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ANTHROPOLOGICAL PRESENTATION OF SKELETONS FROM THE VERUŠIC–NA (VOJVODINA, YUGOSLAVIA) CEMETERY FROM THE SARMATIAN AGE (4TH–5TH CENTURIES)

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Abstract

This paper deals with 56 skeletons discovered in Verušic, which originate from the Sarmatian age (end of the 4th, beginning of the 5th century). A large number of graves were robbed. The number of infant skeletons was small. There were more male than female skeletons. Most of the members of both sexes had died at a mature age (50–60 years old). The skulls of the males were dolichocranic, orthocranic, acrocranic and eurymetopic, while those of the females were mesocranic and metriometopic. The stature of the males was medium tall, whereas that of the females was short.

Key words: Verušić, 4th–5th centuries A.D., morphometric analysis, anatomic variations.

Introduction

In 1979, tombes were found 7 km south of Subotica, on the area of the Verušic farms, near the Subotica-Novi Sad railway-track. The excavation revealed one aligned cemetery, which originated at the end of the 4th, or the beginning of the 5th century. The entire cemetery, consisting of 56 tombs, was opened. An 11th century cemetery was also found at the same site (CZÉKUS, 1994; SZEKERES and SZEKERES, 1996).

Material and methods

Many tombes had been robbed. The bones which could be examined were badly preserved. The determination of age for the children was based on the teeth, according to SCHOUR and MASSLER (1941), whereas for the juveniles it was based on the ossification of the epi- and diaphysis, according to HARSÁNYI (FARKAS et al., 1972). The age of the adults was determined according to NEMESKÉRI et al. (1960). The sex of the adults was determined by the method of ACSÁDI and NEMESKÉRI (1970). The measurements and descriptions were carried out according to MARTIN'S handbook (MARTIN and SALLER, 1957). Stature was calculated according to the formulae of BREITINGER and BACH (FARKAS et al., 1972), PEARSON (RÖSING, 1988) and SJOVOLD (1990).

Results and discussion

Age and sex distribution of the skeletons

There were 51 adult and 5 infant skeletons. Parts of the infant skeletons were missing. The adults included 24 definite males and 18 definite females. Most of them had died at a mature age (Table 1).

Table 1. Age and sex distribution of the skeletons.

Age groups		Infants		Males		Females		Total	
		N	%	N	%	N	%	N	%
Infants I	0-7	3	75.0					3	5.4
Infants II	8-14	1	25.0			1	5.6	2	3.6
Juvenile	15-22			1	4.2	1	5.6	2	3.6
Adult	23-39					1	5.6	1	1.8
Mature	40-59			11	45.8	11	61.1	22	39.3
Senile	60-x			6	25.0			6	10.7
?				6	25.0	4	22.2	20	35.7
Total		4	100.0	24	100.0	18	100.0	56	100.0

Metric characteristics of the skulls

Due to the small number of skulls, the obtained results should be treated with some reserve. The skulls of the males and females differed only in the upper face. It was medium long and narrow; the forehead was medium broad (dolichocranic and mesocranic; orthocranic and hypsicranic; acrocranic and eurymetopic and metriometopic). Measurements of the face were possible only in certain cases (Tables 2-4).

Morphological characteristics of the skulls

Viewed from above, the skulls of the males were ellipsoid and sphenoid, while those of the females were ellipsoid. From the rear view, they were house-shaped. The glabellae of the males were of 4th degree, while those of the females were of 2nd degree. The fossa canina was moderate. Moderate prognathia alveolaris was characteristic (Table 5).

Characteristics of the post-cranial bones

For both sexes, a moderate asymmetry was observed. The male bones were robust. Both sexes were characterized by a symmetrical forearm. A weak pilaster was observed on the thigh-bones of the males, but not on those of the females. For both sexes, the pilaster was platymeric. The tibia was eurycnemic (Table 6). The following anatomic variations were observed: there was no processus supracondyloideus on the left humerus, and trochanter tertius did not occur at all.

Calculated stature

The individual values differed. The values calculated by different methods also differed from one another (Tables 7 and 8). The average stature of the males was medium tall, while that of the females was short. Due to the small number of bones which could be measured, a statistically evaluable comparison was not conducted.

Table 2. Parameters of cranial measurements and indices

Martin no.	Males				Females			
	N	V min-max	mean	s	N	V min-max	mean	s
1.	5	182-201	188.40	6.59	4	175-183	178.75	3.77
1.c	6	180-200	186.00	6.53	4	174-192	182.50	6.38
8.	6	133-145	138.50	5.02	4	132-139	134.75	2.68
9.	6	92-105	98.67	4.07	3	88-98	93.00	4.08
17.	2	133-143	138.00	5.00	1	142	142	
23.	3	511-530	523.00	8.52	1	508	508	
38.	2	1383-1492	1437.54	54.56	1	1356	1356.27	
40.	1	110	110		1	97	97	
43.	1	102	102		1	99	99	
45.	1	131	131					
46.	1	94	94					
47.	1	127	127	1	120	120		
48.	2	62-73	67.50	5.50	1	75	75	
51d	1	43	43					
51s	2	39-41	40.00	1.00	2	38-41	39.50	1.50
52d	1	30	30					
52s	2	30-32	31.00	1.00	2	34-35	34.50	0.50
54.	3	23-28	26.33	2.39	1	25	25	
55.	2	47-51	49.00	2.00	1	52	52	
62.	4	42-49	44.50	2.69	2	36-42	39.00	3.00
63.	3	42-46	43.67	1.61	2	38-42	40.00	2.00
65.	3	111-122	117.00	4.55	1	120	120	
66.	4	96-113	103.75	7.01	3	96-118	104.00	9.93
68.	7	73-82	78.00	2.98	3	76-82	78.67	2.39
69.	7	29-39	34.00	3.30	6	27-32	30.50	1.89
69(1)	9	28-38	32.11	2.78	7	26-32	28.71	2.11
69(2)	8	24-31	26.75	2.17	6	22-25	23.67	1.18
69(3)	10	9-14	11.10	1.70	7	8-11	9.57	1.06
70.	9	60-76	69.33	4.60	6	52-72	62.83	6.82
71.	11	28-37	32.64	2.89	8	26-34	29.75	2.54
8:1	5	71.51-78.38	73.38	2.67	3	74.18-79.43	76.34	2.38
17:1	2	73.08-76.06	74.57	1.51	1	78.02	78.02	
17:8	2	100.00-105.93	102.96	3.06	1	105.19	105.19	
9:8	4	68.75-77.78	72.64	3.44	3	66.67-72.59	68.72	2.79
48:45	1	47.33	47.33					
52:51d	1	69.77	69.77					
52:51s	2	76.92-78.05	77.49		2	85.36-89.47	87.42	2.04
54:55	2	48.93-54.90	51.67	4.74				
63:62	2	87.76-95.45	91.60	3.96	2	100.00-105.56	102.78	2.69
69(3):69(1)	9	29.03-45.16	35.35	4.59	7	26.68-42.31	33.59	5.01

Conclusions

This paper deals with the 56 skeletal remains from the 4th–5th centuries A.D. found at a Sarmatian-age site at Verušic-Na. There were a small number of infant II skeletons, but no infant I ones. There were more males than females among the adults. Most of them had died at the age of 50-60 years. The skulls of the males were dolichocranic, orthocranic, acrocranic and eurymetopic, whereas those of the females

were mesocranic and metriometopic. The average stature of the male population was medium tall, while that of the females was short.

Table 3. Distribution of some cranial measurements according to class categories.

Martin no.		Males	N	%	Females	N	%
1.	Medium	180-189.9	4	80.00	170-179.9	2	50.00
	Long	190-x	1	20.00	180-x	2	50.00
8.	Narrow	x-139.9	3	50.00	x-134.9	2	50.00
	Medium	140-149.9	3	50.00	135-144.9	2	50.00
9.	Narow	x-96.9	2	33.33	x-92.9	1	33.33
	Medium	97-101.9	2	33.33	93-97.9	1	33.33
	Broad	102-x	2	33.33	98-x	1	33.33
17.	Medium	130-137.9	1	50.00			
	High	138-x	1	50.00	135-x	1	100.00
45.	Medium	130-137.9	1	100.00			
47.	High	122-x	1	100.00	114-x	1	100.00
48.	Low	x-68.9	1	50.00			
	Medium	69-73.9	1	50.00			
	High				70-x	1	100.00

Table 4. Distribution of some cranial indices according to class categories.

Martin no.			Males N	%	Females N	%
8:1	Dolichocranic	70-74.9	4	80	1	33.3
	Mesocranic	75-79.9	1	20	2	66. 7
17:1	Orthocranic	70-74.9	1	50		
	Hypsicranic	75-x	1	50		
17:8	Akrocranic	98-x	2	100	1	100
9:8	Metriometopic	66-68.9	1	25	2	66.7
	Eurymetopic	69-x	3	75	1	33.3
48:45	Euryen	45-49.9	1	100		
52:51d	Chamaeconch	x-75.9	1	100		
52:51s	Mesoconch	76-84.9	2	100		
	Hypsiconch	85-x			2	100
54:55	Hyperchamaerrhine	58-x	2	100		
63:62	Brachystaphyline	85-87.9	2	100	2	100

Table 5. Morphological characteristics of the skulls

Characteristics	Males N	Males %	Females N	Females %
Norma verticalis				
ellipsoid	1	16.7	2	66.7
pentagonoid	2	33.3		
rhomboid			1	33.3
ovoid	1	16.7		
sphenoid	2	33.3		
Norma occipitalis				
bomb-shaped	2	33.3		
house-shaped	4	66.7	2	100.0
Slope of forehead				
straight	1	14.3	2	50.0
mod.sloped	4	57.1	2	50.0
sloped	2	28.6		
Occiput				
bathrocranic			1	20.0
curvoccipital	1	16.7	1	20.0
mod. curvooccipital	5	83.3	3	60.0
Protuberantia occipitalis externa				
0			3	50.0
1			2	33.3
2	1	12.5		
3	6	75.0	1	16.7
4	1	12.5		
Glabella				
1			1	20.0
2			3	60.0
4	4	57.1	1	20.0
5	2	28.6		
6	1	14.3		
Orbita				
round			2	100.0
ellipsoid	1	33.3		
rectangular	2	66.7		
Apertura piriformis				
infantile	2	50.0	1	50.0
fossa praenasalis			1	50.0
sulcus praenasalis	2	50.0		
Spina nasalis anterior				
2	1	20.0		
3	3	60.0		
4			1	50.
5	1	20.0	1	50.0
Fossa canina				
shallow	1	20.0		
moderate	4	80.0	2	66.7
deep			1	33.3
Prognathia alveolaris				
moderate prognath	4	100.0	1	50.0
prognath			1	50.0

Table 6. Distribution of postcranial indices according to class categories

Martin no.		Males					Females			
			N	$V_{max-min}$	mean	s	N	$V_{max-min}$	mean	s
Clavicula	1	d	4	140-149	144.75	3.27	1	132-132	132.00	
		s	3	148-163	153.67	6.65	2	121-136	128.50	7.50
	6	d	13	35- 56	42.62	5.06	5	31-39	34.40	2.80
		s	9	34-49	41.00	4.67	6	29-39	33.00	3.27
Humerus	1	d	5	306-321	314.80	5.84	1	297-297	297.00	
		s	4	294-330	314.75	3.14	2	289-295	292.00	3.00
	2	d	5	306-314	310.20	2.93	1	291-291	291.00	
		s	5	301-327	310.80	8.66	2	283-293	288.00	5.00
	7	d	12	62-72	66.58	2.66	7	50-63	56.00	3.93
		s	10	54-71	64.90	4.30	8	48-59	54.38	3.12
Radius	1	d	3	242-247	244.00	2.16	2	213-215	214.00	1.00
		s	3	240-247	243.00	2.94	1	211-211	211.00	
	1b	d	3	238-244	240.33	2.62	2	212-214	213.00	1.00
		s	3	238-246	240.67	3.77	1	209-209	209.00	
Ulna	1	d	2	262-263	262.50	0.50				
		s	2	262-263	262.50	0.50	1	236-236	236.00	
Femur	1	d	4	425-495	461.25	32.39	4	377-402	392.25	9.28
		s	4	410-444	428.75	12.15	4	397-404	401.50	2.69
	2	d	4	422-495	458.00	33.19	4	369-401	387.50	1'1.59
		s	4	402-439	424.25	13.63	4	391-402	398.00	4.18
	6	d	18	24-33	28.28	2.84	12	19-28	22.83	2.51
		s	19	23-33	27.63	2.66	12	20-24	22.75	1.30
	7	d	18	24-33	28.00	2.56	12	21-28	23.92	1.93
		s	19	25-32	28.53	2.44	12	21-27	24.00	1.73
	9	d	17	28-38	34.06	2.92	10	25-34	28.80	2.60
		s	19	27-40	33.05	3.62	7	22-35	29.29	3.92
	10	d	17	23-30	26.65	2.11	10	20-27	23.40	2.33
		s	19	23-30	26.16	2.03	7	20-32	24.86	3.64
Tibia	1	d	3	345-353	349.67	3.40	3	307-334	317.67	11.73
		s	3	348-357	351.33	4.03	3	310-336	320.67	11.12
	1b	d	3	343-352	346.00	4.24	3	303-328	314.33	10.34
		s	3	344-352	347.00	3.56	4	300-329	313.75	10.50
	8a	d	15	24-35	31.00	2.83	10	20-31	26.40	2.84
		s	12	27-38	33.00	3.19	10	21-33	27.40	2.91
	9a	d	15	21-29	24.27	2.08	10	17-23	20.10	1.58
		s	12	21-30	24.58	2.36	10	18-23	20.30	1.55
Fibula	1	d	2	344-352	348.00	4.00	1	324-324	324.00	
		s	1	342-342	342.00					
Sacrum	2		3	106-117	112.67	4.78	4	95-121	104.75	10.06
	5		1	116-116	116.00		1	105-105	105.00	
Pubis length		d	2	70-76	73.00	3.00	2	75-78	76.50	1.50
		s	2	65-71	68.00	3.00				
Ischium length		d	1	108-108	108.00	0.00	2	103-108	105.50	2.50
		s	2	111-112	111.50	0.50				
Cotylum breadth		d	9	30-44	38.22	3.91	3	29-33	31.33	1.70
		s	7	38-47	41.00	2.62	4	29-36	32.50	2.50
Inc.isch.breadth		d	6	21-31	24.50	3.25	2	48-50	49.00	1.00
		s	5	24-27	25.80	1.17	4	25-51	39.50	10.23
Clavicula	6:1	d	4	26-40	31.55	5.63	1	27-27	26.52	
		s	3	26-30	28.58	2.05	2	24-25	24.16	0.63
Humerus	7:1	d	5	21-24	21.74	0.96	1	19-19	18.86	
		s	4	20-24	21.44	1.65	2	19-20	19.18	0.54
Femur	6:7	d	18	79-122	101.31	9.08	12	80-114	95.88	11.36
		s	19	81-112	97.08	7.68	12	81-110	95.27	8.59

Table 6. (continued).

Martin no.		Males N	$V_{max-min}$	mean	s	Females N	$V_{max-min}$	mean	s
Femur 10:9	d	17	68-93	78.54	6.24	10	68-108	81.89	11.29
	s	19	66-100	79.89	9.11	7	74-114	85.86	14.11
Tibia 9a:8a	d	15	70-91	78.62	6.6	10	69-85	76.54	5.05
	s	12	66-84	74.73	5.53	10	67-88	74.62	6.93
Rad.1:Hum. 2	d	3	77-79	78.21	0.81	1	73-73	73.2	0
	s	3	79-80	79.33	0.54	1	75-75	74.56	
Pub.:Isch.	d	1	70-70	70.37		2	69-76	72.59	3.15
	s	2	59-63	60.98	2.41				
Cotylo.-Inc.	d	6	97-150	146.71	30.11	2	64-69	66.38	2.38
	s	5	148-167	156.9	7.17	4	63-116	87.95	22.13
Sacrum		1	99-99	99.15		1	87-87	86.78	

d = right s = left

Table 7. Parameters of the stature.

Methods of	Males N	$V_{max-min}$	mean	s	Females N	$V_{max-min}$	mean	s
Breitinger/Bach	9	161.76-175.24	168.26	4.05	5	151.08-158.78	155.93	2.84
Olivier	9	155.78-176.35	165.87	5.75	5	149.35-156.44	153.36	2.48
Pearson	9	156.58-172.50	163.18	4.83	5	145.99-150.65	148.62	1.56
Sjøvold	9	155.62-179.57	167.16	6.98	5	147.99-155.59	153.02	2.75

Table 8. Class categories of the stature.

Class		Breitinger N	%	Pearson N	%	Sjøvold N	%
Males							
Short	150.0-159.9			2	22.22	2	2.22
Med. short	160.0-163.9	1	11.11	5	55.56	1	11.11
Medium	164.0-166.9	2	22.22			4	44.44
Medium tall	167.0-169.9	4	44.44				
Tall	170.0-179.9	2	22.22	2	22.22	2	22.22
Total		11	100.00	9	100.00	9	100.00
Females							
Short	140.0-148.9			3	60.00	2	40.00
Medium short	149.0-152.9	1	20.00	2	40.00	1	20.00
Medium	153.0-155.9	1	20.00			2	40.00
Medium tall	156.0-158.9	3	60.00				
Total		6	100.00	5	100.00	5	100.00

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