cross section of the middle of diaphysis is a variant between HRDLIČKA's 4th and KNUSSMANN's 3rd grade. The fossa olecrani corresponds to KNUSSMANN's 2nd type. In terms of KNUSSMANN's variants, the margo lateralis is '4', the epicondylus medialis 'b', and the epicondylus lateralis '6'. The perforatio fossae olecrani, is 1.5 x 1.5 mm.

Radius dexter. The capitulum and the collum are missing. The tuberositas hardly projects on its side facing the facies anterioralis (+). Its surface is smooth, with a slight sulcus medialis. The capitulum lies 1 mm short of the collum - on the side facing the tuberositas. The crista interossea is developed (+++), sharp, and expressly bifurcates above the incisura radialis (crista anterior and posterior). The cross section is HRDLIČKA's type 5, and KNUSSMANN's type 'a'.

Ulna dextra. The ulna is broken (pseudo-joint), the distal part is missing, thus its length is 201 mm. The tuberositas is indented in its surface (++). The margo interossea is averagely developed (++). The margo anterior and posterior are also definite, thus

the cross section of the diaphysis is HRDLIČKA's type 1, or KNUSSMANN's types 2-3. The olecranon is high, and the incisura trochlearis is very open, similar to KNUSSMANN's type 3. The curvedness is KNUSSMANN's type 7. The crista m. supinatoris has a crested surface, and it is firm. It emerges right from below the rim of the incisura radialis.

Phalanx proximalis manus IV dextra. The dorsal part of the corpus is round (cylindrical). A sharp margo lateralis et medialis characterize the palmary surface, and they form a tuberositas on both sides nearby the corpus.

Vertebrae. The vertebrae are masculine and strong. The processus costarius of Lumb. II. is massive (+++). In the case of dorsal vertebrae, the processus spinosus bends to the right (+), whereas in that of the Lumb. III slightly to the left (0 - +).

Costae. IX.d. et s., as well as VIII.d.: with a well-isolated wide sulcus (+++). XI. s.: marked angulus-reliefs. The ribs are slightly arched, and the chest is wide.

Patella dextra. Two longitudinal protuberances divide the facies articularis into three parts (pars medialis, pars intermedia, pars lateralis). The angle enclosed by the pars medialis and pars lateralis is 97° (short).

Fibula dextra. The apex slightly protrudes (+). The margos are strong, as a result of which the cross section of the middle of diaphysis is similar to HRDLIČKA's type 3b, but is more robust (variants 3b - 3).

Calcaneus dexter. The facies articularis talaris anterior et media is connected, narrow, and long; the lateral rim is also connected. The sulcus calcanei is deep and wide (+++). Between the facies articularis talaris posterior et media it is as wide as the facies articularis media. The flexor muscles of the big toe must have been developed, for the sulcus musculus flexoris hallucis longi is very deep and marked (++++). The lateral side is unindented (0 - +).

Ossa metatarsi dexter. The margo plantaris is generally highly marked (+++), the sulcus medialis being definite. Subcapitalis IV. has a considerable degree of curvedness (+++).

THE RECONSTRUCTION OF STATURE AND PHYSIQUE

The body height of the individual was reconstructed by seven procedures, as follows: the table given by BREITINGER (1938), the regressive formula relating to europids provided by DUPERTUIS and HADDEN (1951), the table given by MANOUVRIER (1893), the regressive formula worked out by PEARSON (1899), the regressive formula elaborated by STEVENSON (1929), the table given by TELKKÄ (1950), and the table related to europids set up by TROTTER and GLESER (1952). The representation of the reconstruction is 0.3 or 0.4 (SZATHMÁRY 1976).

The values determined on the basis of the length of the humerus and the fibula are close. From the size of the radius greater body height than this can be calculated in all possible cases. Since the elements of the upper limb do not reveal such a close correlation with body height as elements of the lower limb, the body height values corresponding to the radius are presumably higher than in reality. (It is well-known that by means of Dupertuis and Hadden's as well as Stevenson's procedure higher values can be calculated.) The smallest intrinsic difference can be achieved by the method outlined by BREITINGER (1938), for it is the constitutional deviances of the BREITINGER-series that stand closest to those of the individual from Zaránk. This method gives a body height of 175.2 cm, thus it is this method that gives the most reliable results. This also means, at the same time, that the man from Zaránk is Hungary's tallest Neolithic individual hitherto known (cf.: SZATHMÁRY 1975).

Details of the reconstruction of body height call attention to the phenomenon that the most characteristic feature of the constitution is the relatively long forearm. The value of the humero-radial index (80.6) also proves this, for the upper limb is dolichokerk. On the basis of quantitative and qualitative type variations, according to SCHNEIDER's (1944) and ULLRICH's (1966) methods, it represents a specific constitutional type, namely athletic (KRETSCHMER 1961) or mesomorph (SHELDON 1940).

Table 3. - Postcranial measurement and indices
3. Táblázat - Posztkraniális méretek és jelzők

MARTIN N°	Value Érték
Scapula - d	
9	30
10	60
11	46
12	39
13	27
17	142°
13:12	69.2
Humerus - d	
1	342
2	337
3	51
5	25
6	18
7	70
8	146
9	43
10	48
12	16
14	30
15	12
17	127°
6:5	72.0
7:1	20.5
9:10	89.6
Radius - d	
1	(270)
1/b	(267)
2	(258)
3	42
4	17
5	13
7	(162)
3:2	16.3
5:4	76.5

MARTIN N°	Value Érték
Ulna - d	
6	26
10	11
11	15
12	16
13	20
14	(27)
11:12	93.4
13:14	(74.1)
Phalanx proximalis manus IV - d	
3	45
Costa VIII - d	
1	19
2	9
Costa X - s	
1	20
2	(7)
Patella - s	
1	41
2	42
3	19
4	30
5	22
6	27
1:2	97.6
5:6	81.5
Fibula - d	
1	385
2	17
3	15
4	53
4/a	40
3:2	88.2
4/a:1	10.4

MARTIN N°	Value Érték
Calcaneus - d	
1	86
1/a	82
2	45
3	20
4	44
5	58
6	15
7	47
8	(38)
9	33
10	24
12	29
13	27
14	45
2:1	52.1
3:1	33.1
4:1/a	53.7
5:1	67.4
6:2	33.3
8:7	80.9
7:1	54.7
10:9	72.7
Metatarsale II - d	
2	73
3	8
4	9
Metatarsale IV - d	
3	6
4	11
4:3	183.3

Table 4 - Vertebral measurements and indices

4. Táblázat - Csigolyaméretek és jelzők

Vertebrae	MARTIN N°																	Curve of processus spinosus
	1	2	3	4	5	6	7	8	9	10	11	12	12a	2:1	3:6	6:9	10:11	
Vertebra thoracica II	-	17	16	19	-	18	27	34	32	13	18	149	-	-	88.9	56.3	72.2	dex.
Vertebra thoracica VI	19	22	19	27	27	30	27	29	28	13	14	123	116	115.8	157.9	107.1	92.9	dex.
Vertebra thoracica VIII	-	22	19	-	30	-	-	34	30	11	14	119	111	-	-	-	78.6	dex.
Vertebra thoracica IX	19	23	20	29	33	29	39	36	31	12	13	-	-	121.1	145.0	93.5	92.3	-
Vertebra thoracica XI	22	26	22	30	32	30	-	42	36	13	14	-	147	118.2	136.4	83.3	92.9	dex.
Vertebra lumbalis II	27	28	24	37	38	35	50	54	43	-	19	-	-	103.7	145.8	81.4	-	-
Vertebra lumbalis III	-	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	-	sin.

Table 5. - Reconstruction of stature from long bones
5. Táblázat - A testmagasság rekonstrukciója a végtagcsontok alapján

Method	Humerus	Radius	Fibula	Mean Átlag	Representation Reprezentáció
Manouvrier (1893)	169.6	(179.8)	170.7	173.4	0.4
Pearson (1899)	169.6	(174.2)	-	171.9	0.3
Stevenson (1929)	177.7	(181.0)	-	179.4	0.3
Breitinger (1938)	174.0	(176.3)	-	175.2	0.3
Telkkä (1950)	171.0	(178.0)	173.3	174.1	0.4
Dupertuis-Hadden (1951)	176.0	(182.0)	-	179.0	0.3
Trotter-Gleser (1952)	175.8	(181.0)	175.7	177.5	0.4
Mean - Átlag	173.7	(179.2)	173.9	176.1	-

PATHOLOGY

a/ The ulna is broken, and the bone knitted abnormally, forming a pseudo-joint. There are traces of a small degree of exostosis (23 x 17 mm) on the surface of fracture (Table III. c, d). The ulna with the pseudo-joint entailed a characteristic carriage of the arm, which can be well reconstructed. The description of the reconstruction is as follows:

The phenomenon that the crista m. supinatoris ulnae is robust, that its position is periincisural, and that the capitulum radii approaches the collum on the side facing the tuberositas only 1 mm (while 3 mm on the other side) is related to the frequent pronate position of the forearm. This being the case, the radius and the ulna cross each other and the back of the hand looks ahead. At the same time, the fossa olecrani humeri somewhat widens out towards the margo lateralis, which indicates that the forearm, in turn, was often bent towards the thorax. This position of the arm, therefore, resembles the position in a fling of a broken forearm today. Work was probably done with the left hand, which is proved by a deviation to the right of the processus spinosus vertebrae thoracicae as well as by a deviation to the left by the lumbalis processus spinosus (cf.: KÜHNE 1934). This phenomenon may also indicate that the injured individual was spared, which may be an interesting sign of division of labour in Neolithic society.

b/ Vert. th. IX. and vert. lumb. II.: minimum osteophyte formation (spondylosis +) can be observed on the ventral low rim.

c/ M_{2sup} (s): caries profunda; M_{3inf} (d), M_{2inf} (s), M_{3inf} (s): caries penetrans. In the latter two cases a cysta was also formed (Plate III, b).

SZATHMÁRY L.: A zaránki neolitikus csontváz

A Zaránkon feltárt neolitikus csontváz (AVK) szexualizációja +1,83 (1. táblázat), neme férfi, elhalálozási kora 66-71 év. Kvantitative legtöbb elemében meso-variáns (2. és 3. táblázat). A termet magas (5. táblázat), az alkat atletikus (mesomorph), melynek legjellemzőbb vonása a viszonylag hosszú alkar. Igen érdekes az agykoponya anatómiai variációinak több esetben megfigyelhető aszimmetriája. Archaikus vonást a csapott nyakszirt és a zápfogak morfológiája mutat. A kóros elváltozások közül a jobb oldali ulna álizülete (pseudoarthros) érdemes nagyobb figyelmet. A könyökizület részletes vizsgálata felkötött alkarra utal. Ez a jelenség a sérült egyén kimélésére, az újkőkori társadalom munkamegosztásának egy érdekes momentumára hivhatja fel a figyelmet.

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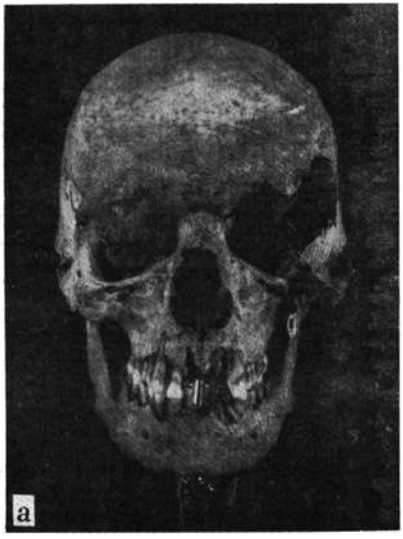

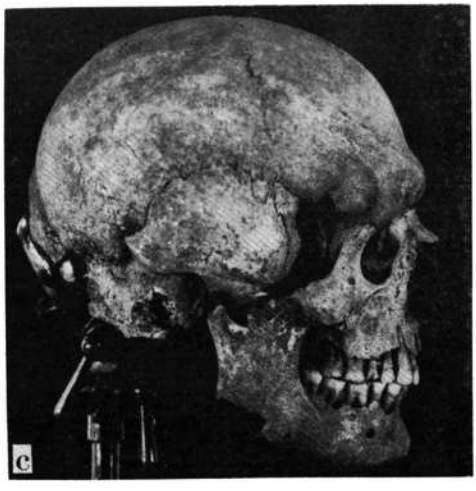

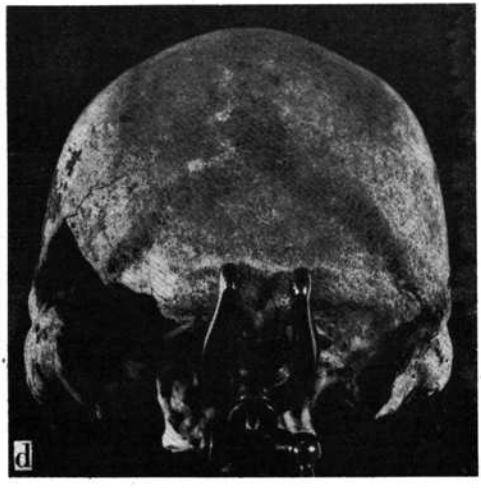

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PLATE I. I. TÁBLA

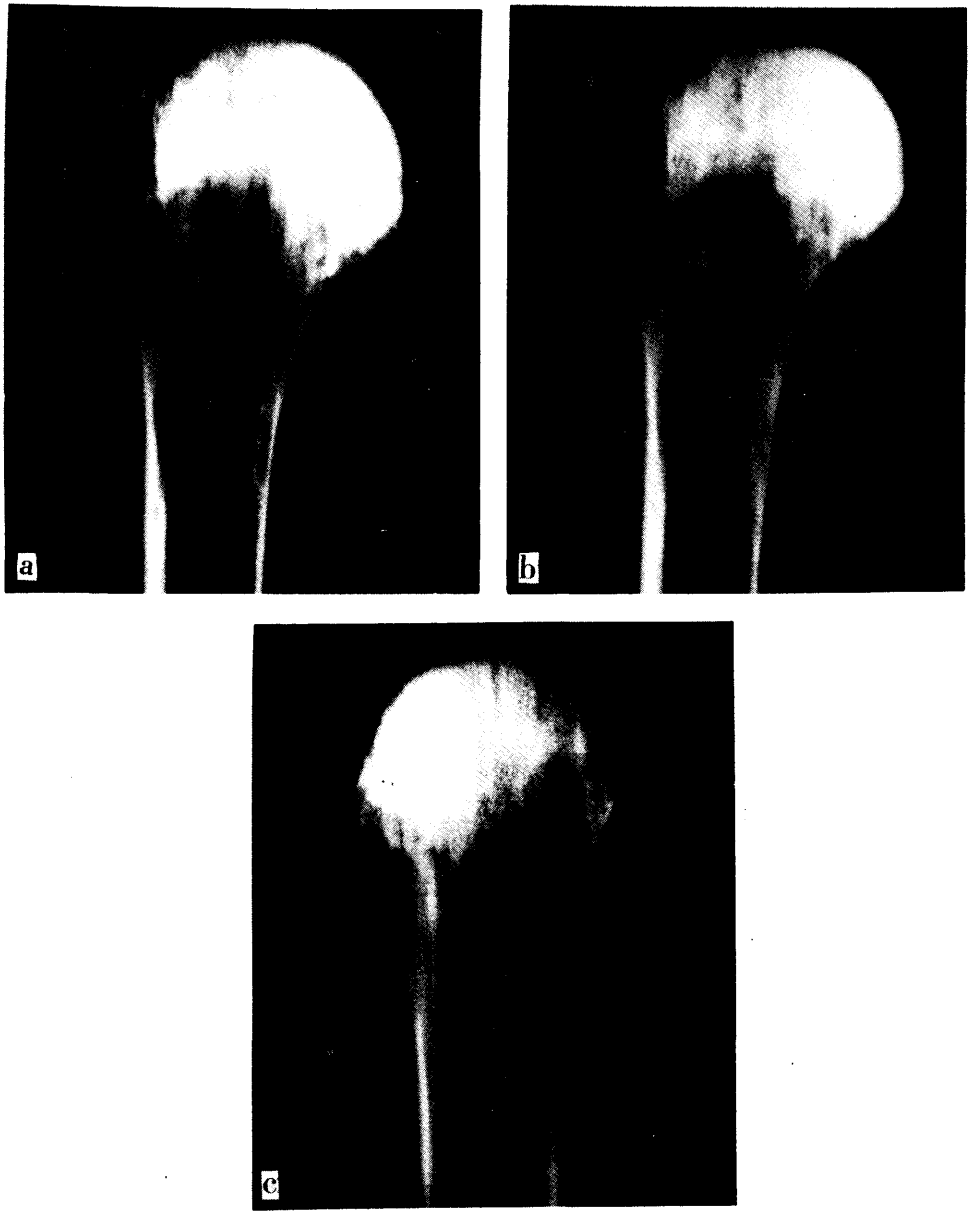

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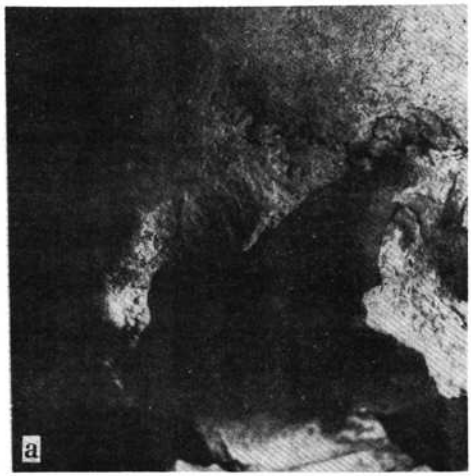
PLATE II. II. TÁBLA

Humerus-epiphysis proximalis (tomograph)



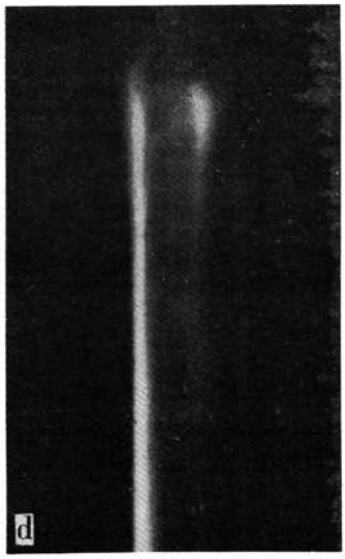


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PLATE III.

III. TÁBLA

a = occipital curve
b = caries penetrans (M_{2inf}, M_{3inf} - sin.)
c = ulna-pseudarthros
d = ulna-pseudarthros (tomograph)