PALEOANTHROPOLOGICAL AND PALEOPATHOLOGICAL EXAMINATION OF PANAZTEPE

(ABSTRACT)

Panaztepe is an antique settlement within the boundaries of Menemen, İzmir. 3 Groups of skeletons have been unearthed belonging to 2 nd Millenium, Roman and Islamic Periods during the archaeological excavations at Panaztepe under the direction of Prof. Dr. Armağan Erkanal.

The material subject to our present study belongs to the Islamic Period findings of Panaztepe. West Anatolia was the scene of an intensive Turkmen Tribes migration toward the end of XI th Century A.D., and thus the Islamic Period began. According to archive records of XVI th Century, there had been settlement during that time in this tumulus. Wheat farming used to be practised in the surrounding area, and there were vineyards. In addition, other agricultural produces were cultivated, and there were grazing lands, and fields of reeds. This ecological medium gives us clues to the people of Panaztepe, whose skeletons we have studied.

Panaztepe series, composed of 82 skeletons, seem to give us a morphological appearance in a homogeny.

We have observed that all Mediterranean, Euroafrican, Alpine and Dynaric types are represented in them. However, Meditterranean types weigh heavier in this collection.

The average biometric values of Panaztepe Skeletons are given in table I. According to this, average maximum cranial length is 174.54 cms. Maximum Cranial width has been found to be 140.22 cms. This ratio which defines cranial index of 80.34 takes place at the lower margin of brachicranial head index. That shows that there is an inclination from Mediterranean type towards brachicephalization.

The index values of the related population have been given in table 2. According to the results obtained, a morphological characteristic of skeletons with broad meadow weighs heavier compared to cranium. While the average facial index points to considerably a median breadth face of the eight individuals whose alveolar indices could be established, in one, a slight prognatism was determined and the rest are orthognaths;

as to the other related values in this community, we can say the following : a medium degree of broad face, of medium height eye socket and again a medium degree of nasal structure.

On the skeletons which belong to İslamic Period of Panaztepe : The average of statue which we have calculated according to T. Gleser formula is 170.78 cms. for males, and 160.44 cms. for females. These statue values are higher when compared with the data which represent Ancient Anatolian populations. (e.g in the Ancient Bronze Troia males were 168 cms-females 155 cms, Medium Bronze Gordium 169 cms, men-155 cms. Women.; in Byzantium Period at Kalenderhane, İstanbul 170 cms men-155 cms, women are the average statue values that we witness.)

Of the individuals of Panaztepe, whose sex could be identified, 58 % were women and 42 % men,. The number of individual below 15 years of age was 24. Mortality rate at 1 - 2 years old 20 %, for 0 - 15 years group while the mortality rate for the whole population reaches 5.9 %. It is possible to account for this situation with the weakness of infants that are weaned, and feeding system of the era and the general health conditions.

The average ages of individuals above 15 years old was fixed to be 38.6. While average female age was 35.5 (N. : 25). This rises to 42.5 in males (N : 22). The fact that women were found to have shown a high rate of mortality at their first delivery is particularly noteworthy.

Pathological findigs that belong to the skeletons we have examined appear to concern the teeth. Of the 87 skeletons representing this community we have determined dental and oral diseases in 24.1 %; in 14.9 % diseases referring to bones. It is known that the dental and oral disorders were related primarly to food materials ingested. Then we consider that the diet of the period was mostly cereal, the situation explains itself. Whereas on the Panaztepe skeletons that belong to 2nd milleneum B.C which we are still studying there is almost no oral pathology. The reason for this can be thought in the dietery system of West Anatoia of the antique period west board on the sea and marine products. At least this is what we are considering when we try to explain this fact. In addition, the existence of osteofit and schumorl on vertebras, osteomyelitis, fracture, osteo-arthritis, have been established on these individiulas.

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TABLO I : Panaztepe İskeletlerine Ait Ölçüler (*)

	Ölçü No.	n	X̄	S	V
			Genel		
1 — Maximum kafa uzunluğu	1	24	174.54	11.55	6.62
2 — Maximum kafa genişliği	8	25	140.22	11.49	8.20
3 — Minimum alın genişliği	9	21	95.42	6.63	6.95
4 — Maximum alın genişliği	10	18	111.64	11.32	9.46
5 — Kafakaidesi uzunluğu	5	9	96.94	5.32	5.49
6 — Biauricular genişlik	11	25	121.84	11.00	9.03
7 — Basion - Bregma yüksekliği	17	10	133.50	4.45	3.33
8 — Yüz derinliği	40	8	89.06	6.65	7.46
9 — Morfolojik yüz yüksekliği	47	10	115.35	10.63	9.21
10 — Üst yüz yüksekliği	48	13	67.78	6.58	9.70
11 — Orbital genişlik	51	13	41.04	2.38	5.79
12 — Orbital genişlik	52	13	33.61	2.87	8.55
13 — Bizygomatik genişlik	45	13	126.42	8.75	6.92
14 — Burun genişliği	54	14	23.93	2.97	12.41
15 — Burun yüksekliği	55	11	50.23	4.11	8.18
16 — Bigonial genişlik	66	23	94.39	6.03	6.39
17 — Alt çene yüksekliği	69.1	27	31.52	3.38	10.72
18 — Alt çene gövde kalınlığı	69.3	37	11.66	1.26	10.84
19 — Dental uzunluk	80.2	15	44.60	1.94	4.35

(*)   Ölçü numaraları Martin ve Saller (1957)'e göredir.

	Kadınlar				Erkekler			
n	min - max	X	S	V	n	min - max	X	S	V
11	157-194	171.32	12.41	7.24	13	157-193.5	177.27	10.48	5.91
11	124-163	137.73	11.04	8.02	14	125-166	142.18	11.86	8.34
11	855-108	94.55	6.19	6.55	10	88-112	96.40	7.28	7.55
8	112-131	119.13	7.38	6.19	10	103-144	120-05	14.12	11.76
5	91-99.5	95.00	3.59	3.78	4	90-105.5	99.38	6.65	6.69
12	108.5-134	118.25	8.87	7.50	13	102-148	25-15	12.05	9.63
5	125-135	130.20	3.95	3.03	5	135-138	136-80	1.30	0.95
5	83-90	86.40	4.62	5.35	3	85-101	93-50	8.05	8.61
3	103-112	108.67	4.93	4.54	7	103-134	118-21	11.37	9.62
6	55.5-70	64.08	4.80	7.49	7	61-80	70.93	6.48	9.14
5	39.5-43	41.30	1.64	3.97	8	36-45	40-88	2.84	6.95
5	30-33,5	31.50	1.66	5.27	8	31.5-39	34.94	2.72	7.78
7	112-137	122.29	8.36	6.84	6	124-143.5	131.25	6.91	5.28
6	19.5-29	23.33	3.71	15.90	8	21-28.5	24.38	2.46	10.09
4	43-49	46.25	2.75	5.95	7	48-56	52.50	2.78	5.30
12	81-101	92.50	6.48	7.01	11	88-105	96.45	4.98	5.16
12	24.5-34.5	29.79	2.76	9.26	15	25.5-40.5	32.90	3.26	9.91
19	9-14	11.37	1.46	12.84	18	10.5-14	11.97	0.96	8.02
7	42.5-49	44.36	2.19	4.94	8	43-48	44.81	1.81	4.04

TABLO II : Panaztepe İskeletlerinde Endis Değerleri (*)

|	Kadınlar					Erkekler					Genel			
	n	$\bar{x}$	min-max	S	V	n	$\bar{x}$	min-max	S	V	n	$\bar{x}$	min-max	S	V
1 — Kafa endisi (1)	9	82.47	70.61-103.82	11.17	13.54	13	78.88	68.46-105.73	10.52	13.34	22	80.35	68.46-105.73	10.68	13.29
2 — Kafatası uzunluk-yük. en. (2)	5	78.17	71.42- 84.07	4.83	6.18	4	75.61	72.63- 78.38	2.71	3.59	9	77.03	71.42- 84.07	4.03	5.23
3 — Kafatası gen.-yük. en. (3)	5	94.26	85.62-101.94	7.06	7.49	5	98.25	87.34-108.80	7.97	8.12	10	96.26	85.62-108.80	7.41	7.70
4 — Alın endisi (12)	6	77.70	71.43- 81.53	3.64	4.68	10	81.60	73.81- 86.40	3.89	4.77	16	80.13	71.43- 86.40	4.16	5.19
5 — Alın - kafa endisi (13)	8	68.24	61.64- 75.48	4.13	6.05	10	69.70	63.26- 76.08	3.61	5.18	18	69.05	61.64- 76.08	3.91	5.66
6 — Yüz endisi (38)	2	95.49	90.98-100.00	6.38	6.68	5	90.96	80.46-100.00	8.20	9.02	7	92.25	80.46-100.00	7.52	8.15
7 — Üst yüz endisi (39)	4	49.17	42.85- 54.62	6.06	12.33	6	54.27	47.65- 59.70	4.35	8.02	10	52.23	42.85- 59.70	5.45	10.43
8 — Yüz-çene endisi (40)	4	74.16	70.73- 79.13	4.09	5.51	7	73.25	64.80- 78.36	5.24	7.16	11	73.58	64.80- 79.13	4.66	6.33
9 — Gözçukuru endisi (42)	4	75.83	75.00- 76.74	0.73	0.96	9	84.71	77.91- 92.85	5.43	6.41	13	81.97	75.00- 92.85	6.17	7.53
10 — Burun endisi (48)	3	48.10	46.51- 50.00	1.77	3.67	8	48.08	38.18- 59.18	7.62	15.86	11	48.08	38.18- 59.18	6.43	13.37
11 — Burun-yüz gen. en. (51.1)	3	18.35	17.41- 20.17	1.57	8.56	6	18.84	15.67- 22.65	2.43	12.91	9	18.67	15.67- 22.65	2.09	11.19
12 — Gnatik endis (60)	5	90.97	86.95- 97.80	4.41	4.85	3	95.00	89.57-101.00	5.74	6.04	8	92.48	86.35-101.00	4.99	5.40
13 — Altçene yük. -kal. en. (66)	13	38.94	31.88- 48.38	5.00	12.83	12	36.89	30.88- 50.98	4.48	12.14	25	37.96	30.88- 50.98	5.39	14.20
14 — Dental endis (68)	1	43.72	—	—	—	2	47.19	45.49- 48.88	2.40	5.08	3	46.03	43.72- 48.88	2.62	5.70
15 — Kafa-yüz endisi (71)	5	88.67	83.56- 95.34	5.32	6.00	7	95.98	91.15-103.98	4.62	4.81	12	92.93	83.56-103.98	6.01	6.47

(*) Endis numaraları Martin ve Saller (1957)'e göredir.

## TABLO III : Panaztepe Toplumunda Boya İlişkin İstatistiksel Veriler

	n	$\overline{x}$	min-max	S	V
Erkekler					
Pearson	17	164.58	153.95-174.83	5.44	3.31
Trotter - Gleser	17	170.78	158.84-182.21	6.02	3.53
Olivier - Tissier	17	167.85	155.88-178.20	6.38	3.80
Kadınlar					
Pearson	21	156.33	148.06-164.25	4.47	2.85
Trotter - Gleser	21	160.44	151.91-170.36	8.84	5.50
Olivier - Tissier	21	161.21	149.72-173.19	5.96	3.70
Genel Ortalama					
Pearson	38	160.02	148.06-174.83	6.40	4.00
Trotter - Gleser	38	165.07	151.91-182.21	7.97	4.83
Olivier - Tissier	38	164.18	149.72-178.20	8.07	4.91

	Araştırıcı	Dönem	♀	n	♂	n	♀ + ♂	n
Çayönü	Özbek	Neolitik					29	50
Çatal Höyük	Angel	Neolitik	29.8	132	34.3	84		
Troy I-V	"	E.Bronz	25.2	3	28.3	3		
Karataş	"	E.Bronz	29.5	197	33.6	159		
Gordion	"	Hitit(O.B)	32.1	17	39.9	11		
Troy VI-VIII	"	Geç Bronz	31.4	8	32.8	8		
Troy IX	"	Helenistik	45.2	34	34.0	2		
Topaklı	Güleç	E. Bizans					32.8	87
Boğazköy	W - Backofen	E.Bizans					33.0	
Serik	Özbek	G.Bizans					35.2	36
Kalenderhane	Angel	G.Bizans	37.3	32	46.2	100		
Panaztepe	Güleç	İslam	35.5	26	42.5	2	38.6	47
Türkiye	DİE	Günümüz	65.5		60.6			

Tablo: IV — Anadolu'da yaş ortalamalarının bazı merkezlere göre dağılımı

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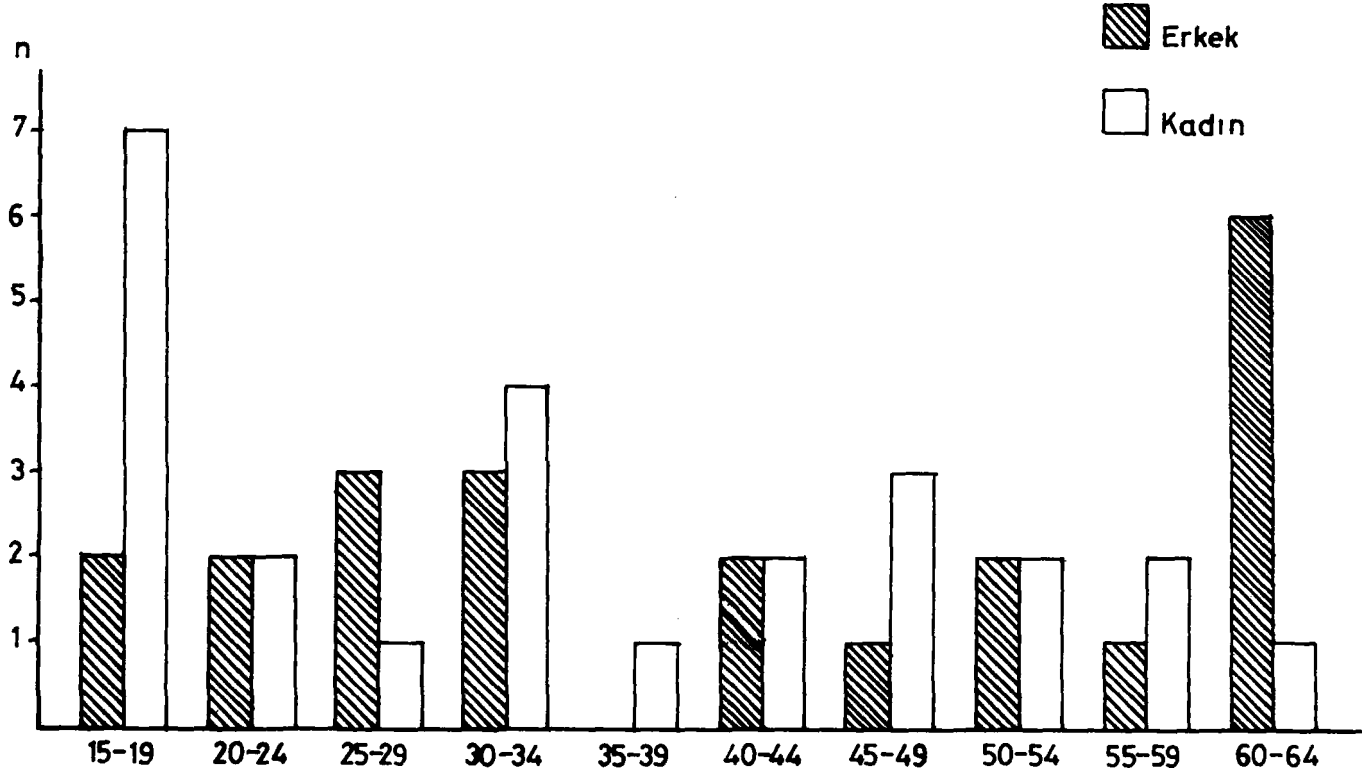
Erkek

Kadın

Tablo : V — Panaztepe İslâm Dönemi kadın - erkek ölüm oranı
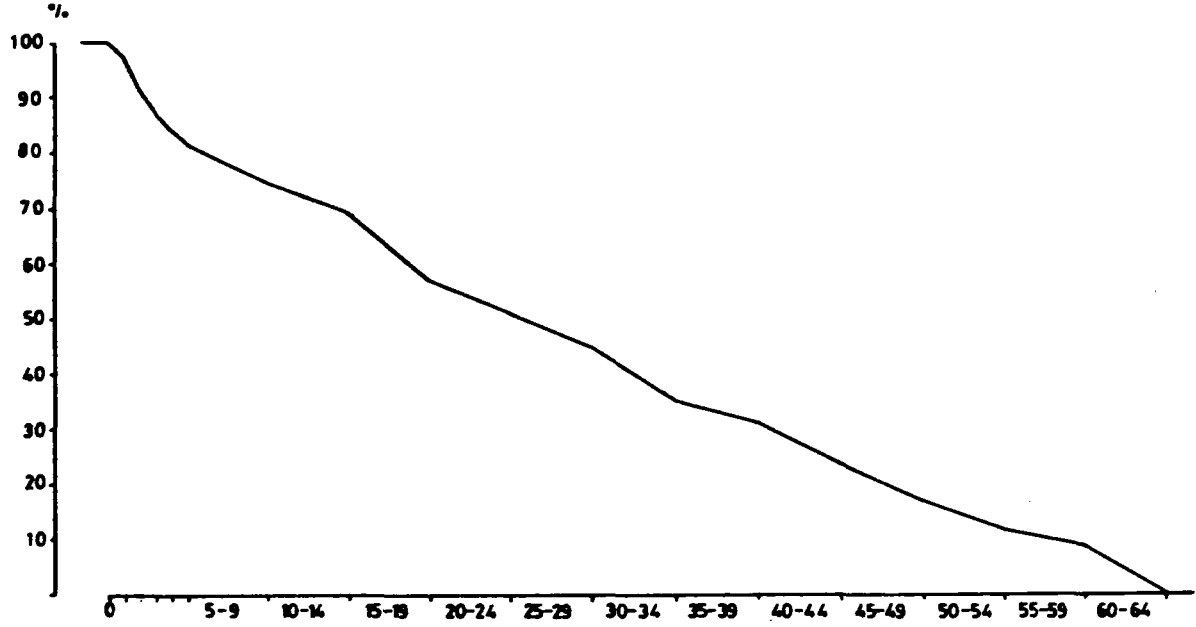
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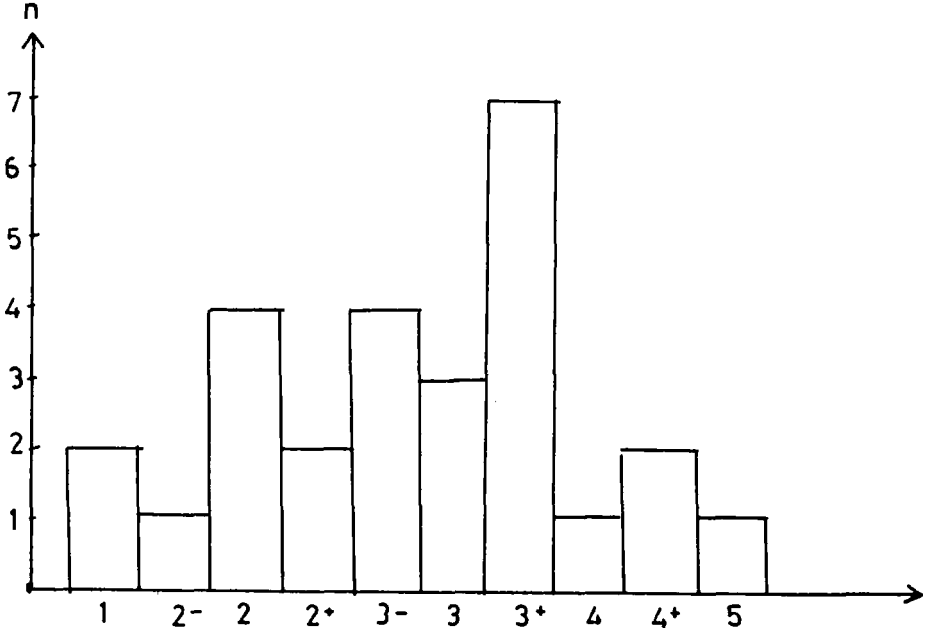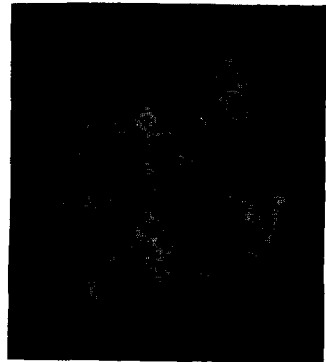
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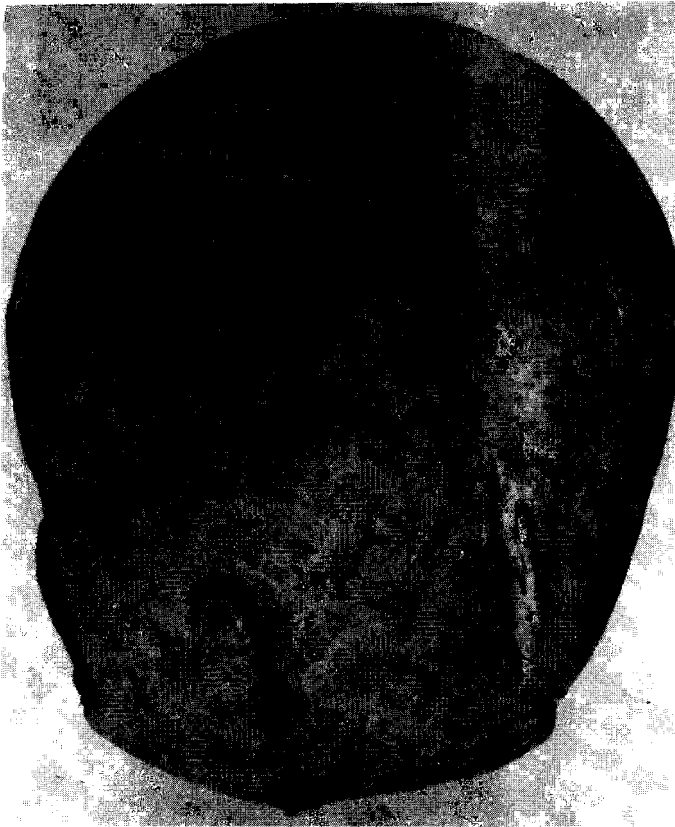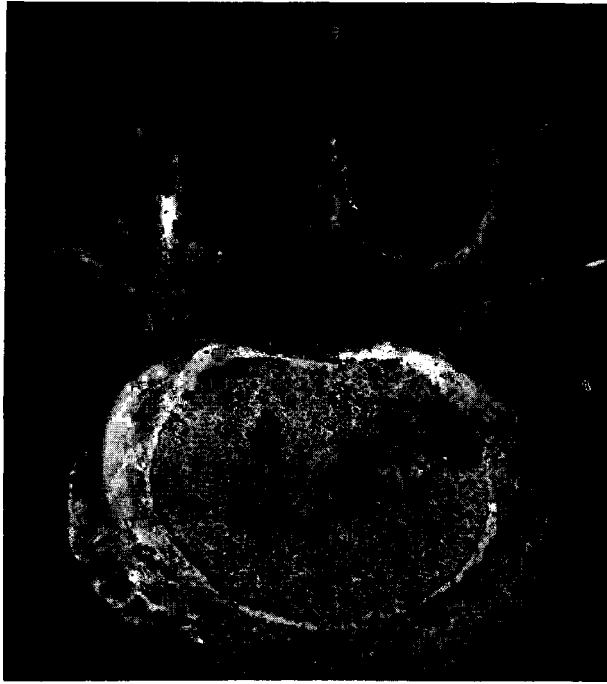
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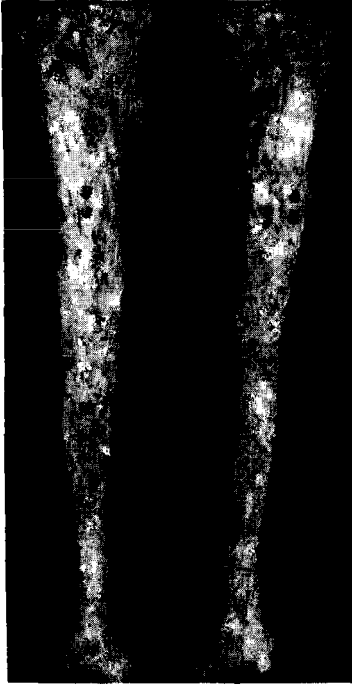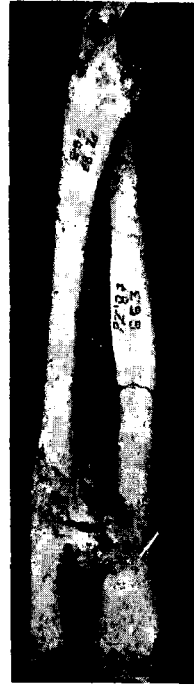
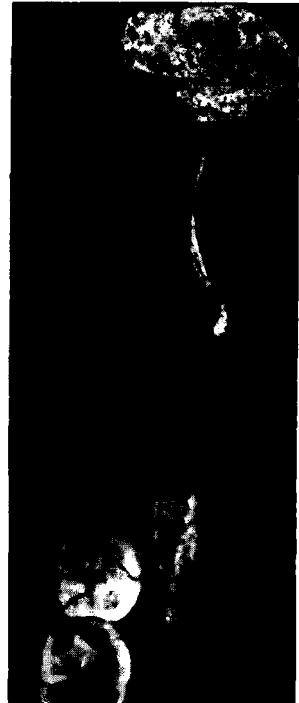Resim : 3

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