ANTHROPOLOGICAL STUDY OF THE HUMAN BONES FOUND IN THE CRYPT FROM HALMYRIS

NICOLAE MIRIȚOIU, ANDREI D. SOFICARU

INTRODUCTION

During the late summer of 2002, the excavations at Murighiol (Tulcea county) undertaken by Mihail Zahariade and Octavian Bounegru lead to the discovery of a crypt with human remains situated under the altar of the antique Halmyris basilica.

The crypt, which it was robbed in antiquity, comprised a funeral chamber and *dromos* with descent steps. The painting and inscriptions suffered obvious important destructions (Zahariade, in the present volume, p…).

The existent bones were found scattered, without anatomical connection. The human remains were assigned by the discoverers as remains of the Christian martyrs Epictet and Astion executed in 8 July 290 A.D. at Halmyris (Zahariade & Bounegru 2002). This was the third discovery of this type on the former territory of Skythia Minor (Bauman 1972: 189-202, Barnea 1978: 182-188, Mirițoiu & Nicolăescu-Plopşor 1978: 189-207).

It is not necessary to say more about the importance of this discovery. Further on, in solving the problmes arosed by it, it was necessary to complete the archaeological facts with an anthropological analysis, and furthermore to compare the results with historical sources. It was for this reason why the bones, which were set down in the church of Celic – Dere monastery (today they are found at Tomis Archiepiscopate from Constanța) became the subject of this analysis.

Before the presentation of the results it must be specify that the bones display a yellowish – brown patina, and belong to the intermixed skeletons of two individuals. Due to the dimensional, ages, and pathologycal differences it was perfectly possible to separate all skeletal elements and reassign them with accuracy.

BURIAL 1

It was contained the mixed bones the skeletons of two individuals. These bones could be separated and assigned correctly because they have differences from point of view dimensional and pathological. They were anthropological noted, skeleton 1 and 2.

SKELETON 1

Condition of preservation and integrity

The only cranial skeleton element present was the **mandible.** It was well preserved but the top of the coronoid apophyses were broken during the excavation. Although 10 teeth have been preserved, it was possible to determine the presence of an older destruction of the incisor's socket.

The shoulder girdle was represented by the both intact **clavicles**, and by the **scapulae** with newer and older fractures. It has been restored to a high degree, although some parts were still missing.

The thorax was represented by the **sternum**, well preserved, and by numerous fragments of **ribs** presenting sternal and vertebral ends. It has been possible to restore entirely some of the ribs, and only partly some others.

Of the **vertebral column** 15 vertebras were preserved in a very good condition. Of these, 3 were cervical (C3 – C5), 8 thoracic (T5 – T12) and 4 lumbar (L1 – L4). It has been noted the absence of the first two cervical vertebras (atlas and axis).

THRACO-DACICA (Serie Nouă), Tomul I (XXIV), Nr. 1–2, 2009, p. 151–181

Of the upper limbs were present both complete **humeri** in a very well state of preservation; the complete right **radius** was present, although the left one had to be restored from 3 fragments presenting *postmortem* fractures; the right **ulna** has been partly restored, the only missing part being a fragment of the distal third; the left **ulna** was represented by 3 fragments displaying old traces of destruction, without points of connection between them.

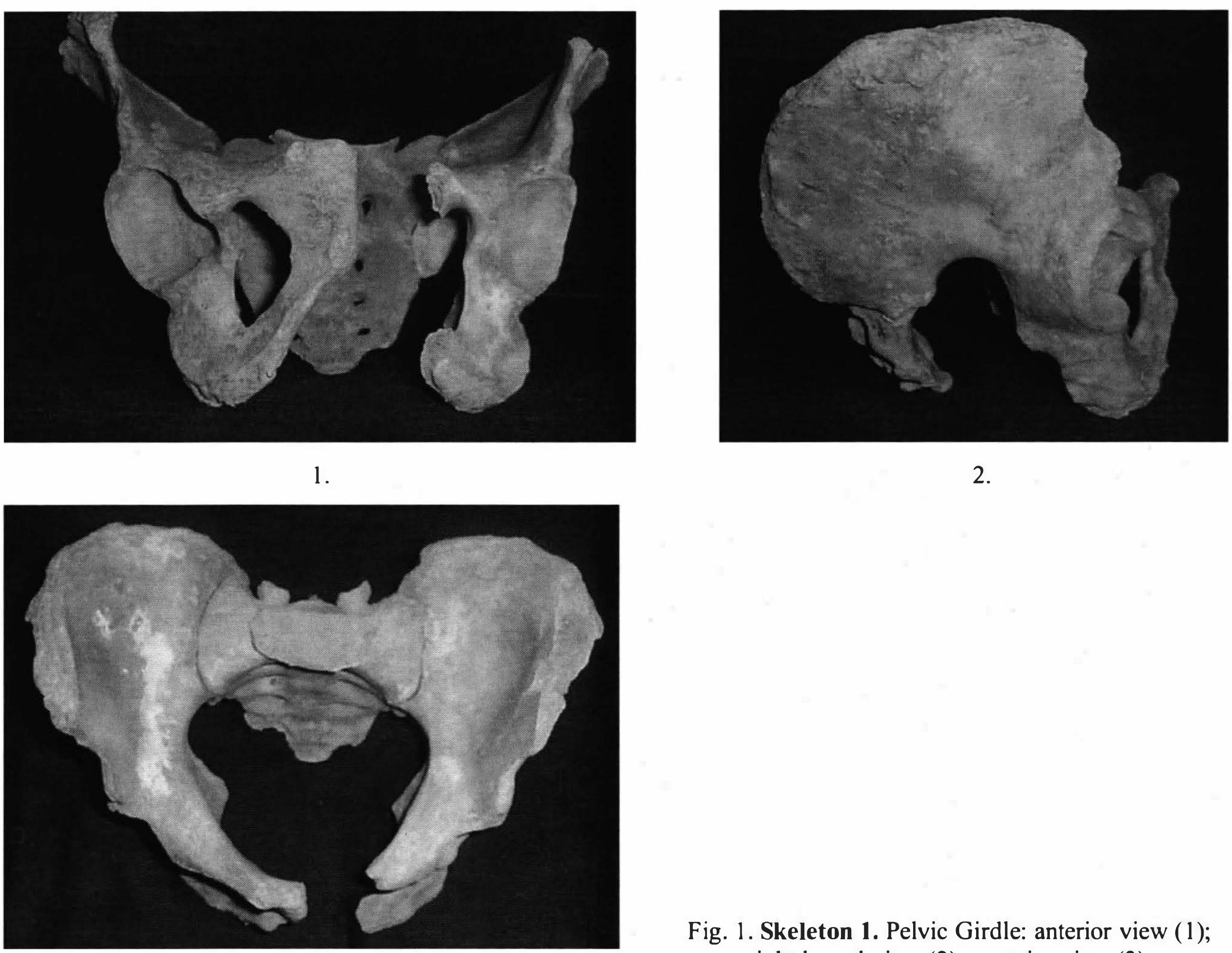
Of the area of the pelvic girdle, the right **sacrum** and **innominate** were complete. Of the left side however, were missing as a result of circumstances unrelated to excavations the innominate, pubis, the anterior portion of iliac crest and the posterior part with both posterior iliac spins. The coccyx was also missing.

The right **femur** presented an ancient destruction of the shaft's inferior third, making impossible the connection of the distal epiphysis and the rest of the diaphysis. The left femur was entirely present. Both **patellae** were missing. On the other hand, both **tibiae** were complete, and **fibulas** were restored despite of some recent damage.

From hand and foot skeleton were present some of the **metacarpals, tali** and **calcanea**, **naviculars**, **metatarsals** and **phalanges**.

Determination of sex

Considering the characteristics of the pelvic griddle (Fig. 1/1-3), the sex is undoubtedly male. The innominate presents high and narrow wings having the iliac crest at an "S" shape, and a developed muscular relief. The greater sciatic notch is narrow and deep; the preauricular sulcus is missing; the subpubian angle is acute (Ferembach, Schwidetzky and Stloukal 1979: 9-11). For more details, see the dimensions offered in the Table 1.



1. 2. 3.

Fig. 1. **Skeleton 1.** Pelvic Girdle: anterior view (1); right lateral view (2); superior view (3).

Table 1

Metrics and indices

Nr.Martin (Bräuer 1988) Metric / Index	Burial 1		Burial 2
	Skeleton 1	Skeleton 2	
Mandible	**right / left**	**right / left**	**right / left**
65.	131	-	-
66.	120	-	93
68.	72	-	77
69.	-	35	31,5
69 (1).	31 / 34	40 / -	29.5 / -
69 (2).	24 / 26	29 / -	29 / -
69 (3).	14 / 14.5	14 / -	11 / -
69 b.	16 / 17	15 / -	12.5 / -
70.	62	65	-
71.	30.5 / 32	36.5 / -	29 / -
79.	123	115	128
I. 62.	54.96	-	-
I. 62 (1).	-	82.85 / -	92.06 / -
I. 63.	41.19 / 51.61	56.15 / -	-
I. 64.	91.60	-	-
I. 66.	45.16 / 42.64	35 / -	37.28 / -
Sternum			
1.	140	-	-
2.	47 (?)	-	43
3.	98	115	73
4.	62 (?)	-	47
5.	40	55	28
Length – width sternum index (5:1)	28.57	-	-
Length – width body index (5:3)	40.91	34.78	54.79
Clavicle	**right / left**	**right / left**	**dr.**
1.	146 / 157	164 / 157	128
4.	11 / 11	12 / 12	9
5.	13 / 14.5	14.5 / 13	12
6.	37 / 42	42 / 39	34
Robustness index (6:1)	25.34 / 26.75	25.60 / 24.84	26.56
Section index (4:5)	84.61 / 75.86	82.75 / 92.30	75
Scapula	**right / left**	**right / left**	**right / left**
2.	/ 108	-	-
12.	37 / 39	43 / 42	33 / 34
13.	30 / 30	33 / 31	24 / 22
Glenoid fossa index (13:12)	81.08 / 76.92	76.74 / 73.80	72.72 / 64.70
Humerus	**right / left**	**right / left**	**right / left**
1.	325 / 314	356 / -	- / 298
2.	318 / 309	350 / -	- / 294
3.	64 / 64	69 / -	- / 54
5.	25 / 25	27 / 26	24.5 / 20
6.	19 / 19	19 / 19	16 / 16
7.	65 / 66	70 / 70	56 / 53
7a.	72 / 70	76 / 74	60 / 57

8.	150 / 140	150 (?) / 146	123 / -
9.	46 / 43.5	- / 45	40 / 39
10.	48 / 47	50.5 / 50	40 / -
Robustness index (7:1)	20 / 21.01	19.66 / -	- / 17.78
Section index (6:5)	76 / 76	70.37 / 73.07	65.30 / 80
Section of head index (9:10)	95.83 / 92.55	- / 90	100 / -
Radius	**right / left**	**right / left**	**right / left**
1.	248* / 246	273 / -	220
1b.	247 / 245	270 / -	218
3.	42 / 43	48 / 47	38
4.	17 / 17	20 / 19	16
4 (1).	23* / 23 *	24 / 26	20
5.	13 / 13.5	14 / 14	11
5 (1).	23* / 22*	25 / 25	21
5 (4).	42 / 44	48 * / -	46
5 (5).	47 / 47	52 / 51	40
5 (6).	34 / 33.5	37 / 38	29
Robustness index (3:1)	16.93* / 17.47	17.58 / -	17.27
Section index (5:4)	76.47 / 79.41	70 / 73.68	68.75
Ulna	**right / left**	**right / left**	**right / left**
1.	272 / -	- / 292	241
2.	239 / -	260 / 260	206
3.	41 / 43	43 / 45	32
11.	17 / 16	16 / 16	13
12.	19 / 20	20 / 20	16
Robustness index (3:2)	17.15 / -	16.53 / 17.30	15.53
Section index (11:12)	89.47 / 80	80 / 80	81.25
Os Coxae	**right / left**	**right / left**	-
9.	227 / -	231 / 238	-
9a.	145 / -	- / 154	-
15a.	89 / -	- / 67	-
15 (1).	38 / 38	34 / 38	-
17a.	82 / -	- / 81	-
14 (1).	45 / 44	- / 42	-
- spino – sciatic distance (Gaillard)	74 / 73	- / 77	-
- spino – auricular distance (Gaillard)	79 / 79	- / 80	-
Ischium-pubic index (Schultz) (17a:15a)	92.13 / -	- / 83.50	-
Cotylo-sciatique index [15(1):14(1)]	84.44 / 86.36	- / 90.47	-
Sacrum	**right / left**	**right / left**	**right / left**
1.	122	150	99
2.	110	122	87
5.	116	126.5	102
6.	20	40	21
14.	64 / 70	66 / 68	55 / 55
15.	23 / 22	25 / 25	-
19.	60 (?)	60	52
22.	59	62	62.5°
- Height S1	33	34	26
- Proc. artic. med. distance	25	22	30
- Proc. artic. lat. distanţa	60	60	58

Sacral index (5:2)	105.45	103.68	117.24
Curvature index (2:1)	90.16	81.33	117.24
Concavity index (6:2)	18.18	32.78	24.13
Femur	**right / left**	**right / left**	**right**
1.	- / 447	- / 468	403
2.	- / 445	- / 466	401
3.	- / 436	459 / 458	397
6.	34 / 34.5	37 / 35	29
7.	33.5 / 32	33 / 33	26
8.	102 / 102	109 / 104	82
9.	37 / 36	40 / 40	30
10.	26 / 26	31 / 31	24
13.	98 / 99	- / 108	85
17.	98 / 98	- / 108	80
18.	46 / 46	- / 51	40
19.	45 / 45	- / 49	39
21.	78 / 79	85 / 86	71
29.	- / 129	- / 118°	124°
Massiveness index (8:2)	- / 22.92	- / 22.31	20.44
Robustness index (6+7:2)	- / 14.94	- / 14.59	13.71
Pilastric index (6:7)	101.49 / 107.81	112.12 / 106.06	111.53
Platimetric index (10:9)	70.27 / 72.22	77.5/ 77.5	80
Section of head index (19:8)	97.82 / 97.82	- / 96.07	97.5
Robustness head index (19+18:2)	- / 20.44	- / 21.45	19.70
Patella		**right / left**	
1.	-	45.5 / 47	-
2.	-	- / 48	-
3.	-	23 / 24	-
Height – breadth index (1:2)	-	- / 102.12	-
Tibia	**right / left**	**right / left**	**right**
1.	383 / 385	390 / 397.5	328
1a.	391* / 389	396 / 402.5	334
1b.	378 / 381	388 / 395.5	325
3.	83* / 79	79 / 80	63
6.	47 / 50	51 / 55	43
8.	36* / 41*	- / 34.5	29
8a.	40 / 42	37 / 36	32
9.	30* / 31*	24 / 24	21
9a.	29 / 27	25 / 25	23
10.	102* / 110*	- / 90	77
10 b.	90* / 95*	83 / 91	68
Mid section index (9:8)	83.33* / 75.60*	- / 69.56	72.41
Cnemic index (9a:8a)	72.5 / 64.28	67.56 / 69.44	71.87
Robustness index (10b:1)	23.49* / 24.42*	21.28 / 20.37	20.73
Fibula	**right / left**	**right / left**	**right**
1.	369 / 366	- / 388	-
2.	18 / 19	17 / 18	-
3.	16 / 15	16 / 15	-
4.	55 / 55	50 / 52	-
4a.	38 / 41	37 / 37	-

4 (1).	25.5 / -	31 / 29	-
4 (2).	26.5 / 26.5	- / 27	22
Robustness index (4a:1)	10.29 / 11.20	- / 9.53	-
Section index (3:2)	88.88 / 78.94	94.11 / 83.33	-
Talus	**right / left**	**right / left**	**right**
1.	58 / 63*	56 / 56	48
2.	41 / 43	45 / 49	37
3.	33.5 / 33.5	34 / 33	29
Length – width index (2:1)	70.68 / 68.25*	80.35 / 87.5	77.08
Length – height index (3:1)	57.75 / 53.17*	60.71 / 58.92	60.41
Calcaneus	**right / left**	**right / left**	
1.	82 / 84	83 / 88*	-
2.	40 / 40.5	44 / 47	-
4.	43 / 48	49 / 50	-
Length – width index (2:1)	48.78 / 48.21	53.01 / 53.40*	-
Indices of skeleton proportions	**Burial 2**	**Skeleton 1**	**Skeleton 2**
Claviculo – humeral index (clavicle 1 : humerus 2)	-	45.91 / 50.80	46.85
Humero – radial index (radius 1 : humerus 2)	75.82	77.98 / 79.61	78 / -
Tibio – femural index (tibia 1b : femur 2)	-	- / 85.61	- / 84.87
Intermembral index (humerus 1 + radius 1 : femur 1 + tibia 1)	-	- / 68.30	-
Humero – femoral index (humerus 2 : femur 2)	-	- / 69.43	-
Tibio – radial index (radius 1 : tibia 1)	-	64.75 / 63.89	70 / -
Height patella index (patella 1 : femur 1 + tibia 1)	-	-	- / 5.43
Width patella index (rotulă 2 : femur 21)	-	-	- / 55.81

Also, through massiveness and robustness (visual and dimensional – using univariate and multivariate analysis) the entire skeleton confirms this diagnosis (Černy and Komenda 1976: 67-70; Pettener and Brasili Gualandi 1979: 59-68; Pettener, Brasili Gualandi and Cavicchi 1980: 363-372).

Estimation of age

Individual's age at death was determined using the Nemeskéri, Harsány and Acsádi (1960: 70-95) method, based on the cranial suture closure, the changes occurring at the level of the pubic diaphysis, and resorption of the spongy bone of proximal epiphyses of the humerus and femur observed by sagital sections.

The surface of the pubic symphysis shows the 4th phase evolution, the humerus epiphysis shows the same phase, and the femur's the 3rd phase (Fig. 2/1–3). Correlating these three factors with information offered by the tables calculated by Sjøvold (1975: 9-22), it was possible to estimate a chronological age of death of about 64.67 years, allowing an error of ± 3 years, and a degree of confidence of about 80–85%. This age period was confirmed by the wearing stage of the mandible dentition (Fig. 2/4).

Anthropological features

Due to the fact that the skull was missing, below was described only the anthropological features of the mandible and postcranial skeleton (see the dimension in the table 1).

The **mandible** is robust and it has the gonions only slightly turned up. After the scale of Alexeev and Debetz (1964: 112-127), bicondylar and bigonial breadth are consistent with the "very large" category, and the projective length of the corpus mandibulae with the "small" category. The height of the ascending ramus and of the mandibular angle is "medium". The height and the thickness at the foramen mentale and their indices also place it in the category of high digits.

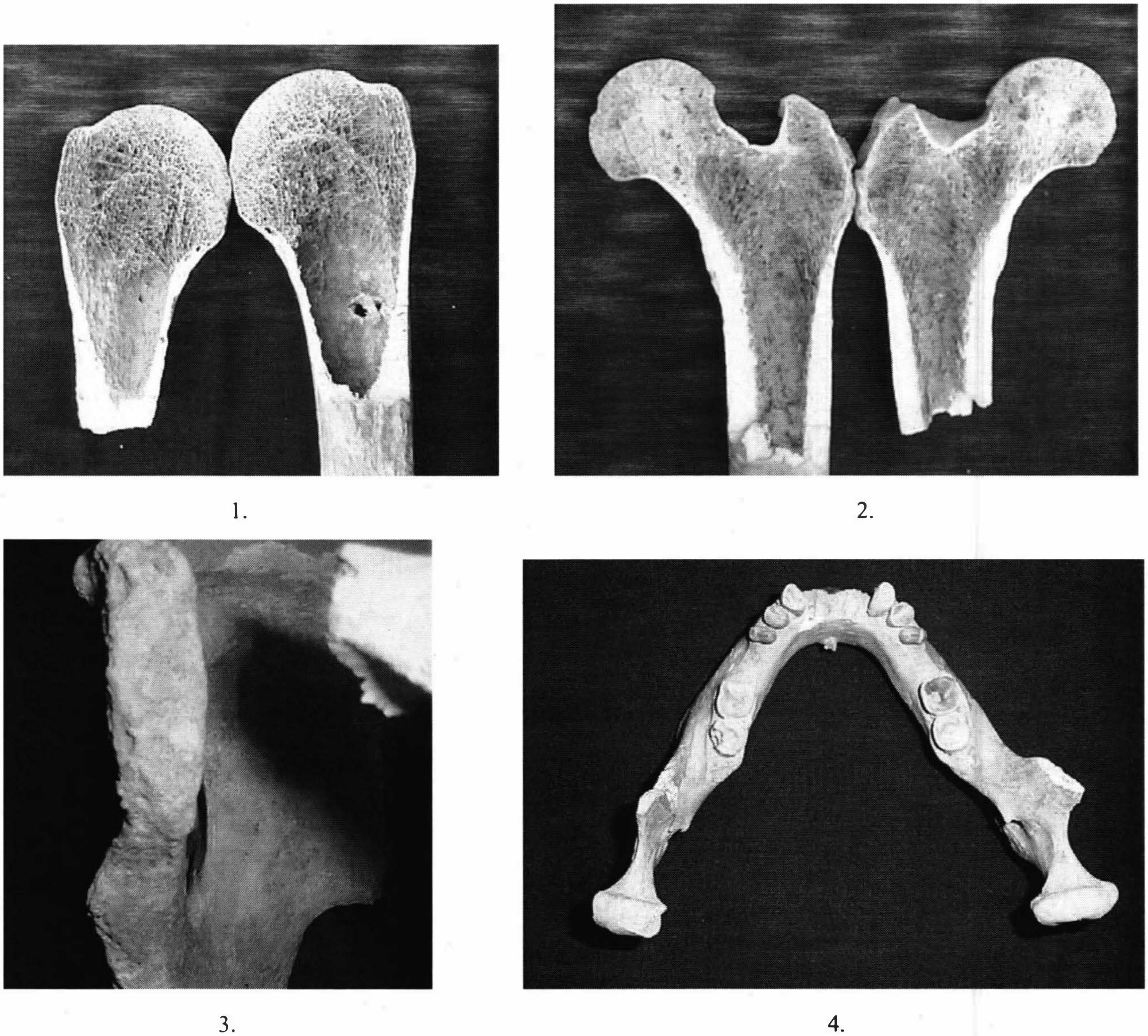


Fig. 2. **Skeleton 1.** Elements for ageing: sagittal sections of the left humerus epiphyses, IV phase (1); sagittal section of the left femur, III phase (2); pubic symphysis (3); mandible, occlusal surfaces of the teeth with strong wear (4).

The **postcranial skeleton** is robust and in a eutrophic state, contrary to the age and pathology (which will be described below). Muscular insertions are developed. The **femurs** present a *linea aspera* weakly developed for the right leg, and a medium developed one for the left. In the subtrochanterian region the bone is much flattened hyperplatimer, although more precisely marked for the right element.

The **sacrum** has a hyperplatyhieric (middle wide) sacral index.

Tibiae present a cnemic index; a euricnem category for the right bone, and a mesocnem for the left, showing no flatteness in the nutritive foramen region.

Stature has been calculated according to the length of the leg bones using classical methods (see Table 2). Therefore, the methods advanced by Manouvrier (1893: 347-402), Pearson & Lee (1899: 169-244), Olivier (1963: 433-449), and Breitinger (1938: 249-274) lead to an estimation of 167-169 cm stature, consistent with the "supermedium" category postulated by Martin (1914: 2080). Trotter and Gleser (1952: 463-514) (whites) method offers an estimation of 172 cm which is integrated in the "large" category of stature.

Table 2

Stature determination after the length of bone legs

Method Metrics (Manouvrier 1899	**Burial 1**				**Burial 2 woman**
	Skeleton 1 male		**Skeleton 2 male**		
	Right	**Left**	**Right**	**Left**	
H. 1.	165.8	162.8	176.7		155.9
R. 1.	168.3	167.7	183.0		157.5
C. 1	171.0		171.3	182.4	158.7
F. 2.		166.4		169.6	152.2
T. 1.	169.7	170.4	170.1	174.2	154.0
P. 1.	167.9	167.3		173.0	
Mean	168.54	166.92	175.275	174.8	155.66
	167.73		175.0375		
(Pearson & Lee 1899)					
H. 1.	165	162	174		153.5
R. 1.	167	167	175		154.7
F. 1		165.5		169.5	151.2
T. 1.	170	170		173	151.9
H. + R.	166	164	164		154.2
F. + T.		179.5	179.5	171.5	151.4
F.; T.		167.5	167.5	171.4	151.4
H.; R.	164.6	161.5	161.5		153.7
F.; H.		163.3	163.3		
F.; T.; H.; R.		164.8	164.8		
Mean	166.52	166.51	168.7	171.35	152.75
	166.515		170.025		
(Olivier 1963)					
H. 1.	166	164	176		
R. 1.	170	170	181		
C. 1	173			183	
F. 2.		166.5		171.5	
T. 1.	172	172	174	175	
P.	169	168.5		174	
H. + F.		165			
F. + T.		169.5		173.5	
Mean	170	167.92	177	175.4	
	168.96		176.2		
(Bach 1965; Breitinger 1938)					
H. 1.	169	166.5	178		161.5
H. 2.	169.5	165	178		162
R. 1b.	170	170	177		159
F. 1.		168		171.5	159.5
T 1b.	171	171.5	173	174.5	152.5
Mean	169.87	168.2	176.5	173	158.9
	169.03		174.75		
(Trotter & Gleser 1952 – albi)					
H. 1.	170.5	167	180		158
R. 1.	173	172	182		159
C. 1.	174.5			182	160.5
F. 1.		168		173	154
T 1a.	177	177	178.5	180	158

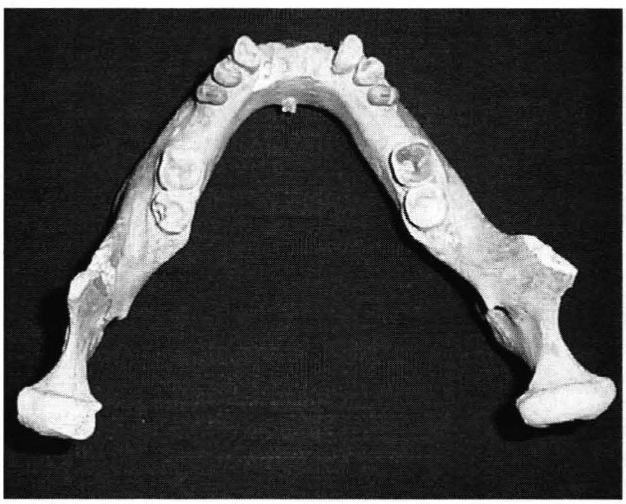
P. 1.	171	170		176	
F. + T.		172		176.5	155
Mean	173.2	171	180.16	177.5	157.41
	172.1		178.83		

Note. The H, R, C, F, T and P symbols represent the long bones: humerus, radius, ulna, femur, tibia and fibula, and the number is Marin number of metric from Table 1.

Biological and pathological consideration

The **mandible** has the bilateral molars M1 lost *intravitam*, the sockets being reabsorbed. The left molar M3 presents a deep caries on the mesial side of the crown. Also, the premolars have extreme oblique wear on the lingual side, and a brown coloration due the occlusal caries which destroyed the teeth crowns. Molars M2 have a marked wear, all the occlusal side being represented by dentin only. Incisors pathology is unclear due to the destruction of the sockets (Fig. 3/1–3).

Regarding the **postcranial skeleton,** it is the vertebral column which presents an interesting pathology.



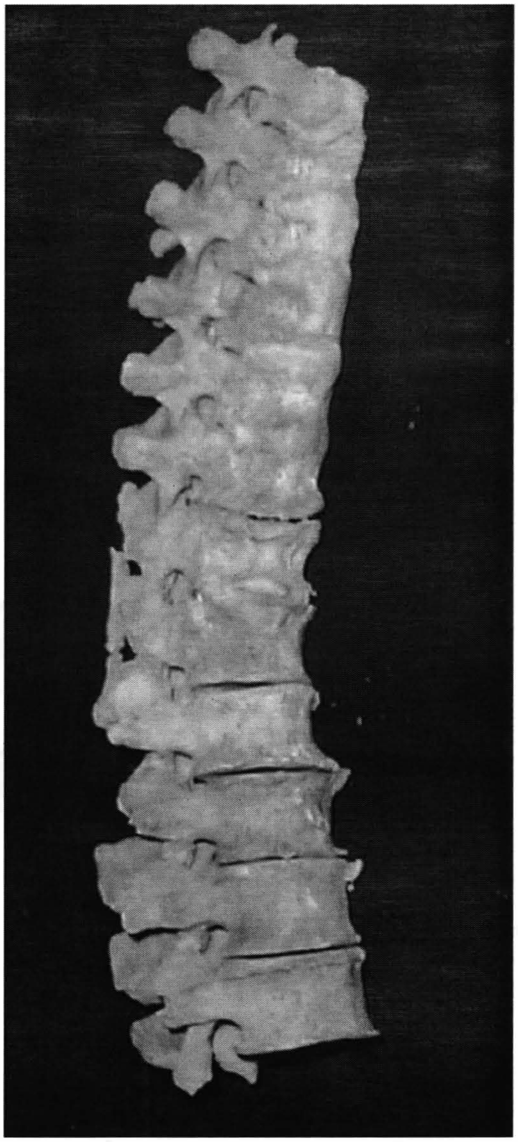
1.

2.

3.

Fig. 3. **Skeleton 1.** Mandible: superior view (1), anterior view (2) and lateral view (3). The arrow shows a penetrated vestibular decay at the molar 3 neck.

The preserved thoracic vertebrae (T5 – T12), built up a vertebral block due to the ossification of the anterior ligaments. On the left side and on the center this ossification overshadows completely the vertebral bodies. On the left side these vertebrae are covered only in the T9 – T10 sector (Fig. 4/1–3 and Fig. 5). The intervertebral discs of this vertebral block did preserve same dimensions: the superior and inferior articular surfaces of the vertebral bodies are normal, without herniations. It was not possible to record any ossification of some intervertebral discs. The articulations of the vertebrae with the costal foveae present strong arthrosis modifications.

1. 

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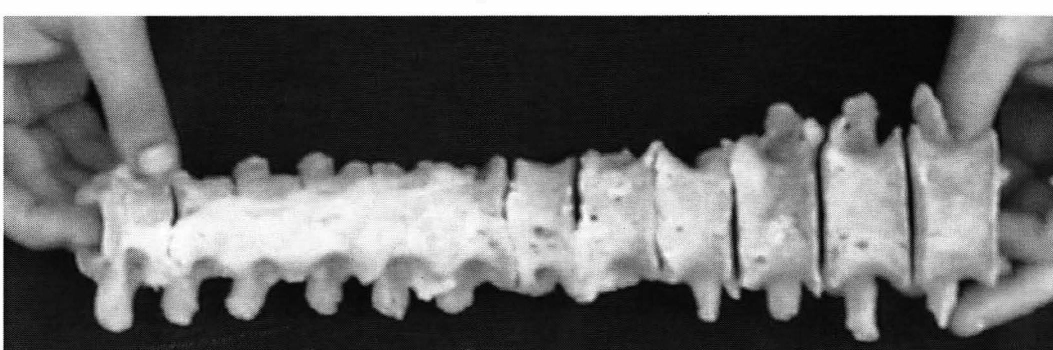
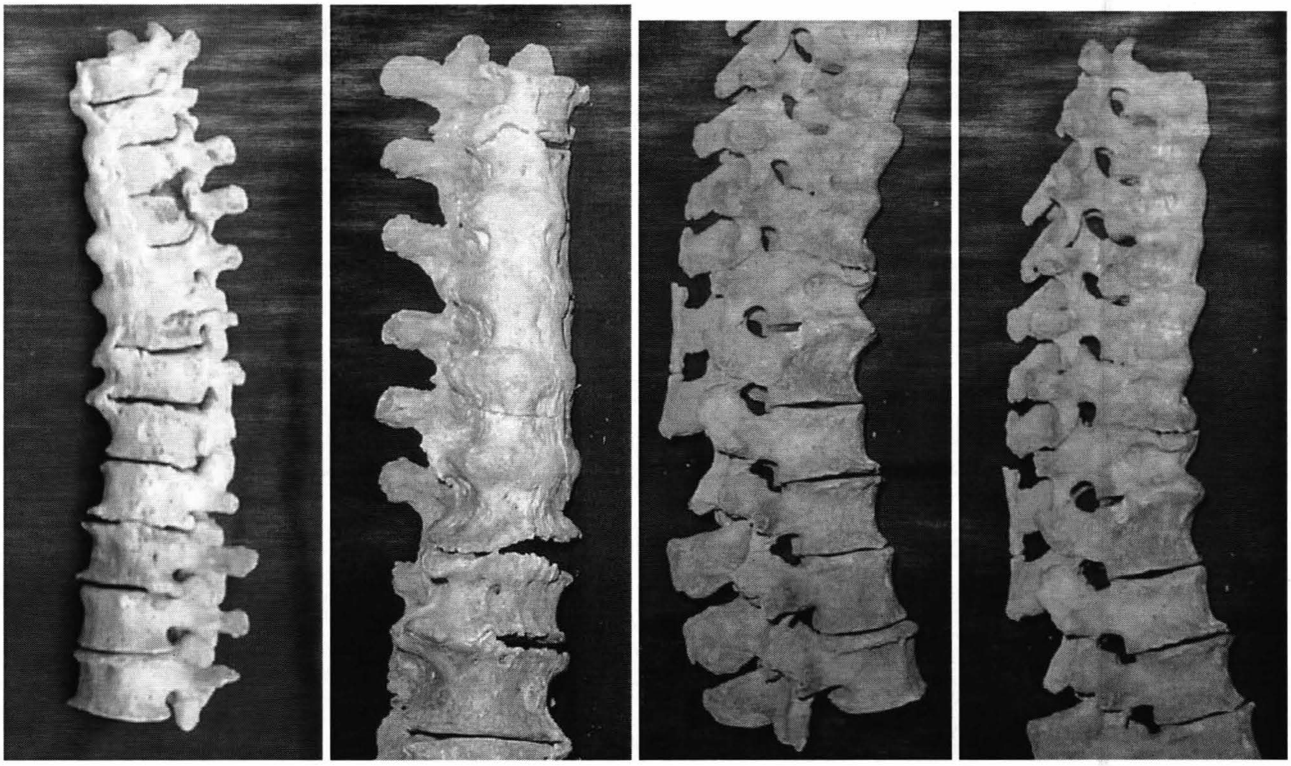
 3.

Fig. 4. **Skeleton 1.** Vertebral column. Thoracic segment T 5 – T 12 and lumbar L 1 – L 4. Right lateral view (1), left lateral view (2) and anterior view (3). It could see the vertebral block moulds by 8 thoracic vertebras.



1. 2. 3. 4.

Fig. 5. **Skeleton 1.** Vertebral column, details.

This individual suffered of a chronic arthropathy, a condition belonging to the seronegative spondiloarthropathies group, characterized by the absence of the rheumatoid factor in the blood, and the tendency for axial involvement. In this group are included 4 major diseases: ankylosing spondylitis (synonyms: Marie – Strümpel's disease, von Bechterew's disease), reactive arthritis (synonym: Reiter syndrome), psoriatic spondiloarthritis and enteropathic arthritis (Dougados *et al.*, 1991: 1218/1227).

The etiology of these diseases is still unknown, the main cause being genetic (HLA system), infectious or metabolic (Duțu and Bloșoiu, 1978: 71-117).

The skeletal diagnostic criteria are: spondylitis, sacroiliitis, inflammatory enthesopathy, and synovitis (asymmetric or predominantly in the lower limbs), which could produce articular erosion (Bruintjes & Panhuysen 1995: 73-77). Therefore, because the ankylosis affected an extended sector of the axial skeleton (bamboo spine), but also the other articulations of vertebral column and all the other skeleton articulations, bellow it will be analyzed the state of these affections.

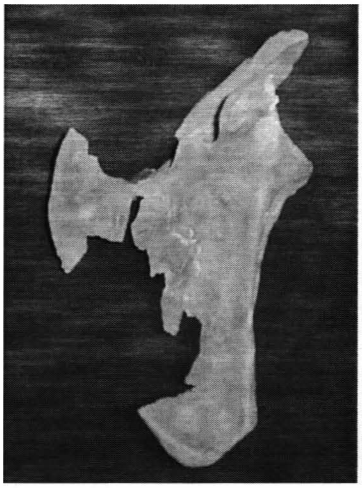
In addition to the inflammatory processes it has been observed the development of osteoarthrosis affection due to the new mechanical conditions generated by the disease.

For example, the three preserved cervical vertebrae (C3 – C5) present exostosis and osteophytes. The lumbar vertebrae (L1 – L4) developed giant exostosis and osteophyites on the superior and inferior edges of the vertebral bodies, although the articular faces are "clean", without herniations or nodules. In addition, the edge of the sacral promontory presents an exostosis continuous collar.

Except for the arthrosis of the vertebral ends of the ribs (describe above) it has been observed strong transformations of the sternal ends, which present large osteophytes and irregular cavities with large dimensions due to the old age (Iscan, Loth & Wright, 1984: 14-156).

The sternum has the costal notches very deep and rugged, and an exuberant ossification of the 1st left costal cartilage (Fig. 7 / 4–5).

At the level of the shoulder girdle exists a strong arthrosis of acromio – clavicular region (more accentuated on the right side) (Fig. 6/2, 5–6). The glenoid cavity of scapulas and the humeral heads present an incipient form of arthrosis, opposite to the articulations of the elbows which are affected by deep and serious arthrosis modifications. On the right leg, the distal epiphysis of the humerus presents osteophyte development adjacent to the trochlear joint surface, and a bony transversal exostosis bridge in the olecranon fossa.



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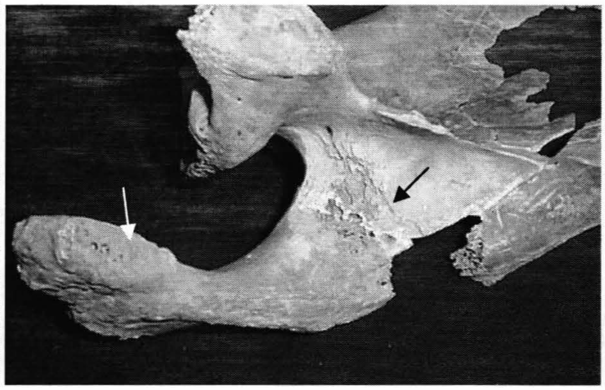

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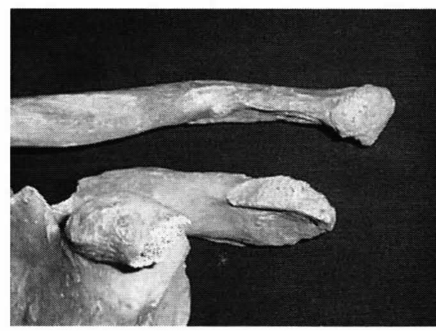

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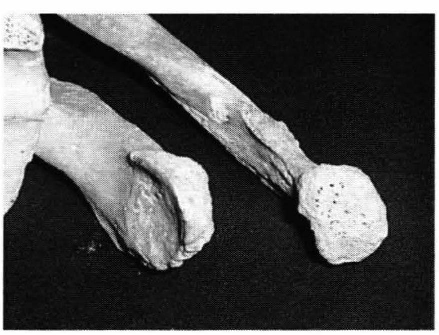

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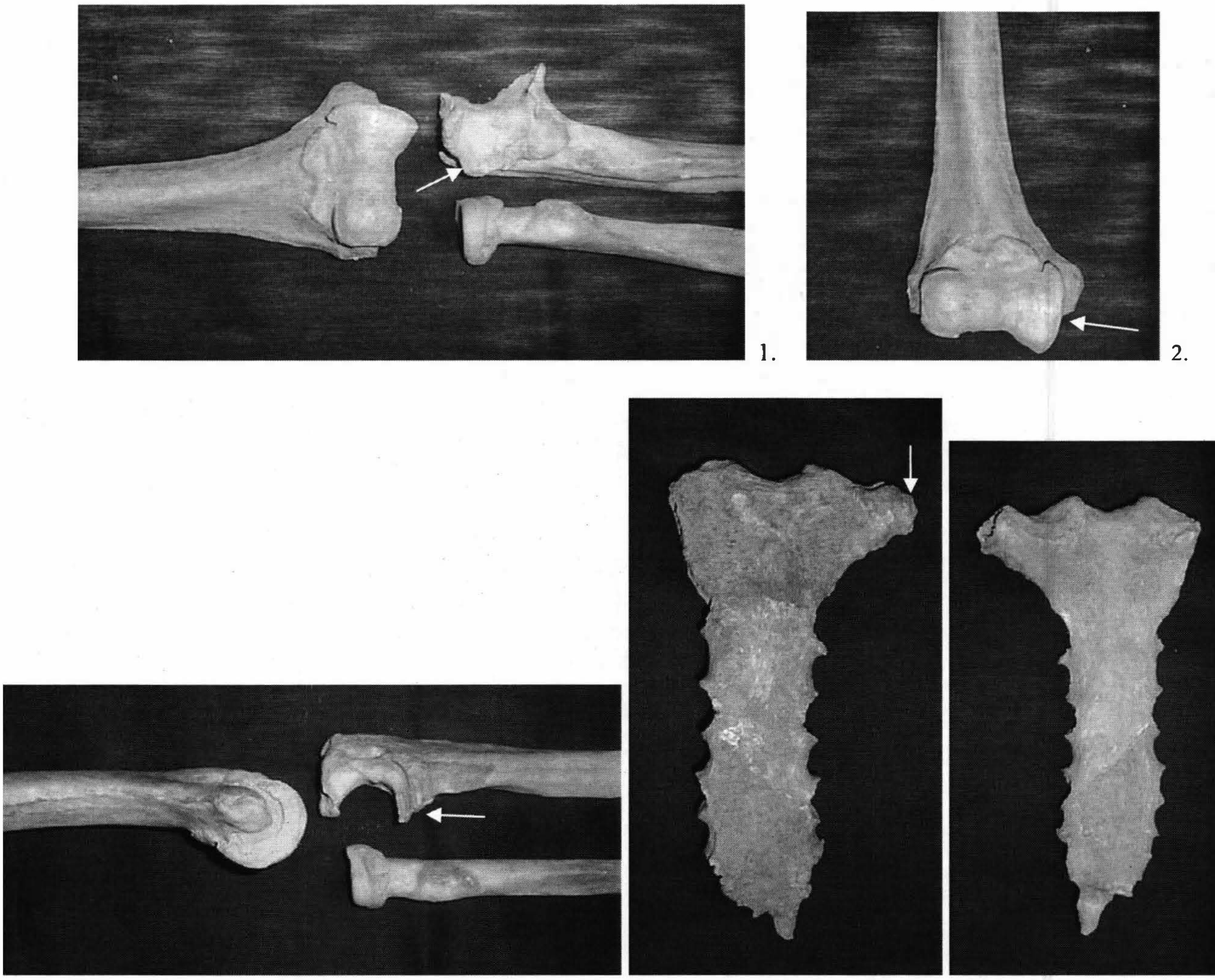
Fig. 6. **Skeleton 1.** Left scapula: posterior view (1), supraspinous fossa with a possible perimortem fracture (black arrow) and arthrosis of acromial facet of scapula (white arrow) (2). Right scapula: anterior view (3) and a possible perimortem fracture (white arrow) (4). Osteoarthritis of acromioclavicular joint (5; 6).

There are also present eburnation areas of a polished ivory aspect, due to the destruction of the cartilage and friction of bone on bone during the movement. This kind of friction have also occurred on a large area in the medial zone of humeral trochlea, on the coronoid apophysis of medial ulna, and, on a smaller area of the lateral edges of trochlea (posterior face) and sigmoid cavity (Fig. 7/1–3). At the left elbow the arthrosis is obvious, but to a lesser degree and without bon friction.

Sacro-iliac articulations do not present modifications. It was possible to observe a giant exostosis on the superior edge of the left innominate which is nearby (without syonstosis) another one developed on the sacral wing, articular with the 5th lumbar vertebra. There are also some small exostoses on the edges of the right articulation (Fig. 10/1).

Coxo-femoral articulations have been not affected, but the knees present very severe arthrosis modifications. The femurs present continuous exostosis collars on the edges of articular faces of condyles, giant exostosis at the posterior edge of medial condyles, and an inter-articular exostosis on the inferior face of medial condyle of the left femur (Fig. 8/1–4 and 10/2).



1. 2.

3. 4. 5.

Fig. 7. **Skeleton 1.** Elbow joint (humerus, radius and ulna) with a strong arthrosis, lippings and eburnation of surface (arrows) (1; 2; 3). Sternum, anterior (4) and posterior (5) view. The arrow shows an exuberant ossification of 1st costal cartilage.

Furthermore, the edges of the articular tibial plateaus developed marginal lipping more accentuated and of a "mushroom" shape for the right side. Tibial spines also present giant exostosis (Fig. 9/1–3). A friction area appears only on the medial condyles of both femurs in the antero – superior area (Fig. 8/2). For the right tibia the friction surface is larger then it appears on the left tibia. All these problems were caused by the strong friction of bone on bone and on the articular lateral sides of patella, do to an abnormal posture. As in the superior limbs, it was the right part of the body which became more affected: the right knee suffered arthrosis transformation more severely developed then left knee.

The same situation was identified at articulation level between talus and calcaneus of the right foot which presented exostosis on the edges, and on the friction surface of the middle and posterior facets (Fig. 9/5–6). Also, the navicular presents a collar and little exostosis on its articular edge with talus.

It has been mentioned the existence of enthesopathies of the iliac crest, the ischial tuberosity and postero – inferior iliac spin, and the absence of same pathology between the articulations of phalanges from hand and foot.

Summarizing, it can be said that: 1) there is present a vertebral block created by non-marginal syndesmophytes, almost asymmetric arranged; 2) there is an absence of so-called sacroiliitis; 3) there is a presence of enthesopathies in the typical places; 4) a systematic and predominately affection at inferior legs of articulations through synovitis with articular erosion is also present.

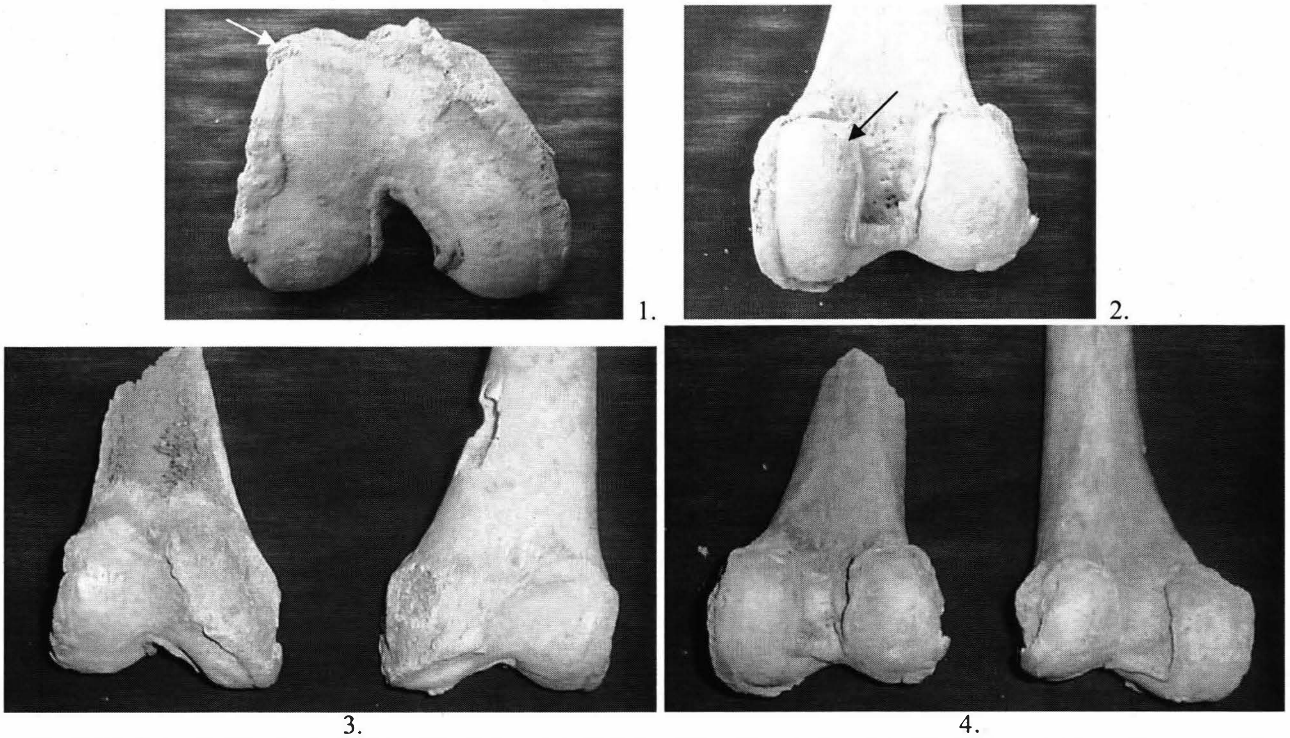


Fig. 8. **Skeleton 1.** Distal epiphysis o right femur: inferior view (1) and posterior view (2), the arrows show the areas with eburnation. Distal epiphysis of femurs, anterior (3) and posterior (4) view. It can see the strong arthrosis transformations.

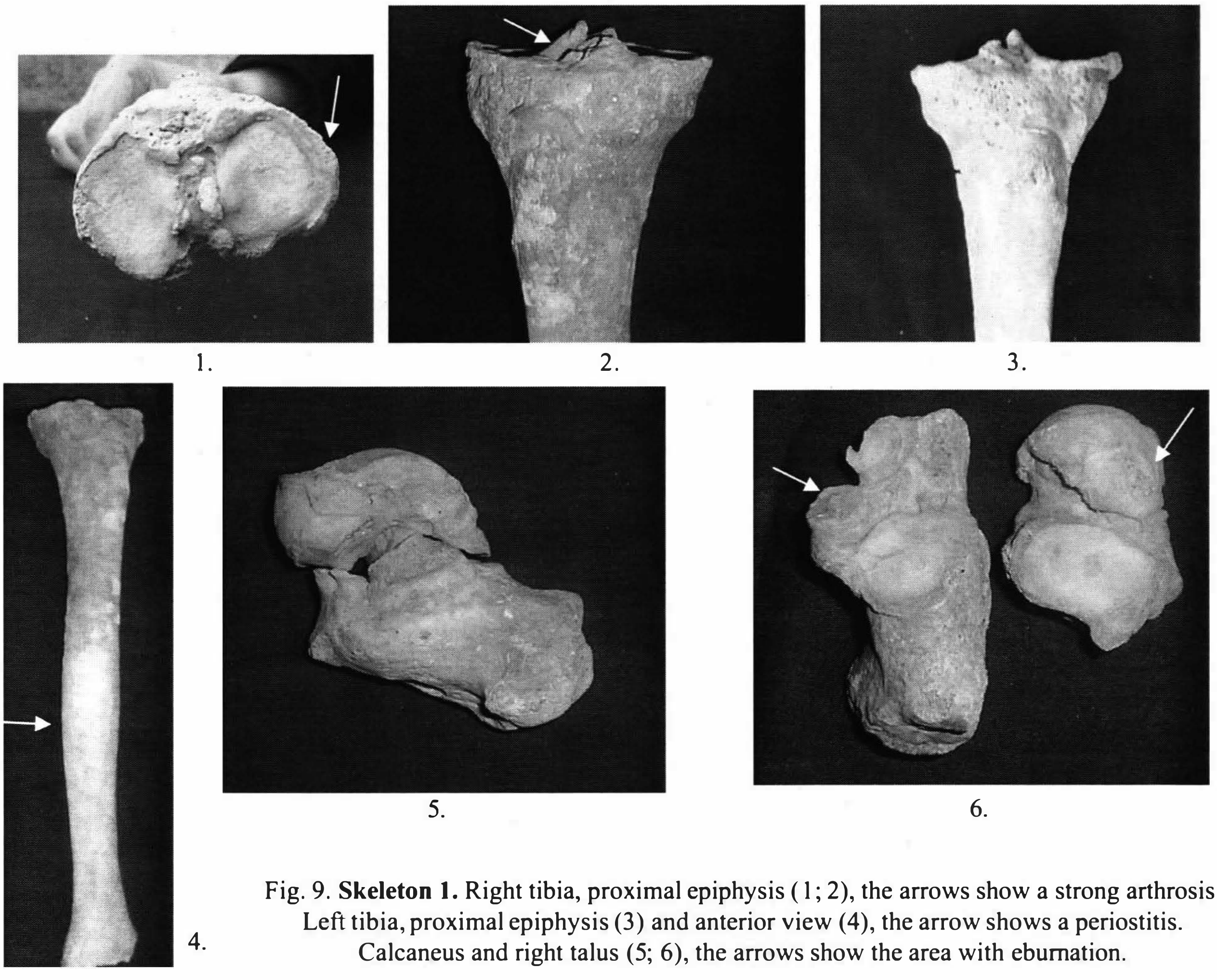
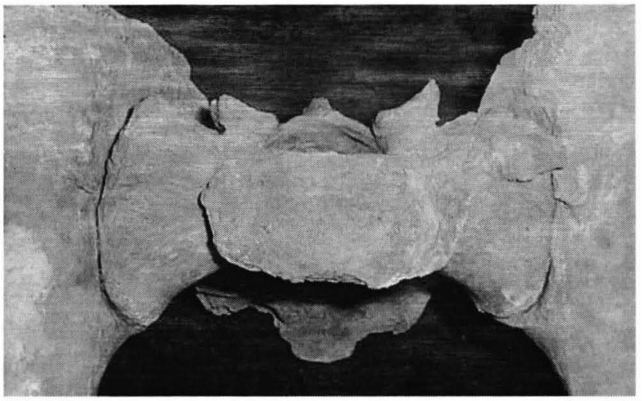


Fig. 9. **Skeleton 1.** Right tibia, proximal epiphysis (1; 2), the arrows show a strong arthrosis. Left tibia, proximal epiphysis (3) and anterior view (4), the arrow shows a periostitis. Calcaneus and right talus (5; 6), the arrows show the area with eburnation.



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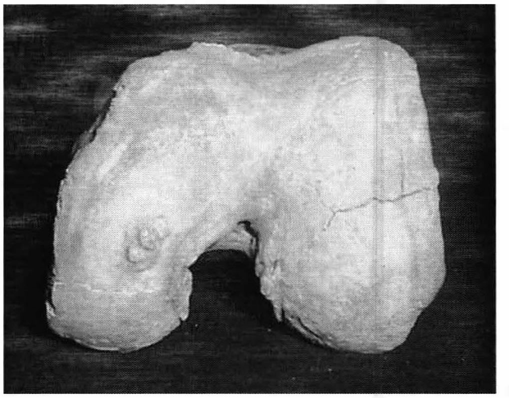

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Fig. 10. **Skeleton 1.** Sacroiliac joint (1), the arrow shows an exostosis on the rim of the left coxa which is near with another from sacral wing, which is articulated. Left femur, distal epiphysis (2), the arrow shows a strong intra-articular exostosis.

The lock of sacro – iliac articulations (bilateral and symmetric) affections, and the shoulder and hip affections exclude the ankylosing spondylitis and enteropathic arthritis which manifest in a similar way. Moreover, the missing of blunting and inter – phalanges fusion (with "pencil-and-cups" form) or synovitis presence (asymmetrical) at inferior legs exclude the psoriatic arthritis.

In conclusion it can be said that the subject suffered by reactive arthritis (Reiter syndrome), a disease reaching its late evolutionary stage at the moment of decease (Bruintjes & Panhuysen 1995: 74). The presence of eburnation and the absence of ankylosis at legs articulation show a permanent physical activity of this man.

Another observation may be advanced with regard to the shinbones diaphysis. These bones present a high thickness and have a slight curvature towards to medial (Fig. 9/4). Also, their medial faces have longitudinal striations which prove a strong periosteal reaction. Without sectioning and radiographies the diagnostic is difficult, however. Probably it was a periostitis with an unknown etiology (traumatically, infectious or vascular) (Trancho, Campillo and Sangose 1995: 407-415).

Violent *perimortem* traces

A careful examination of the entire skeletal elements, lead to the conclusion that no traces produced by cutting objects were present. Also, the fractures and other bone destruction possible to be labeled as "far older" prove that in the great majority of occurrences the traumatic fracture of the fresh bone could not be considered as credible.

There are two possible exceptions (scapulas and mandible) which are explained with prudence. The left scapula presents a fracture of acromion with a splinter toward the supraspinous fossa (Fig. 6/2), and the right scapula has a fracture of auxiliary border (Fig. 6/2). Also, the mandible presents the destruction of incisors socket and crowns (Fig. 3/1–2).

The appearance and the patina of these fractures indicate with a high degree of probability that some blows were produced by blunt objects in the posterior region of the shoulders and face while the bone was fresh. The lock of any bone *postfractum* reaction shows that the death of this person happened short time after the hitting occurred.

The cause of death could not be proved, but we also must keep in mind that the skull and the first vertebra were missing.

SKELETON 2

Preservation and integrity condition

Of the skull only the **mandible** was present. The left horizontal ramus was broken probably after death. A missing part of its basal level impedes the gluing the two fragments. A number of 10 teeth are still present.

Of the shoulder girdle both **clavicles** were entirely present, and although **scapulas** were found in a fragmentary state, the acromions and coracoids were also present.

Regarding the thorax, the **sternum** was represented by its entire body, manubrium was missing, and almost all of the **ribs** were in a fragmentary state (first ribs, many fragments of vertebral and sternal ends).

The **vertebral column** presented 13 vertebrae: atlas (CI), 8 thoracic (T2 and T6 – T12) and 4 lumbar (LI – L4).

Considering the upper limbs, right **humerus** presented some fractures which occurred during excavation. It has been restored, although there were some missing parts of the humeral head. The left humerus had the distal epiphysis destroyed after death.

Radii presented some newer and older fractures in the region of neck. The right bone was entirely restored. The radial head of the left bone remained separate of diaphysis because of missing fragments.

Ulnas presented recent fractures, but they have been restored to a degree. There were some missing parts: olecranon at the right and some area of diaphysis at the left.

Of the pelvic girdle, **sacrum** was entire. Worth to notice, it had 6 vertebrae. The **os coxae** bones were fragmentary, displaying damages that occured during excavation.

Of the inferior limbs, just the left **tibia** was entirely present, the rest of the bones presenting recent brakes and damages. It has been considered however that some of the damages occurred after death but before excavation. Most of the bones have been restored to a higher or lower degree, excepting the right **fibula** represented only by two separated fragments (superior epiphysis and a part of diaphysis).

Considering the right **femur,** a missing portion of its neck impeded the attachment of the femoral body to the epiphysis. The left's femur portion of the greater and lesser trochanters was missing. Also was missing some area of the anterior crest of the right **tibia**.

Both **patellae** were present in very good state of conservation.

Of the hand and food skeleton it has been identified few **carpals** and **metacarpals**, both pairs of **tali** and **calcanea**, left **navicular**, and some **metatarsals** and **phalanges**.

Determination of sex

Visual and dimensional characters undoubtedly indicate a masculine sex. The innominate presents high and narrow wings, the iliac crest has an "S" shape, and a developed muscular relief. The greater sciatic notch is narrow and deep; the preauricular sulcus is missing; the subpubian angle is acute (Ferembach, Schwidetzky and Stloukal 1979: 9-11). Through massiveness and robustness the entire skeleton indicate same diagnosis.

Estimation of age

Using the same method for age determination (Nemeskéri, Harsány and Acsádi 1960: 70-95) as for skeleton 1, the pubic symphysis characteristics are consistent with 3rd phase of evolotion, and the sagital sections of proximal epiphysis of humerus and femur are consistent with the 2nd phase of evolution (Fig. 11/1–3).

Considering these indicators according to Sjovold's tables (1975: 9-22) the age has been estimated to be in the neighborhood of 49.00 years old, leaving a margin of error of ± 3 years valid in 80–85 % of cases. According to the analysis of some other elements, it can be estimated that the real age is 30–40 years. For example: there is a rapid evolution of pubic symphysis (Acsadi & Nemeskeri 1970: 134), a lock of osteoarthrosis at the long bones articulations, a lock of syonstosis between 1st and 2nd sacral vertebra (Fig. 15/1), and the presence of enamel wear for 2nd and 3rd mandible molars (Fig. 11/4).

Anthropological features

Mandible is very robust, the mandibular symphysis is prominent and has the gonions modeled and superficially turned up (see Table 1). The state of preservation does not permit the dimensional evaluation of the breadth. According to Alexeev & Debetz (1964: 112-127) the symphysis has a very large coefficient for height, and the ascending ramus is tall. On the other hand, the height of the mandibular body (at the nutritive foramen) is "very large" although its thickness is constant only with the "large" category conferring it an index associated rather with "small" category.

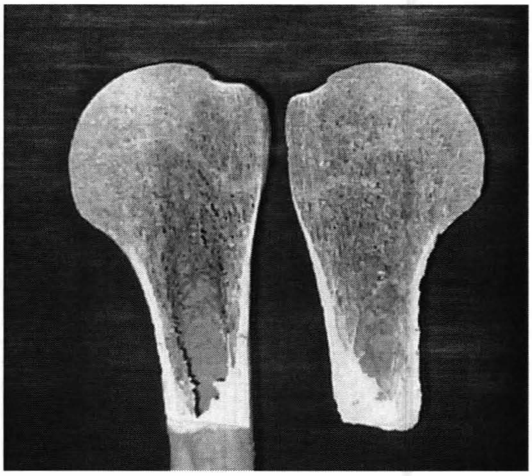

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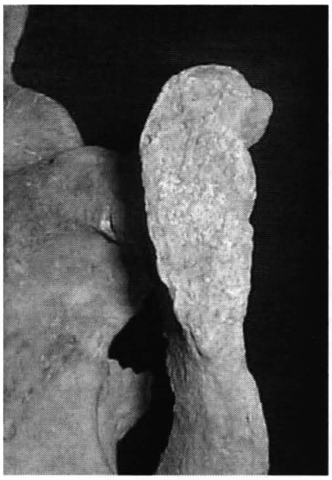
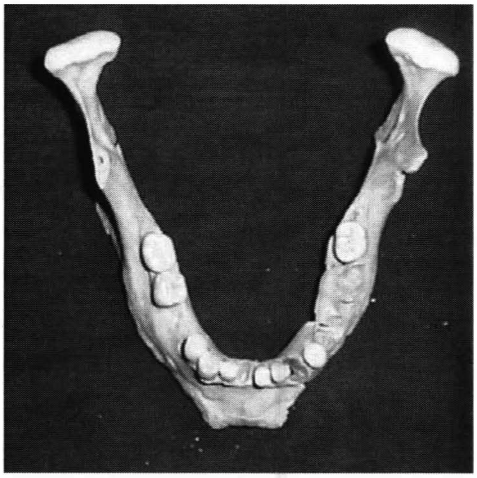
Fig. 11. **Skeleton 2.** Elements for ageing: sagittal section of the left femur, II phase (1); sagittal sections of the left humerus epiphyses, II phase (2); pubic symphysis, III phase (3); mandible with a little attrition.





3 4.

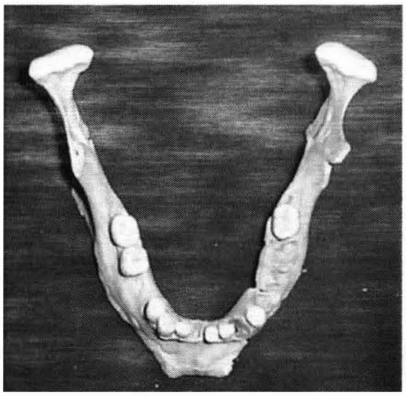
Postcranial skeleton is very robust, with developed musculature, eutrophic. The right femur has a strong pilastric index; the left one only a medium index. In the subtrochanterian region both are flattened, platimer. Tibias are mesocnem, more accentuated on the left. The sacrum is medium wide.

The stature, determined according to classical methods, shows values between 170 and 176 cm, which is integrated in the "large" statures in the Martin classifications scale (see Table 2).

Biological and pathological consideration

The **mandible** presents 10 teeth and some free sockets, a condition which permits the establishment of the dental pathology. The first right molar was lost *intravitam* and the socket reabsorbed. The 2nd and 3rd right molars present incipient caries (with large area) localized on the mesial side of the crown. On the left ramus the 2nd premolar had an occlusal caries that destroyed the entire crown; the molar presents a deep mesial caries. In the region of 1st and 2nd molars it is possible presume that these teeth have radicular abscesses (Fig. 12/1–4).

Regarding the **postcranial skeleton** for this case also, the vertebral column represents the most interesting pathology.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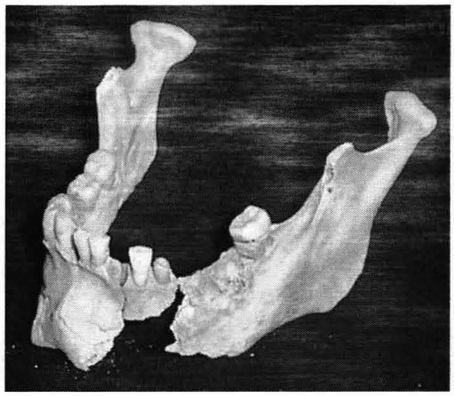
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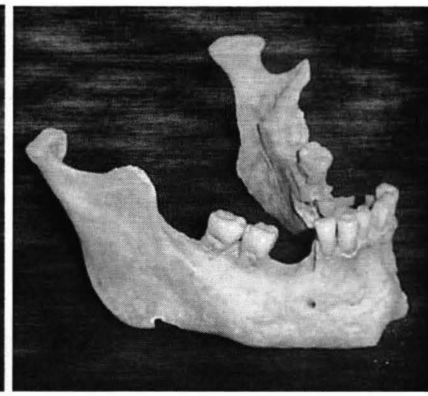
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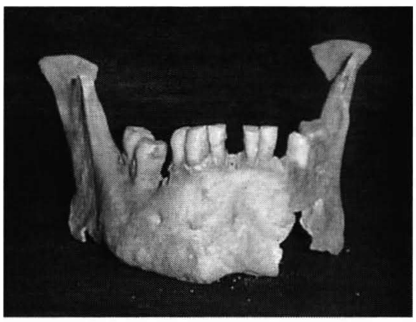
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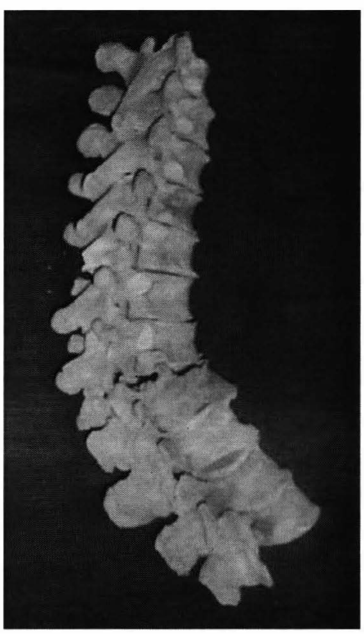
Fig. 12. **Skeleton 2.** Mandible, different views (1; 2; 3; 4).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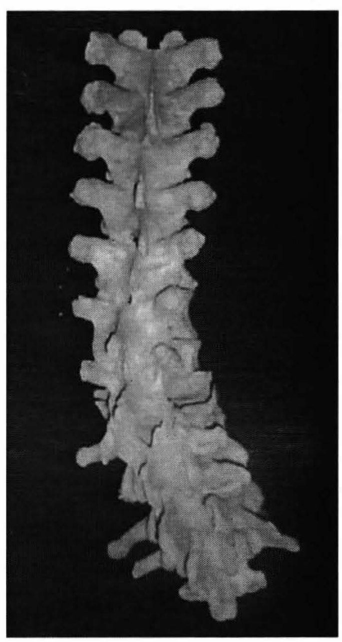
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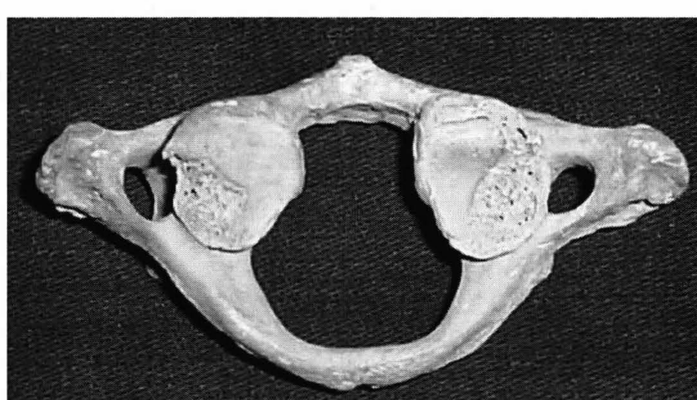
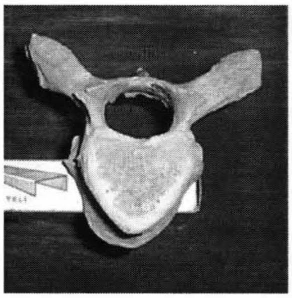


Fig. 13. **Skeleton 2.** Vertebral column, thoracic segment (T 6 – T 12) and lumbar segment (L 1 – L 4), right lateral view (1 and 3), posterior view (2). First cervical vertebra (atlas), inferior view with anterior arch there is on above area of image (4). It could observe the cutting of inferior articular facets.

The first lumbar vertebra (L1) presents an uncommon appearance. Its superior side is collapsed, presenting a sort of oblique ruptures from right to left, with subsides healed through resorption and irregular bony appositions. The inferior side has same tearing toward to central part, but the surface is flat, the vertebra modifying its anterior body height through the collapse of its superior side. Both superior and inferior vertebral edges present exostosis and osteophytis developments. The articular processes present exostosis modifications (Fig. 14/8, 8a, 8b, 8c). Because it was not possible to observe abscesses or other infectious marks, it was believed that the modifications represented a healed old traumatism.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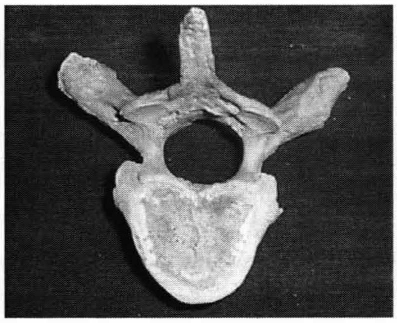
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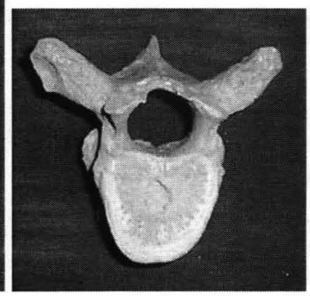
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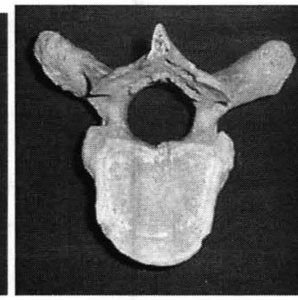
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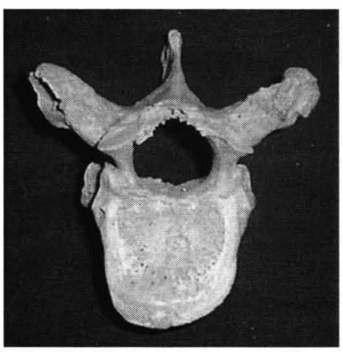
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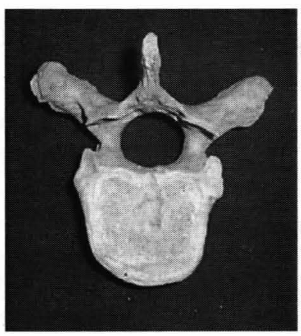
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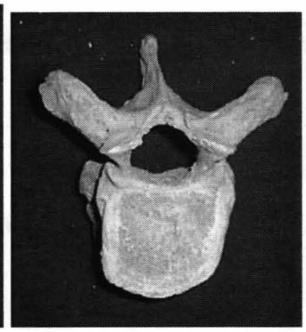
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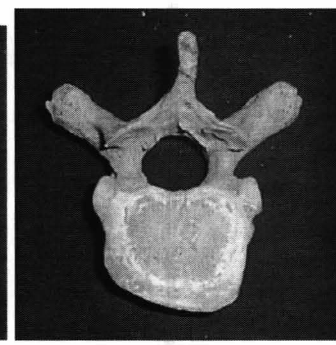
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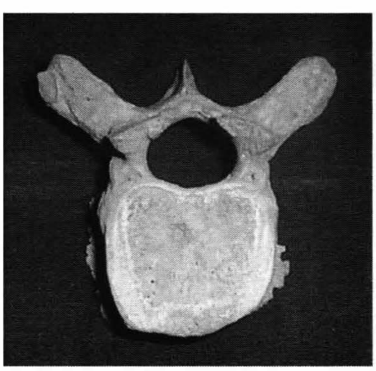
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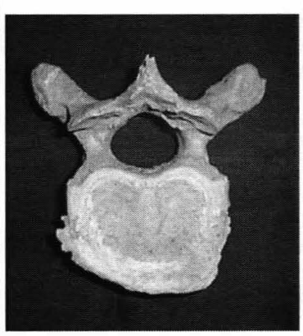
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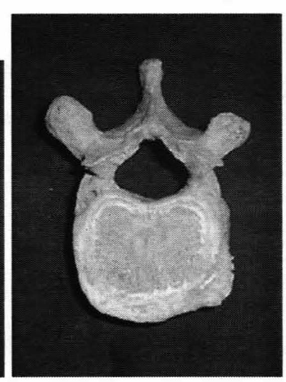
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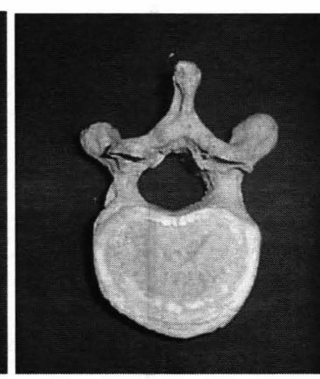
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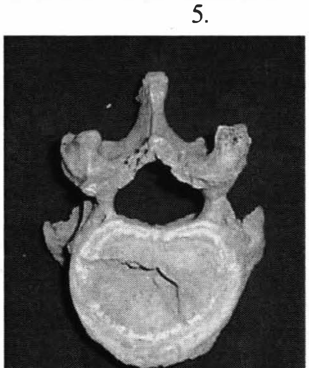
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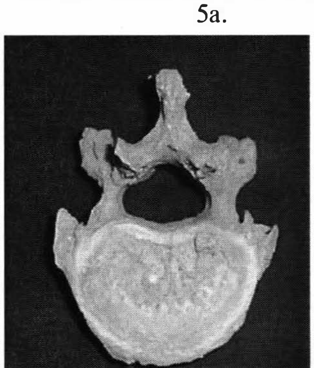
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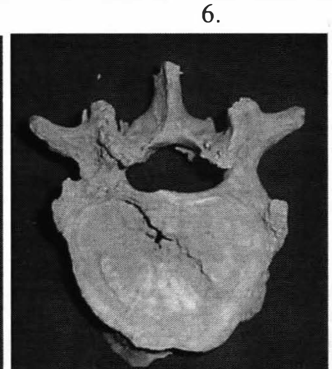
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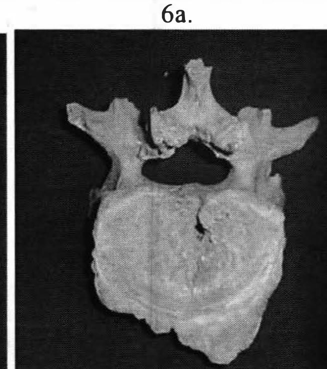
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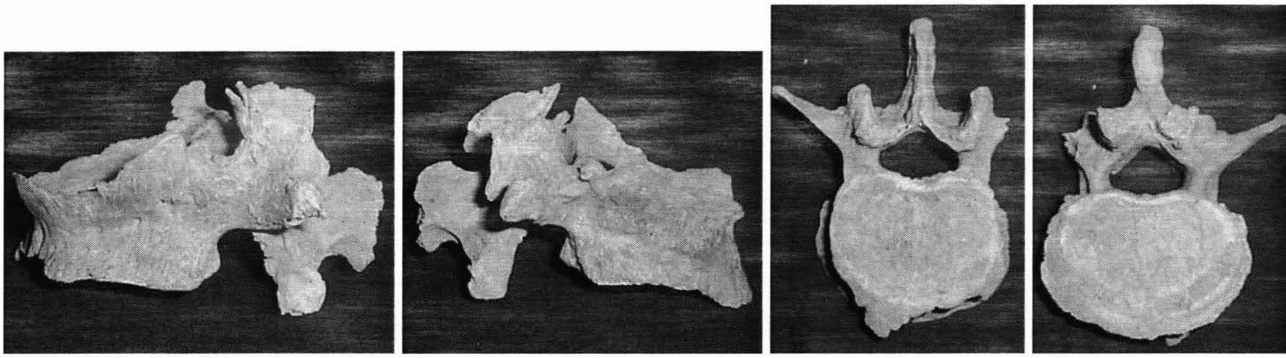
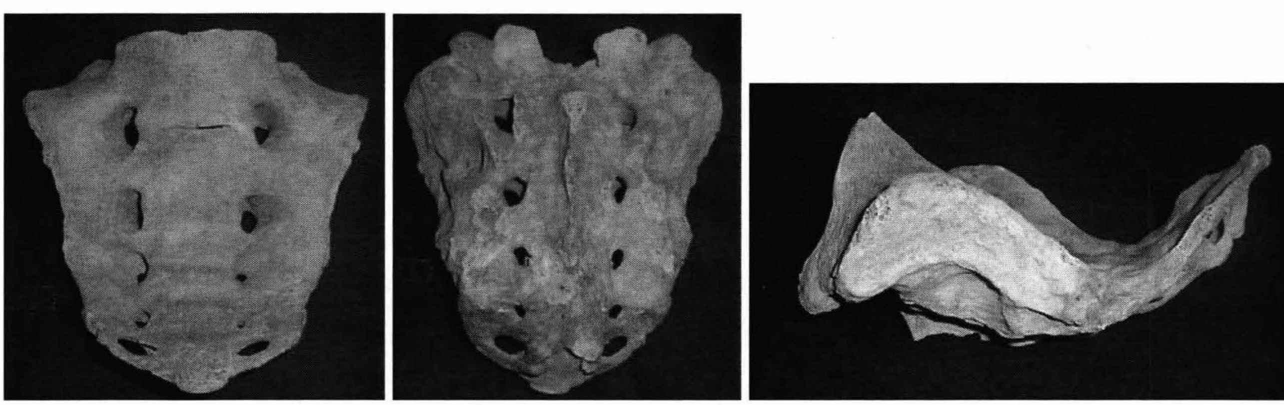


8b. 8c. 9. 9a.

10. 10a. 11. 11a.

Fig. 14. **Skeleton 2.** Thoracic vertebrae T 6 – T 9, superior (1-4) and inferior (1a-4a) view. Thoracic vertebrae T 10 – T 11 and lumbar vertebra L 1, superior (5-8) and inferior (5a-8a) view. Lumbar vertebra L 1, right – left lateral view (8b and 8c). Lumbar vertebrae L 2 – L 4, superior (9-10) and inferior (9a-11a) view. For explanations see the text.

The sequels are important because vertebral column presents a posterior cyphosis (between the thoracic and vertebral vertebras) which in life modified the entire general posture of this person (Fig. 13/1–3).



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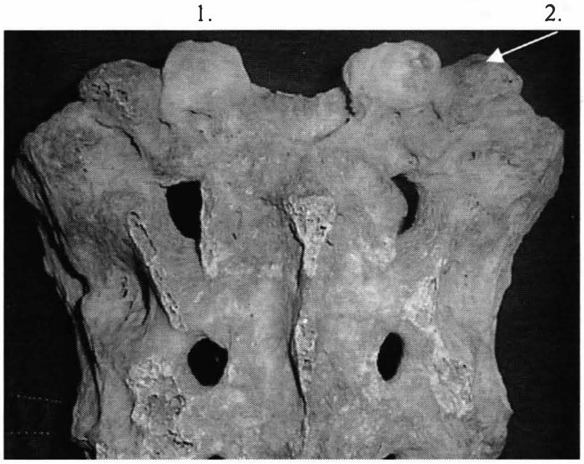

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Fig. 15. **Skeleton 2.** Sacrum with 6 vertebrae: anterior, posterior and right lateral view (1-3). Posterior view, detail (4), the arrow shows an articular supplementary facet lumbar vertebra L 5 on the right sacral wing.

The other vertebras have different modifications: thoracic vertebra T6 is normal and unaffected; T7 has a Schmorl nodule on the superior side; T8 and T9 have nodules on the superior and inferior sides; the body of T9 has a slight asymmetry, a prominent superior edge (non-exostosis), and an inferior edge prominently outward, with osteophytis toward its left side.

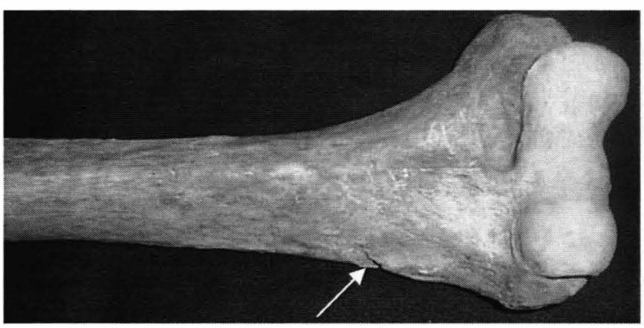
Articular sides of T11 are not affected in any way, but the superior edge of the vertebral body presents osteophytes toward its left side (corresponding to the ones developed on the anterior vertebra).

T12 presents a light asymmetrically body: the superior side shows a slight collapse toward the right, the inferior side appearing to be flat with a rugged look. The superior edge is marked slightly; the inferior one presents continuous exostotic ondulations corresponding to the same development of showing lumbar vertebra L1 described above.

Considering the other lumbar vertebrae, it can be observed that the normal superior and inferior sides, and the prominent bodies are normal. Lumbar vertebra L2 has a continuous osteophyte development on its superior and inferior side.

Violent *perimortem* traces

Nearby the distal epiphysis, on the lateral supracondylar crest of the right humerus, it has been observed a trace caused by a sharp object which produced an oblique cut from proximal to distal diaphysis. The split was not deep however, presenting little splinters with an appearance of broken fresh bone (Fig. 16/2–4).



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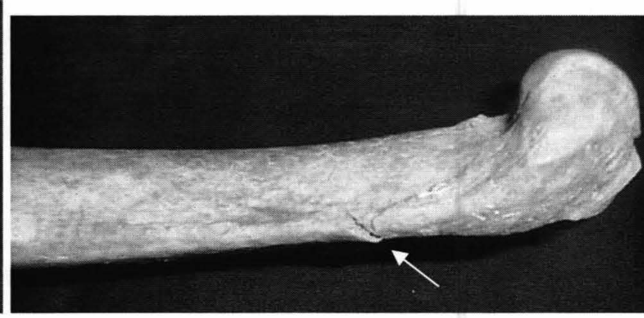

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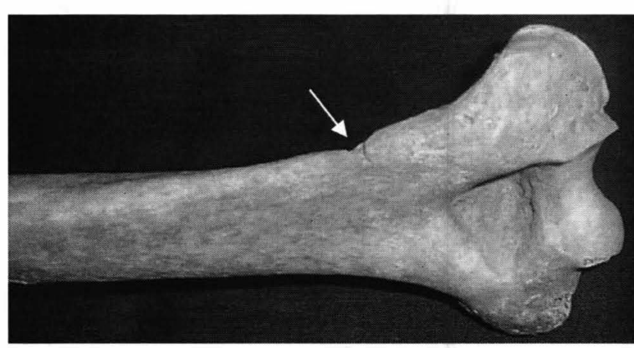


Fig. 16. **Skeleton 2.** Right humerus (1-3). The arrows show a perimortem hit with a sharp object which have cut the lateral rim of the inferior part of diaphysis.

Also, the diaphysis of the left fibula presents on its distal third a complete fracture of an irregular shape, without splits, caused by a lateral hit by a blunt object (Fig. 17/2 – 4).

Very important is the fracture of the mandibular body on the left side. It was broken in many fragments (unfortunately not present) due to a strong blow (Fig. 12/2 and 4). Likely, the maxilla suffered the same kind of violent treatment.

According to the fact that no healing signs of these three traumas were detectable, it was possible to conclude that the subject died at short time after receiving this violent treatment.

1. 2. 3. 4.

Fig. 17. **Skeleton 2.** Proximal epiphysis of fibulas (1), at right it could see an exostosis. Left fibula with a perimortem fracture, general view (2) and details (3; 4).

Cause of death

Exceptionally, the atlas proves the decapitation of subject. The vertebra is well preserved presenting the inferior articular facets severed from posterior to anterior by a blow produced by a very sharp object (Fig. 13/4).

The object's blade, probably a sword, penetrated between the posterior arches of atlas and axis, without touching them, sectioning just the lateral edges of the facets (which are inclined oblique and lower from medial to lateral) nearby the anterior their end, where it could be observed small tearing lines.

The hit probably cut off the axis dens (which is missing). The death occurred rapidly due to sectioning of the cervical marrow.

BURIAL 2

Condition of preservation and integrity

Of the neurocranium is present only the **calotte** with important missing areas (region of glabela, the left area of frontal and parietal with the left temporal, inferior area of occipital, and base of skull) due to the modern destructions.

Of the **face** is present the left zygomatic (uncomplete).

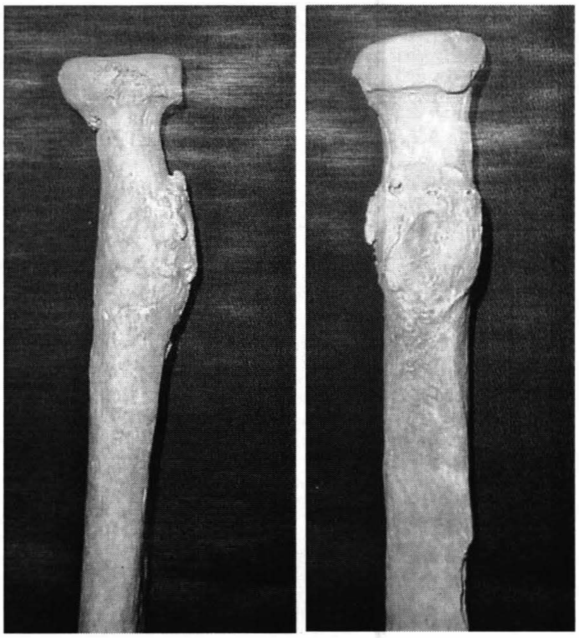
The **mandible** present old destructions. It is missing both mandibular condyle and left coronoid process. It is present 4 teeth.

Of the shoulder girdle are present, partial restored, both **scapulas** and right **clavicle**. Of the thorax we identified the **sternum** with the manubrium ununited with the sternal body and fragments of ribs.

Of the **vertebral column** are present all the cervical vertebras, 4 entire thoracal vertebras (T I, T 10 – T 12) and fragments from others, and the lumbar vertebras L 1 – L 4.

Of the superior legs, the right **humerus** have missing the inferior third (old destruction) and the left was restored. Also are present the left **radius** and **ulna** (Fig. 18).

Fig. 18. **Skeleton 2.** Right radius. Radial tuberosity with arthrosis aspect.



1. 2.

Of the pelvic girdle are present the **sacrum** and a pubian ram fragment with half of pubic symphysis.

On the inferior legs is preserved only the right **femur** and **tibia**, complete, and a distal fragment from **fibula.**

From hand and foot skeleton were present some **metacarpals**, left **talus**, and disparate fragments from **calcaneum**, some **metatarsals** and **phalanges**.

Determination of sex

Due to the missing of the os coxae and a large area of cranium, for sex diagnosis was used discriminant function for humerus and femur (Černy & Komenda 1976: 67-70), for femur (Pettener & Brasili Gualandi 1979: 59-68), and for tibia (Pettener, Brasili Gualandi & Cavicchi 1980: 363-372).

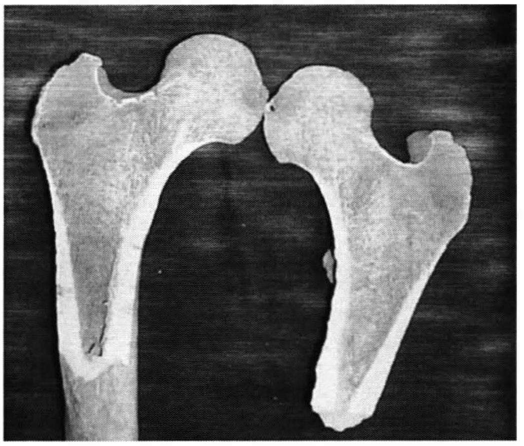
The obtained numbers show the gracility of this skeleton who belong to a woman. This diagnosis is confirmed by the present sexual features of skull: little and gracil mastoid processus, wiped superciliary and occipital arches.

Estimation of age

Using the complex method for age determination (Nemeskéri *et alii* 1960, p. 70-95) the sagital sections of proximal epiphysis of humerus and femur are consistent with 4th and 3rd phase of evolution (Fig. 19/1–2), the pubic symphysis characteristics are consistent with 3rd phase of evolution, and cranial sutures do not present any synostose point both exocranian and endocranian surface in the phase I. Considering these indicators according to Sjøvold's tables (1975: 9-22) the age has been estimated on 48,25 ± 2,5 years old confirmed by the medium wear of the mandibular teeth (Fig. 19/3).

Pathology

Excepting the intravitam loss of molar 2 left from mandible, do not exist other elements. The vertebral column has not spondyloarthrosis.



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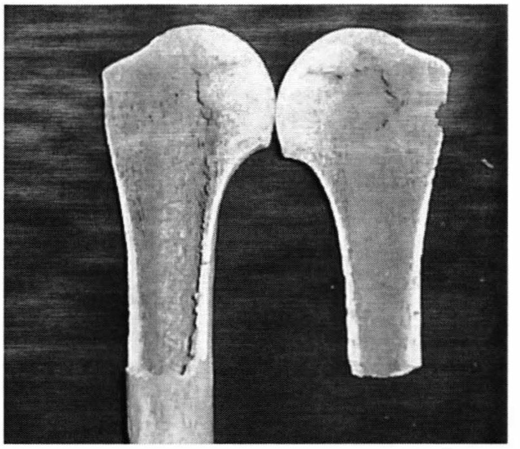

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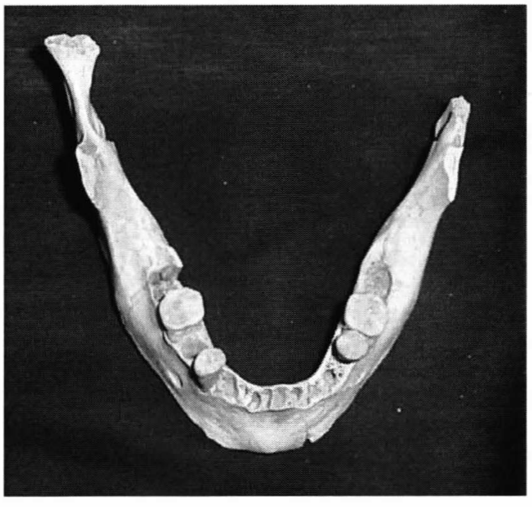


Fig. 19. **Burial 2.** Elements for ageing: Sagittal sections on: sagittal section of the right femur, III phase (1) and humerus, IV phase (2); mandible with medium dental attrition.

Anthropological features

In the superior view the **calotte** (Fig. 20/1–3) is ovoid and dolicocran; in the lateral view present an obelic aplatisation and the occipital is convex. The only metrics are the parietal chord and arch (b – l, with 115 mm and 125 mm), who realize an index of 92.00.

The **mandible** is gracile with wiped muscular insertions and the symphysis just a bit proeminent (Fig. 20 / 4–6). According to Alexeev & Debeț (1964: 112-127) (see the metrics in Table 1), bigonial breadth is "medium", mandibular angle is "medium", and the mandibular index is "small".

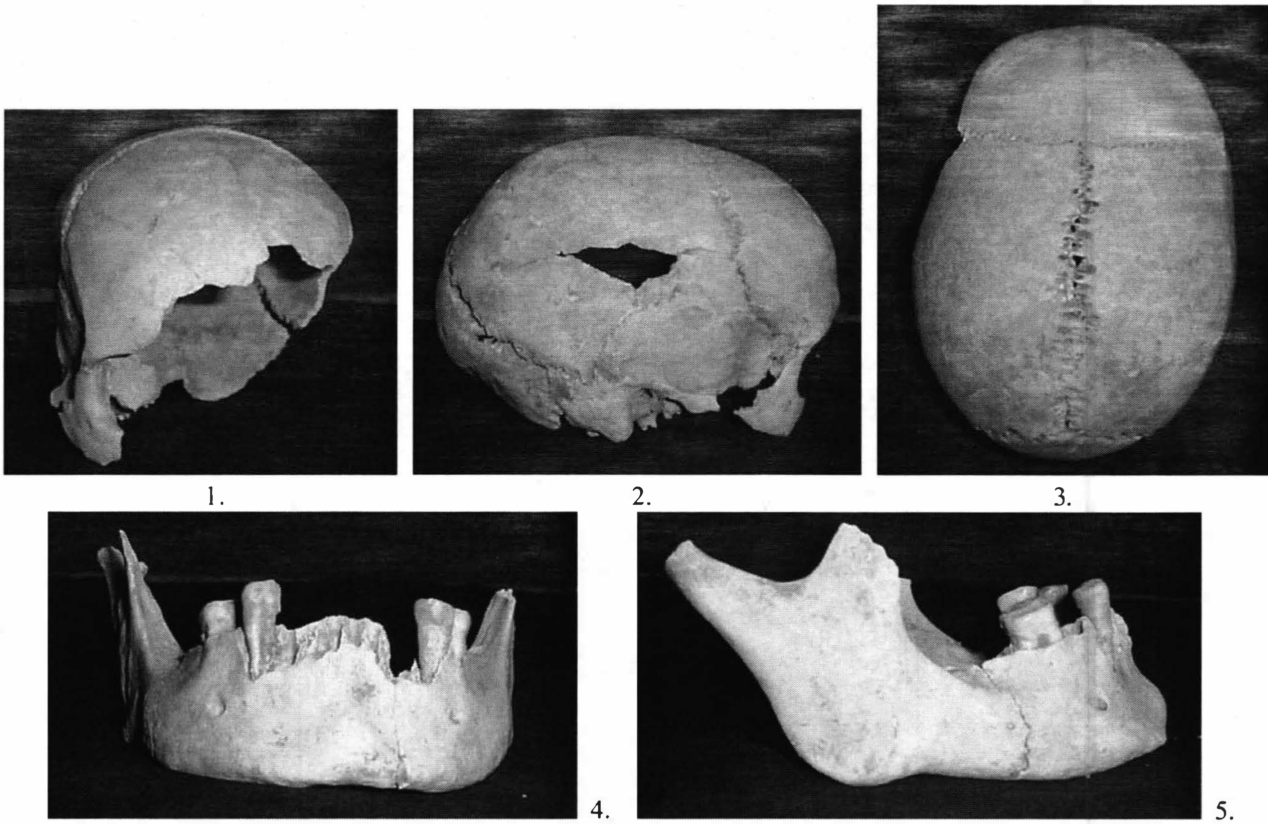
The **long bones** of the postcranian skeleton are gracile with wiped muscular insertions. The femur has a developed pilaster (index 111.53), and in the subtrochanterian region the bone is flattened. Tibia has at the middle of diaphysis a triangle section and on the level of the nutrient foramen is euricnem.

The **sacrum** has a platyhierich index (large).

Stature has been calculated according to length of the leg bones using classical methods. Methods of Bach (1965: 12-25) and Trotter & Glseser (1952: 463-514) lead to an estimation of 157–159 cm (see Tab. 2), consistent with the „supermedium" to „large" category postulated by Martin.

OTHER BONES DISCOVERED IN THE "CHAMBER 2"

1. Right radius (length of 68 mm) and ulna (length of 81 mm) belong to a **child** about a few months old (Fig. 21/1).



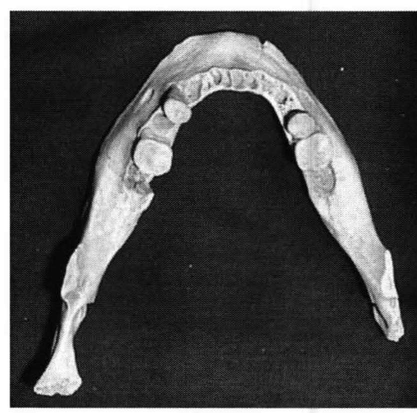


Fig. 20. **Burial 2.** Skull and mandible.

2. Left radius and ulna, both presenting the third proximal missing. The epiphysis are not fused (Fig. 21 / 2). At the middle of diaphysis the radius has the transversal diameter with 13.5 mm, the sagital diameter with 10.5 mm, and the perimeter with 37 mm. The ulna has the dorso – ventral diameter with 12 mm and the transversal with 15 mm. The bones belong to a **child** (infans II).
3. Left parietal (uncomplete) of a **child** about 2–3 years old. In the posterior area toward to lambdoid suture present hyperostosa porotica (Fig. 21/3–4).
4. A piece from the left side of an **adult** skull (frontal, parietal, temporal and a little fragment of occipital) (Fig. 21/5–6). The supraciliars arches are wiped, supraorbital margins is sharp, and mastoid processus are small and gracile. All this indicate a female.
5. Disparate fragments of a **adult – mature** skull. Probable these belong to the same individual (Fig. 22/1):
   a) Fragments from the left side of frontal articulated with great wing of the sphenoid and a fragment of temporal with zygomatic apophysis and zygomatic;
   b) Portions from central and right area of the frontal with nasals and superior area of frontal apophysis of maxilla, portions from zygomatics;
   c) Fragments from left maxilla and the edge of nasal aperture, two fragments from right maxilla, and 3 teeth.
   d) Some cranial fragments with small dimensions. Determination of sex: female.

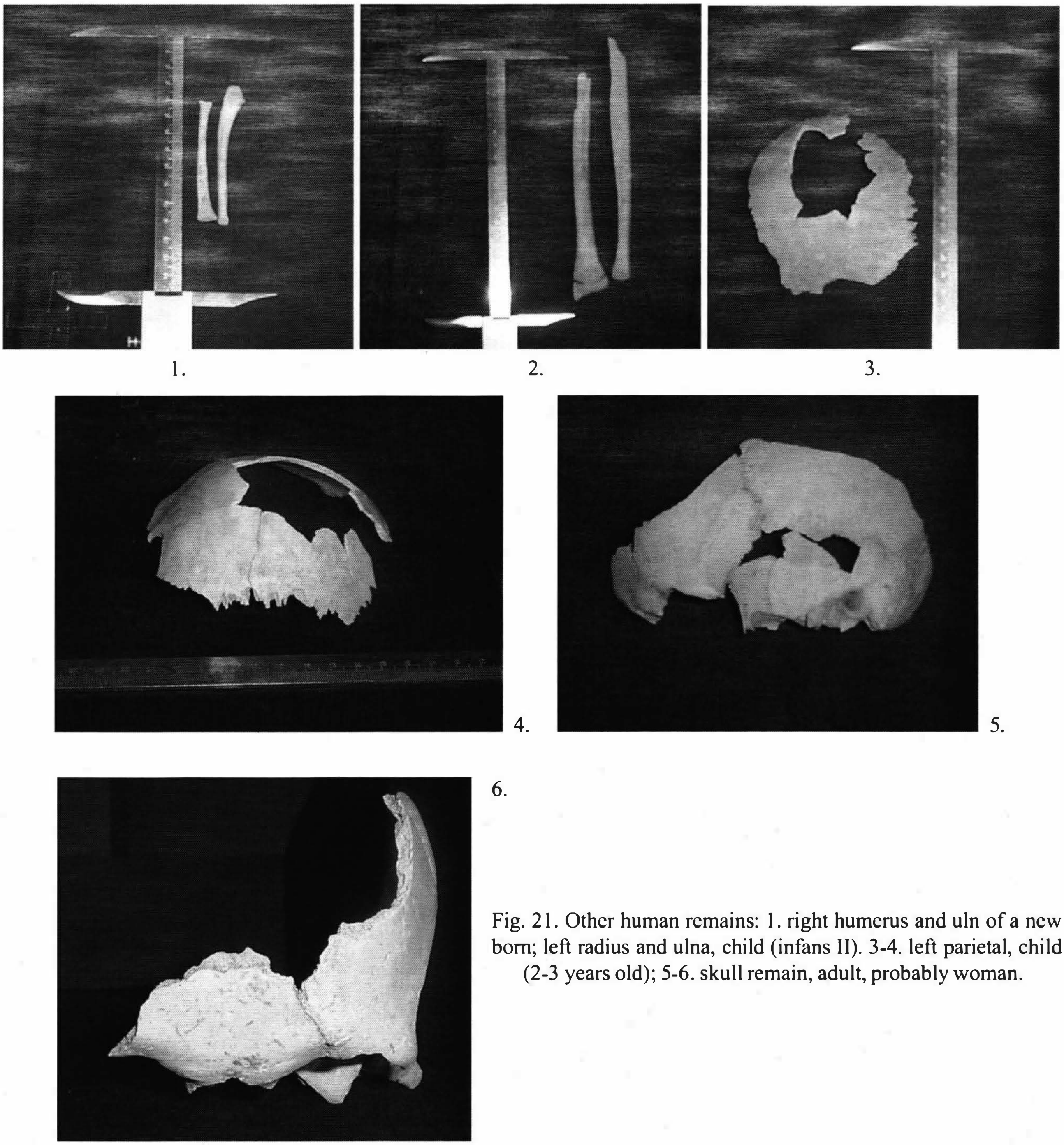
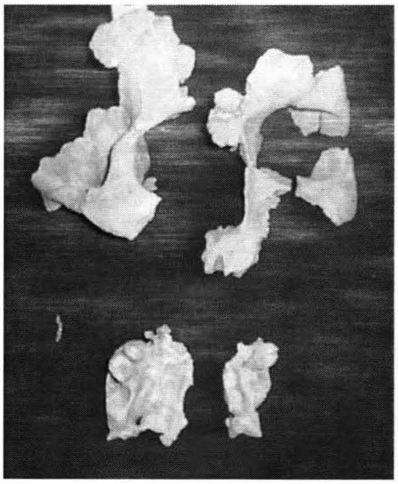


Fig. 21. Other human remains: 1. right humerus and uln of a new born; left radius and ulna, child (infans II). 3-4. left parietal, child (2-3 years old); 5-6. skull remain, adult, probably woman.

6. Disparate cranial fragments belonging to minimum **3 adult – mature individuals** (Fig. 22/2):
   a) Left mastoid and a portion of from posterio – inferior angle of parietal (male ?);
   b) Right mastoid and inferior area of occipital squama.
   c) A portion of basesphenoid and a petrous pyramid.
   d) A fragment of parietal and a fragment of occipital squama.
7. Two lumbar vertebrals bodies of an **adult – mature** (Fig. 22/4).
8. The diaphysis of long bones from minimum **3 adult – mature individuals** (Fig. 22/5) and other bone:
   a) Right femur, fragmentary diaphysis restored with some missing parts and it has developed pilaster and platimer
   b) Right fragmentary femur, gracil, with medium pilaster and platimer.



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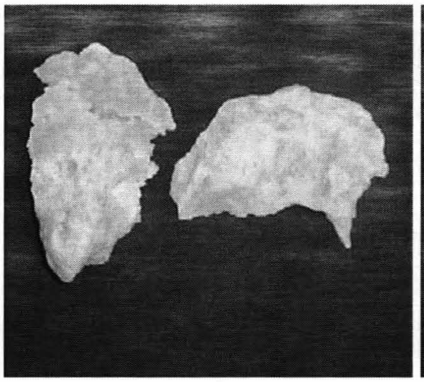

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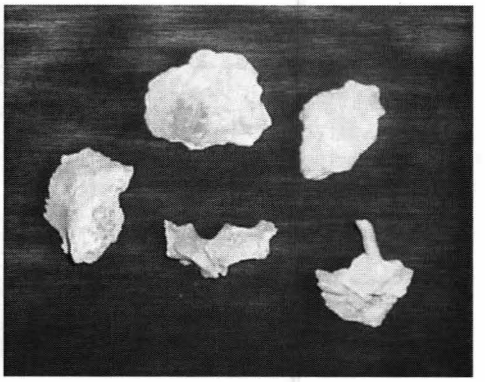

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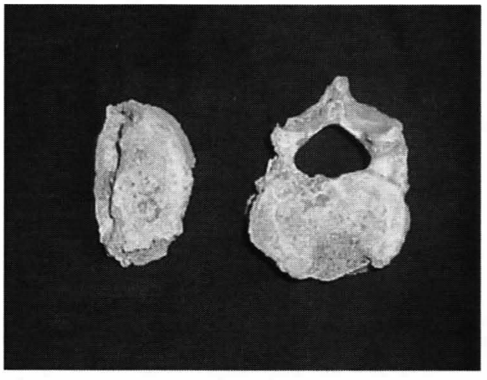

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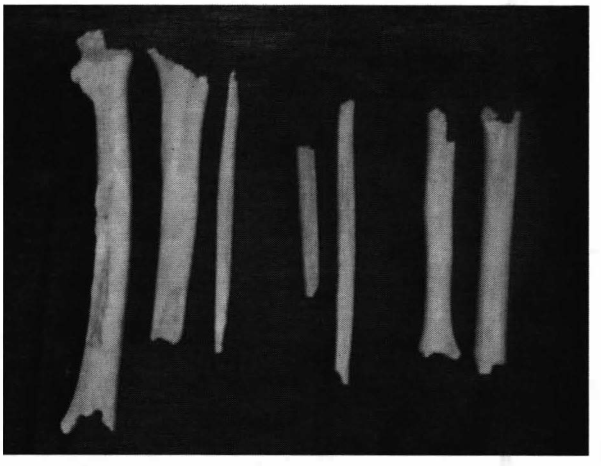

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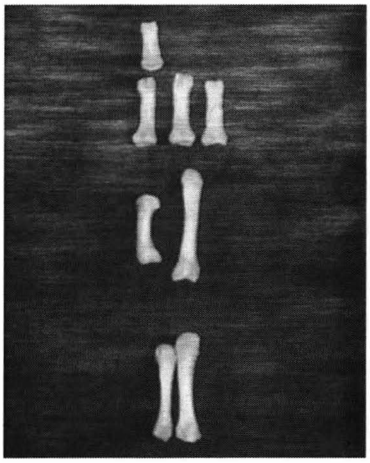
Fig. 22. Other human remains: 1. skull and facial fragments, adult-mature, woman (?); 2-3. sull fragments, adults-matures (probably 3 individuals); 4. two lumbar vertebrae bodies, adult-mature; 5. long bone: femurs, tibias, fibulas, humerus fragments from an adult-mature.

Metrics and indices	a)	b)
6.	30,5	26
7.	27	24
9.	29,5	31
10.	25	24
6:7.	112,96	108,33
10:9.	84,74	77,41

c) Fragment of **tibia** diaphysis with sagital diameter of 30 mm and transversal diameter of 25 mm at the middle of diaphysis; sagital diameter of 32 mm and transversal diameter of 22 mm at the level of nutrient foramen. Section index is 83.33 and the cnemic index 68.75.
d) Three fragments of fibulas diaphyses from 3 individuals.
e) A fragment of humerus diaphysis.
f) A small fragment of scapula.
g) Fragmentary left talus and some phalanges.
h) Numerous fragments of ribs.

9. A group of bones with clean and white patina: 4 metacarpals, 4 phalanges (Fig. 23/1), and some ribs (Fig. 23/3). One of the phalanges present a fractured unhealed (Fig. 23/2a – b).
10. Animal bones: metapodes and skulls fragments of *bos taurus* and sheep/goat, a fragment of a pig mandible, 2 fragments of birds (Fig. 24).



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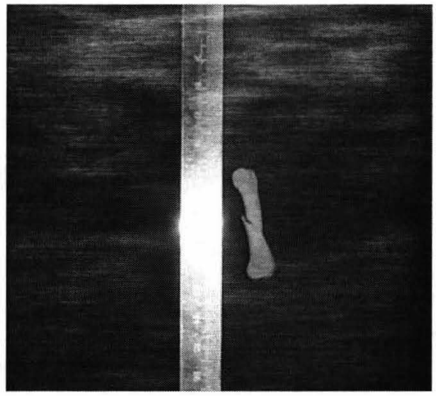

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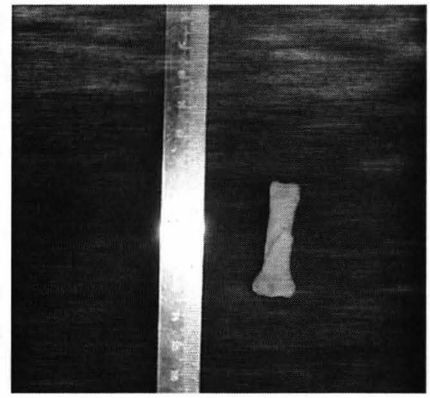

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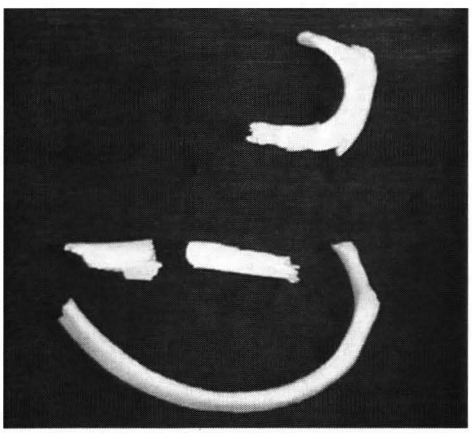

3.

Fig. 23. Other human remains: 1. metacarpals and phalanges, adult; 2a-2b. phalanx 1 with vert fracture; 3. ribs with a same patina as bone noted 1-2a.

Fig. 24. Animals' bones.

SUMMARY AND CONCLUSION

The first important establishment of this analysis is that in the funeral chamber of the monument were the human remains of two individuals.

Using paleoanthropological methods it was possible to determine the sex, age, anthropological features, biopathological history, and cause and condition of death.

As a conclusion two males were identified: first was in the 6th decade of life and the second in the 3rd. Both had a strong constitution and their statures were included in the medium – high category for the first, and high for the second.

The absence of the skulls does not permit a characterization of the anthropological type, but it was possible to observe that the features and traits of the skeleton 2 mandible, and its large stature, indicate the Dinaric – Armenoid type. This type is characteristic to the mountain regions of the north India, Anatolia and Dinaric Alps.

From biopathologic point of view at least last two decades of the first individual life have been dominated by a seronegative spondyloarthropaty which affectd the vertebral column and other articulations of legs. Also, the second individual might have been suffering, at the age limit between teenager and adult, of a first lumbar vertebra trauma. Probably healed after a long sufferince, the accident resulted in a dorso – lumbar cyphosis.

The last days of these men life were undoubt tragic. The violence (perimortem) traces present on bones (mandible and scapulas at first; mandible, humerus and fibula at second) and the absence of healing procesess (*postfractum* bony reaction) proved that they died immediately after the traumas occured.

The cause of death (from forensic point of view) could be established only for the second skeleton, of whom first cervical vertebra (the atlas) state proved (extremly rare case in paleoantropology) decapitation. We presume the same death for the skeleton 1, due to the absence of the first cervical vertebras.

Confrontation of the anthropological results with historical sources represents a rare ocasion in paleoantropology. Making this precise, the historical sources use as refference is given by a martyric act preserved in a copy dated in XV century in the archives of the Saviour Church from Utrecht. This was published in 1615 by the erudite Jesuit, Herbert Rosweyde, the initiator of the great hagiographical colection *Acta Sanctorum*.

The most important section of this document is chapter III where there are describe the last 35 days of martyrs life (from arrestment to execution). Below we present a table with the historical date and the results of anthropological analysis.

Latin	English	Anthropological analysis
Caput III. 20. *Erat siquidem sanctus Epictetus annorum fere sexaginta, statura procerus, barba prolixa, et splendore canitiei decoratus. Similiter et beatissimus Astion monachus, statura et ipse procerus existebat: sed et nimium pulcher ac delicatus, et quasi triginta quinque annos aetatis agens.*	Saint Epictet, almost 60 years old, had high stature, with plentiful beard and admirably in his greyish splendour. The same allhappy monk Astion had high stature but he was very beautiful and delicate, having almost 35 years.	For the **skeleton 1** we can estimate a chronological age of death about 64.67 years, with an error of ± 3 years and with a confidence about 80 – 85 %. The analysis of all elements, for the **skeleton 2** indicate a real age of 30–40 years, rather to the beginning of this one.
Caput III. 27. *Hoc audiens vesanus ille, et horrendus, nimium efferatus est: et jussit ministris suis, ut cum lapidibus ora Sanctorum contunderent. Deinde imperavit, ut virgas afferrent fraxineas, et sic ex eis tam diu eos verberarent, quamdiu spiritum exhalarent.*	This crazy with beast soul, hearing those, ordered to his servants to crash with stone the faces of martyrs. Afterthat, he ask to bring ashtree rods and to be heat them until they will breathe one's last.	At the **skeleton 2** very important is the fracture of mandibular body on the left side. This was broken due to the strong hit in many splits. For the **skeleton 1** the left scapula present a fracture of acromion with a splinter toward to supraspinous fossa, and the right has a fracture of axillary border. Also, the mandible presents destroying of socket (and the crowns) of incisors.

Caput III. 31. *Et haec dicens, statim a spiculatore caput ejus amputator. Hoc cum factum fuisset, cernens sanctus Epictetus, dedit gloriam Deo. Et projiciens se super corpusculum ejus, rogare coepit a carnificibus, ut quomodo jaceret super cadaver sancti Martyris, sic et ipsum percuterent.*	Saying those, immediately the head was cut by hangman. After it is make this, Saint Epictet, looking, gave slave to God and throwing to the body of Astion, he started to ask the hangmen, so he staying above the corpse of saint Martyr, so they killed him.	The atlas of **skeleton 2** is well preserved and present the inferior articular facets cutted toward posterior to anterior by a hit produced with a very sharp object. The object's blade, probably sword, get into between the posterior arches of atlas and axis, without touching, sectioning just the lateral edges of facets (which are inclined oblique to down from medial to lateral) near by the anterior their end, where can observe little tear lines.

Finally it must to explain the missing of skulls among the bones. So chapter IV relating the burial of martyrs bodies by Vigilantus in a secret place outside of walled city (paragraph 32, 43 and 44). Late after the legislate of Christianism, the bone were exhume and buried with honors in the crypt builded intramuros. Probably with this occasion the skulls were keep by christians, may be for adoration or repatriation.

A second problem is represent by the burial 2 who was made after the robbing and broken the crypt in a yellow soil in the superior part of *dromos*. It is about a skeleton of a woman.

Also, unclear is the bones from "chamber" 2 where it was identified human remains of 3 children (a new-born, an infans I and an infans II) and from 5–6 adult – mature individuals. It could possible to belong to some graves. These problems will be established with further archaeological excavations.

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