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PRELIMINARY REPORT ON THE HUMAN REMAINS FROM THE EARLY BRONZE AGE CEMETERY AT ILIPINAR-HACILARTEPE

Songül Alpaslan-Roodenberg

Introduction

Ilıpınar Höyük, situated in the alluvial plain west of Iznik lake (fig. 1), has yielded a large number of human remains from different periods as there are pit-burials from the Late Neolithic and Early Chalcolithic occupation levels, a group of Late Chalcolithic pit-burials and many Byzantine tile-built tombs, all concentrated in the main sector of the mound[1].

The Early Bronze Age burials were discovered on the west slope where for different reasons the excavations had extended. The surface where the burials were located is only two hundred square meters large, an area called LM8/9 (fig. 2), but as there are strong indications that the actual cemetery was larger, an extension of the investigation is planned.

The burials consist of huge ceramic jars or 'pithoi' measuring up to two meters high which were buried in horizontal position with their openings to the south/southwest. Several contained the remains of more than one individual, implying that the pithoi had been reopened for new burials. In such cases, the first remains of earlier burials were pushed aside or to the back of the jar or (partly) taken out. Indeed, loose detached human bones were encountered outside the pithoi. Burials of very young children merely consisted of a few big jar sherds on top of which the body rested.

The cemetery is supposed to have belonged to the settlement of Hacılartepe, a small village situated at a short distance to the southeast (fig. 1)[2].

The method used in this study includes metric and non-metric data. Because of the fragmentary nature of the bones, the sex of adults was determined using several cranial and postcranial markers, of which in most cases only one or two were available. The reliability of the age estimation of adults was largely dependent on the preservation of the skeletons. Sex and age were assessed by the usual methods[3].

[1] Publications on these collections are in preparation.
[2] For supplementary archaeological data see J. Roodenberg "Note on the Early Bronze Age pithos burials of Hacılartepe-Ilıpınar" (forthcoming).
[3] See Alpaslan-Roodenberg, 2001:1, 2.

Results

The total number of skeletons unearthed between 1996-98 in the Early Bronze Age cemetery is eighteen comprising seventeen individuals from jars (a few from pits laid with jar fragments) and one from a simple pit dug in the earth.

Adults

Burial UA was a large pithos containing skeletal remains from three adults (fig. 3 left). The position of the skeletons was not clear, since they were badly disturbed from soil action and animal burrowing. Bones were broken and incomplete, but at least one of the individuals could be identified as a man. Dental remains were broken and most parts were missing. The few isolated teeth had caries and were excessively worn. The very bad preservation of the bones did not allow further analysis. From this pithos the lower jaw bone, in two pieces, from a bovine was also extracted.

UB was a single primary burial of a female aged between 23-40 years lying in a contracted position (fig. 3 right). The dead was on her right side, oriented South-North and facing east. Near her hand there was a small jug. The bones were very fragile although it was one of the few better-preserved skeletons in the cemetery. The skull was deformed and smashed by the weight of the infiltrated earth. Her length was calculated at 1.55 cm (± 4.30) (Trotter and Gleser, 1952, 1958); her age could only be assessed from the degree of obliteration of the cranial sutures (Acsady and Nemeskeri, 1970). On the skull three benign tumors were noticed. The largest, ca 2-2.5 cm in diameter was located on the right temporal (fig. 4), another, ca 1.5 cm in diameter, was on the coronal suture and the third, ca 1 cm in diameter, on the saggital suture. On the occipital bone faint traces of porosis were observed as well. On the proximal tibia from both sides slight bony projections (enthesophytes) were present in the anterosuperior surface of the tibial tuberosity. Caries were absent, but slight alveolar atrophy occurred and molar teeth were worn until dentine exposure.

The large pithos of UN contained two individuals and a zygomatic bone from an earlier burial. Both skeletons, which belonged to a man and a woman, who laid in a contracted position with their heads to the south, were obviously primary burials (fig. 5). The man was lying on his right side facing east, and the woman on her left side facing west. Because of a thick chalky deposit on the bones, especially on the skulls, they could not be properly examined. Near the heads two jugs were found. A polished green stone axe was at the right side of the man and a pin was retrieved from the bottom of the pithos. Because of animal action the bones were broken and incomplete. A circular depressed skull fracture, ca 1.5 cm in diameter, was observed on the right parietal of the man (fig. 6). There were no traces of caries. Slight alveolar atrophy in the level of the front teeth and slight enamel polishing in most teeth were recorded. As the skull and the face of the woman were surprisingly well-preserved (fig. 7), her skull index (66.1) could be calculated (Knussmann, 1988). Dental examination showed that she had a considerable level of calculus formation (fig. 8), moderate alveolar atrophy and periodontitis. Dentine was exposed on most of the teeth. One case of

caries was seen on the upper molar teeth. Small bony projections (enthesophytes) were found on the superoanterior face of both patellas, which is a common finding in most populations.

Burial UI was totally disturbed. The skeleton belonged to an adult of whom only a few broken and incomplete long bones, isolated teeth and part of the left maxilla with molars were left. The skull of a dog was found near the jar.

Burial UG (fig. 9). In a middle-sized pithos a badly preserved skeleton with a smashed skull was lying in southeast-northwest direction. It was from an adult and probably belonged to a female judging from the mandible and the fragility of the bones in comparison to the female adults in this group. She lied on her left side in a contracted position. A small jug was close to the lower part of her legs. Tooth wear was considerable; two isolated molars were affected by caries. Most of the lower mandibular front teeth were lost antemortem (fig. 10).

UE was the burial of an adult who according to the tiny bones probably also belonged to the female sex (fig. 11). The skeleton was in a bad condition and the legs were missing. She was presumably in a contracted position on her left side oriented South-North. A small, decorated pot stood near her neck. All her teeth were found isolated. Slight calculus formation occurred, but no caries.

Burial UM (fig. 12). It was the best preserved skeleton, almost complete and belonged to a young man aged between 18-19 years. The age was determined from the skeleton's epiphyseal union (WEA, 1980). The deceased was oriented South-North and lied on his right side in a flexed position. In the same jar there was a second axis, probably left from a previous interment that had been removed in favour of the young man. Among the thorax bones a cloth pin appeared. Parallel to the young man's body but outside the pithos a dog skeleton had been deposited, of which the skull had been severed (fig. 13). The length of the boy was calculated at 164.9 cm (± 3.86) (Trotter and Gleser, 1952, 1958). His teeth showed a slight calculus formation, but no caries.

UK consisted of a partly preserved skeleton buried in a simple hole in the ground (fig. 14). According to the skull, mandible and long bones, the broken and incomplete skeletal remains were probably from an adult male. The position of the body was abnormal: the head was oriented to the west and the right arm, in a right angle with the head, was stretched to the south. To say the least, this burial strongly deviates from the other interments. As it seems, this individual did not receive, for one reason or another, the usual respects paid to the other deceased: no customary body position, no container. Neither caries nor antemortem teeth loss had occurred. The right lower third molar was congenitally absent.

Another pit-burial was uncovered in square N8 (fig. 15)[4].

[4] During the 1998 season a burial was discovered in square N8, ca. 10 m. east of the cemetery. It probably belonged to a later phase of the Early Bronze Age. This was also a (primary) simple pit-burial, but judging from the pose of the dead, this was a conventional interment with the individual lying in a tightly flexed position on the right side with the head to the south. Most of the bones were broken and the skull was smashed. The deceased was an adult female, whose bones were coated with a chalky deposit which could not be removed properly. The absence of a burial container may be explained by the later date of this grave.

Infants and Juveniles

Burial UL consisted of the bottom of a jar with a well preserved baby skeleton aged ca 1 or 2 months. In a circle around the burial the skull and other parts from a canine skeleton had been deposited.

UF was a similar burial containing the very deteriorated skeleton of a ca 2 months old baby. Among the bones, which were placed on big pottery sherds, a stone bead appeared.

Pithos burial UC. The skeleton in the jar was from a child aged ca 5 year (± 16 months). The bones were in a bad state of preservation. Teeth were worn until dentine exposure, including the front teeth.

Pithos burial UH (fig. 16) included a nearly complete and well preserved skeleton of a child aged ca 5 years (± 16 months). The body lied in a flexed position, the skull was almost complete. The child had been pushed with his head down to the bottom of the half broken pithos. Whether the upper part of the jar was destroyed when the the burials UI and UN were laid out and the body of the child pushed down the remaining half is not clear. Nonetheless, the body's pose is unusual. North of the jar a dog skull was buried (fig. 16). This child suffered from hydrocephalus (fig. 17). Wormian bones were observed on the occipital. The teeth were almost complete; the upper Lm1 had carries.

Burial UQ. It was from a child aged ca 7 years (± 24 months) whose badly preserved remains rested on a few big sherds (fig. 18).

Burial UD. The skeletons were from two children of ca 14 and 2 years old. The burials were fairly disturbed, the bones broken and incomplete (fig. 19).

To finish the list of human skeletons from the EBA burials mention should be made of two burials discovered in the occupation remains at Hacılartepe. These remains belonged to a newborn baby and a child aged ca 2-3 years[5].

Discussion and conclusions

Thirteen pithos burials and one pit burial (UK) were unearthed in the Early Bronze Age cemetery at Ilıpınar. Large jars such as UN and UA were used for 2 to 3 adult burials respectively, while medium size or smaller jars contained single adults (UB, UI, UG, UE, UM) and children (UH, UC). In one case, two children had been deposited in the same pithos (UD). A young child (UO) and two infants (UL, UF) were found lying on jar sherds only. Altogether there were eighteen individuals comprising a minimum of eleven adults (including 4 male, 4 female and 3 of unidentified sex) and seven juveniles and infants (Tables 1 and 2).

Quite a few burials were badly disturbed and not much was left of the skeletons. With few exceptions the state of the bones was bad: they were rather brittle and incomplete and erosion of the outer layer of the bones was considerable. Because of this bad preservation it

[5]In a small jar the bones of a newborn baby were found together with a few bone fragments of an approximately 2-3 years old child. There were no dental remains to confirm the child's age.

was excluded to collect sufficient anthropological data, for example the measurements from many of them could not be recorded.

The dead were buried with their head near the opening of the pithos. Although there is no total correspondance between the sexes and the side on which the individuals were found; there was a strong tendency to bury females on their left side (UN, UG, UE, but not UB) and males on their right side (UN, UM, UK). Furthermore, the head to feet orientation was always South-North or slightly deviated SSE-NNW. The same tendencies were prevalent in other EBA cemeteries of West Anatolia (Seeher, 2000: 24).

There is no doubt that most burials were primary, this in the anthropological sense that the skeletons were articulated when buried. Three pithoi (UA, UN, UM) showed evidence for secondary use, since there were still one or two bones left from an old burial.

Grave goods were common findings for EBA burials. Yet, the Ilıpınar burials, because of their plain gifts, suggest that the local population had a low standard of living (Roodenberg, forthcoming). The remains of dogs deposited near the graves of infants and young people seem to indicate that deceased of their age were commonly interred with their pets.

The skulls were smashed and deformed by soil action and animal disturbances, and therefore skull indexes could not be calculated, except for one female (UN), which was estimated at 66.1 (dolichocranial). Because of the fragmented long bones, the length of the population could only be calculated for the skeletons from UB and UM. The length of the female skeleton from UB was estimated at 155 cm (± 4.30) and of the young male from UM at 164.9 cm (± 3.86).

Dental health of the adults in this small group was rather satisfactory. The majority of them had no caries. Calculus formation was slight except for the female of UN as was shown above. Alveolar atrophy and dentine exposure occurred often, the latter including adults and even two children aged ca 5 years old. One of those children also had caries. Since the age of most adults could not be calculated, the relation between age and dental health cannot be demonstrated. In general, the diet of the population must have been quite abrasive – dentine exposure occurred on both permanent and milk teeth, including front teeth.

A female aged between 23-40 (UB) had three benign tumours on her skull. They consisted of round bony tissue known as ivory osteoma. One male (UN) showed traces of trauma on his head. Enthesophytes were present in the anterosuperior surface of the tibial tuberosity (UB) and on the superoanterior face of both patellas (UN). These are common findings in most populations. Hydrocephalus, however, is rarely met in archaeological contexts. One child aged ca 5 years old (UH) suffered from this infirmity. The reason for its rare occurrence in antiquity may be that at birth congenital hydrocephalus would have caused the death of the child and the mother (Roberts & Manchester, 1995). The juvenile from UH may have developped this disease as a result of a brain infection from mumps or measles or from a tumor.

As stated above, adults constituted the majority of the individuals. Males and females, when taking into account that most of the sex and age marks were not preserved on the bones, were equal in number. The skeletons from UB and UM were relatively better preserved – the

age of the female individual from UB can be estimated between 23-40 years and the age of the young male from UM between 18-19 years. Juveniles and infants died at the following age: two infants at ca 2 months, two juveniles at ca 5 years and three at ca 2, 7 and 14 years.

The number of low aged children is small compared to the Neolithic and Early Chalcolithic populations of Menteşe and Ilıpınar. In these villages, where it appeared that the total population was buried, adult graves constituted a minority compared to the ones of children including infants (Alpaslan-Roodenberg, 2001). The explanation probably is that the high number of infants that commonly died during or shortly after birth were buried without ceremony in the village compounds. However, when specially organized graveyards at some distance from the habitation area such as the Hacılartep-Ilıpınar cemetery became a trend, infant corpses continued to be 'discarded' in domestic areas. The contemporary cemeteries from Sarıket-Demircihüyük (Wittwer-Backofen, 2000:259), Ikiztepe (Wittwer-Backofen, 1987:181) and Semayük (Angel, 1966:255) with their low ratio of infant burials seem to confirm this trend.

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Table 1

Adults

Burial Code	Grave type	Sex	Age	Orient.	Side	Grave goods	Spec. features
UA	pithos	male	-	-	-	bowl	bovine mandible
		unknown	-	-	-	-	-
		unknown	-	-	-	-	-
UB	pithos	female	23-40	S-N	R	cup	bovine mandible
UN	pithos	female	-	SE-NW	L	pin, 2 jugs	-
		male	-	S-N	R	stone axe	-
UI	pithos	unknown	-	-	-	3 pins	-
UG	pithos	female	-	SE-NW	L	jug	-
UE	pithos	female ?	-	S-N	L	pin, pot	-
UM	pithos	male	18-19	S-N	R	pin	dog skeleton
UK	pit	male	-	?	-	-	-

Table 2

Juveniles and Infants

Burial Code	Grave type	Age	Grave goods	Special features
UL	pot sherds	ca 2 months	-	dog skeleton
UF	pot sherds	ca 2 months	-	-
UC	pithos	ca 5 years	jug, pot	-
UH	pithos	ca 5 years	small pot	dog skull
UO	pot sherds	ca 7 years	-	-
UD	pithos	ca 14 years	-	-
		ca 2 years	jug	-

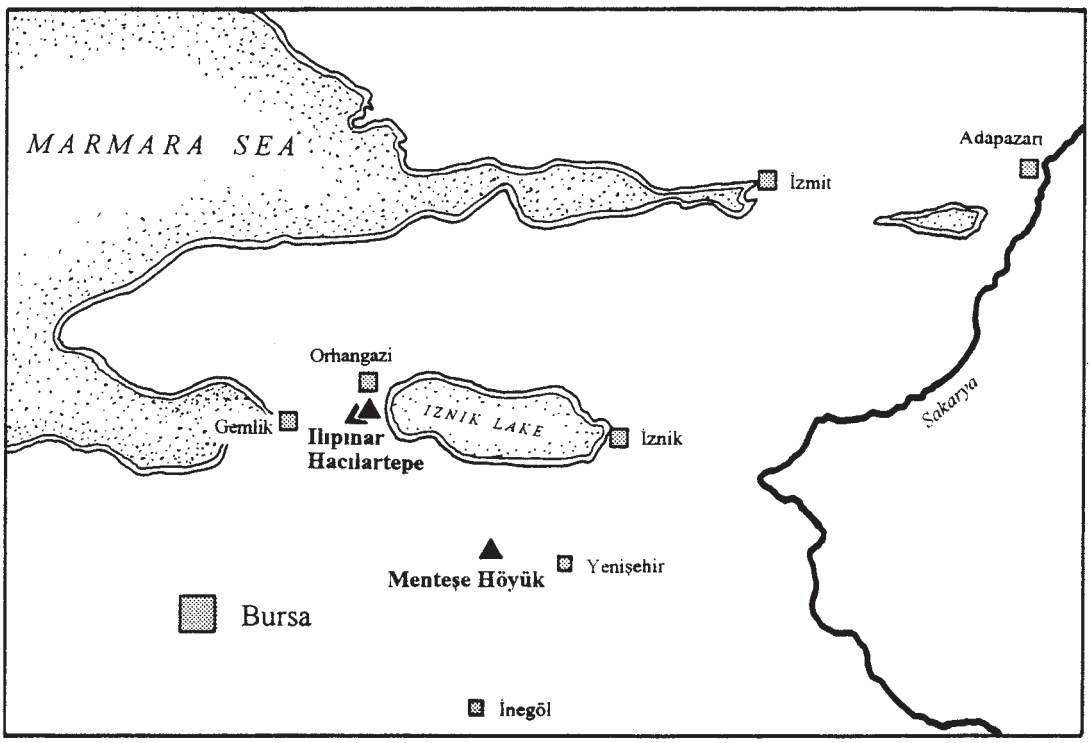
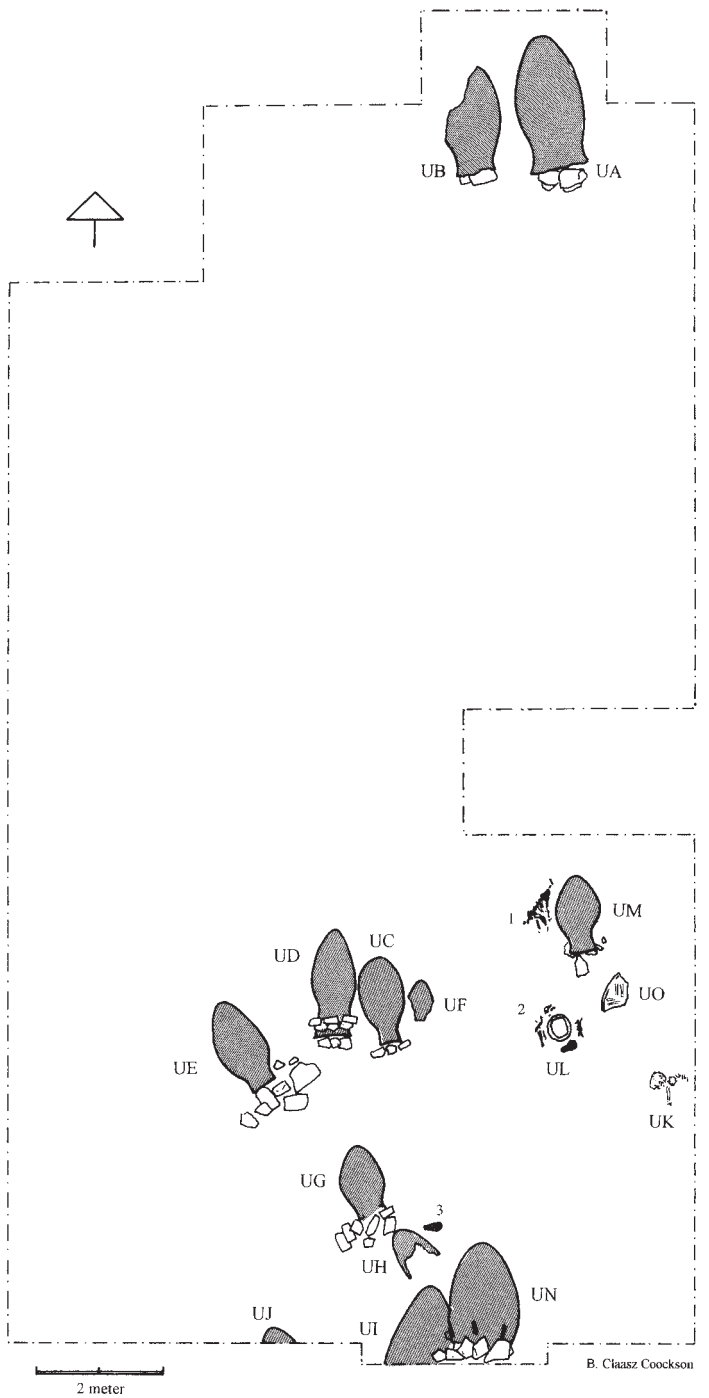


Fig. 1. Map of the eastern Marmara region.



1. dog's skeleton without skull. 2. dog's skull and scattered skeleton parts.
3. dog's skull.

Fig. 2. Plan of the excavated cemetery area.

Fig. 3. Burial UA left, UB right.

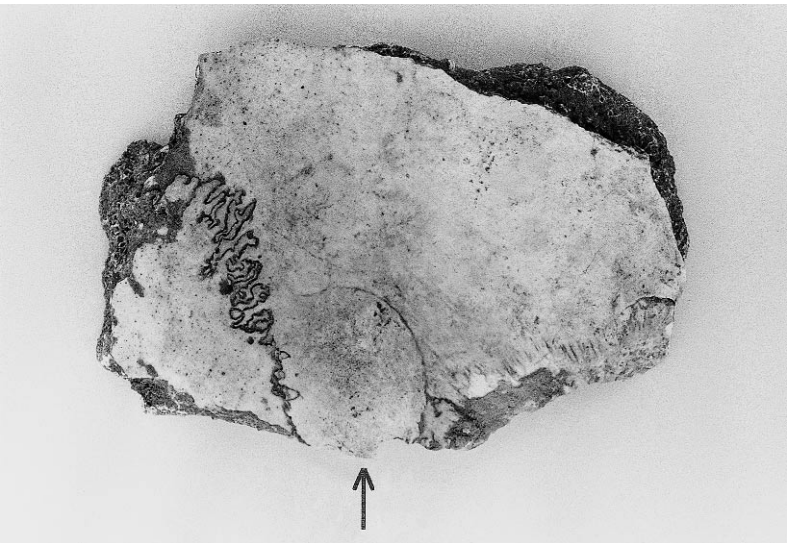


Fig. 4. Tumor on skull from UB.

Fig. 5. Double burial UN with grave goods.

Fig. 6. Trauma on male head from UN.

Fig. 7. Face of female from UN.

Fig. 8. Teeth with calculus in mandible from UN.

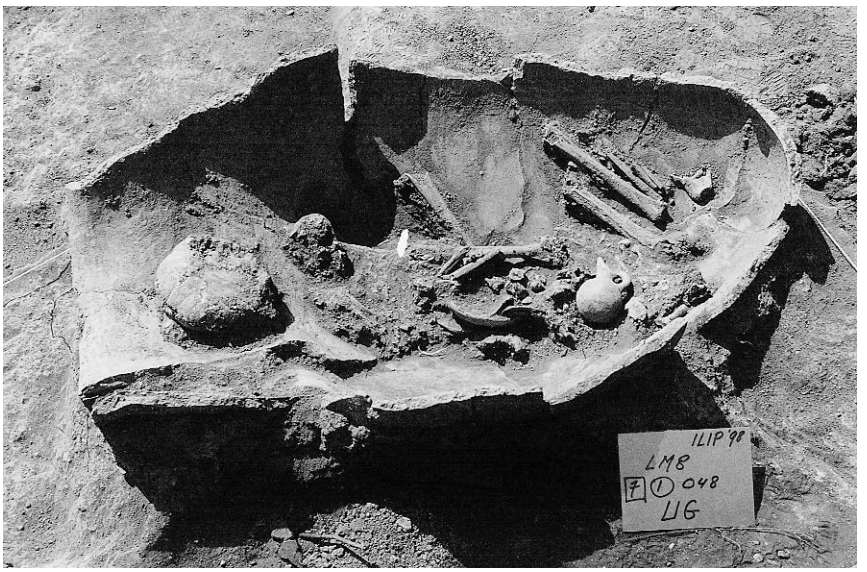


Fig. 9. Burial UG with jug.

Fig. 10. Mandible from UG: a.m. loss of front teeth.

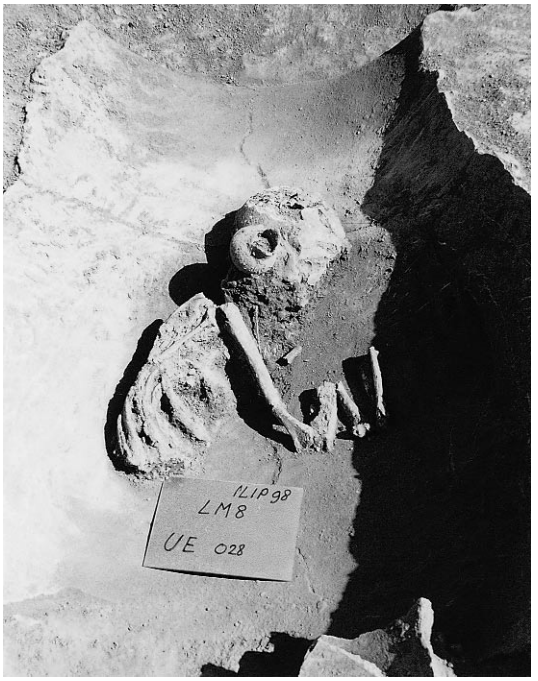


Fig. 11. Burial UE with pot.

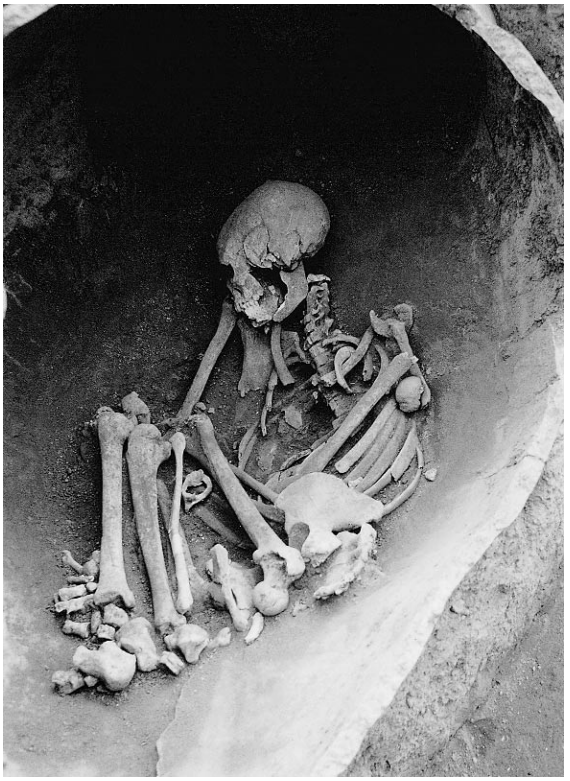


Fig. 12. Burial UM.

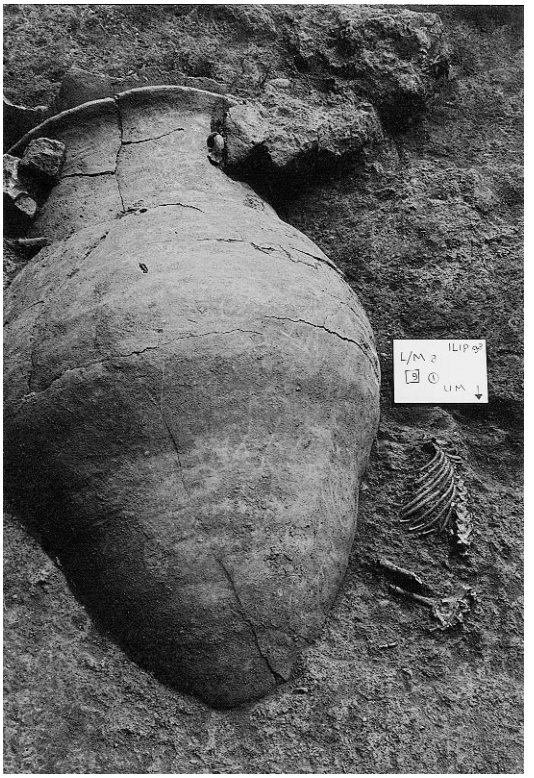


Fig. 13. Dog skeleton without head deposited next to burial of a young man.

Fig. 14. Pit-burial UK.

Fig. 15. Pit-burial UA from square N8.

Fig. 16. Burial UH; in the forefront a dog skull.

Fig. 17. Hydrocephalic skull from a child (UH).

Fig. 18. Burial UO deposited on big sherds.

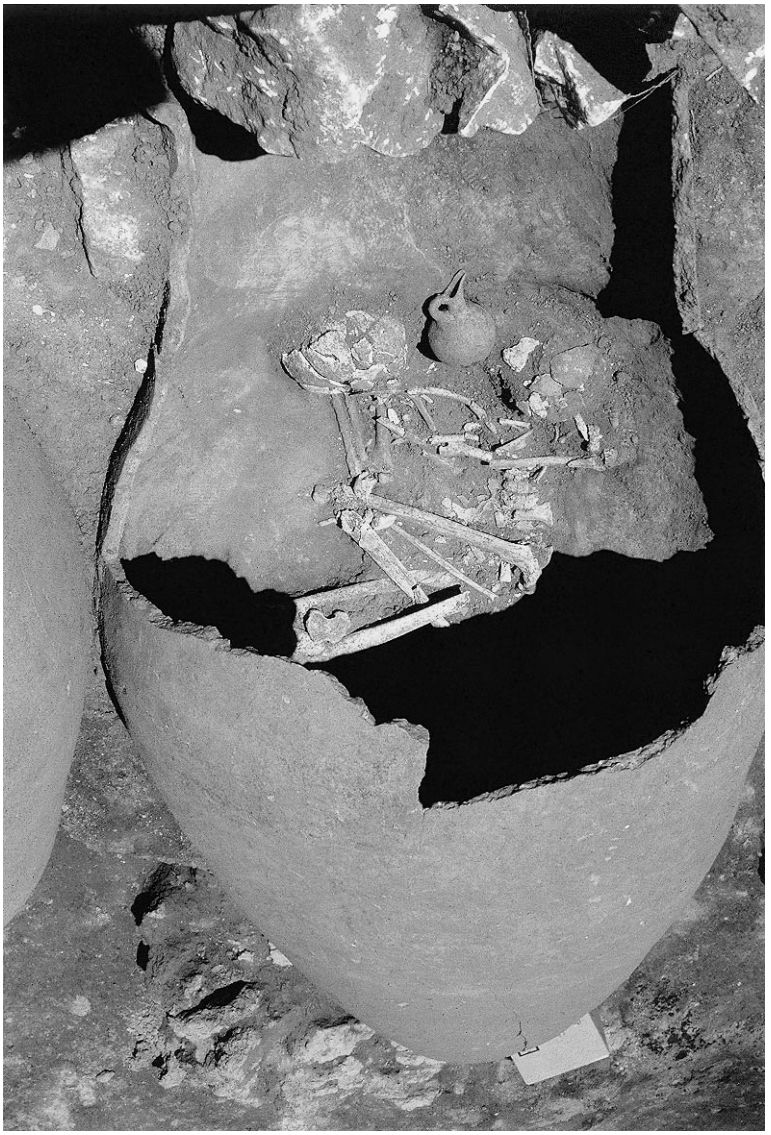


Fig. 19. Burial UD with jug.