PRELIMINARY INVESTIGATION OF THE HUMAN SKELETAL REMAINS FROM THE HIPPODROME AT JARASH

by
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Introduction

During the 1991 - 1993 excavation and restoration of the Hippodrome at Jarash, [2] human skeletal remains were recovered from two chambers (W2 and W3) in the north western sector of the building (Fig 1) (Ostrasz 1991). This report deals only with W3 chamber.[3]

The human remains lay under and between tumbled of the vault of the chamber. Directly underneath and in place mixed with the bones was a dump of discarded nisfired ceramics of the late sixth and early seventh centurey AD. (Ostrasz 1993: 499; Kehrberg and strasz 1994: 546).

All the material was heavily fragmented into pieces on average 2-3 cm in size. The preliminary aim of this analysis, in line with the excavators request, was to obtain a minimum number of individuals and comment on any observations regarding sex, age and pathology.

Methodology

As a first step mature and immature individuals were separated wherever possible. In respect of adults a minimum number of individuals was obtained by isolating and counting diagnostic elements. Dense bone elements exhibited a high degree of preservation (i.e. patellae, calcanei, and femora) and provided adequate information for preliminary assessment. In the case of the sub-adults, preservation was more problematic and a more detailed analysis will prove necessary.

Results

Minimum Number of Individuals (MNI)

Table 1 indicates a MNI for adults was 42 based on the highest incidence of sided bone (left patellae). The incidence of immature individuals was assessed at 15.

Demography

Observations in the general robusticity and gracility of particular bones (i.e. mastoid processes, nuchal lines, orbits, femora and teeth), are consistent with a standard pre-industrial distribution for adults, but reduced numbers of sub-adults is likely to be of greater significance and will be pursued in further analysis.

All age classes were present from neonates to the aged, with no obvious imbalance, with respect to adult individuals.

Pathologies

Several pathologies were recognised. Osteo-arthritis was present in a number of individuals. In two cases ankylosing spondylitis was suggested.[4]

In one individual a small healed lesion on the outer table of a cranium indicates that the individual survived a tumour. Evidence for porotic hyperostosis (a coral-like porosity which affects the skull and is usu-

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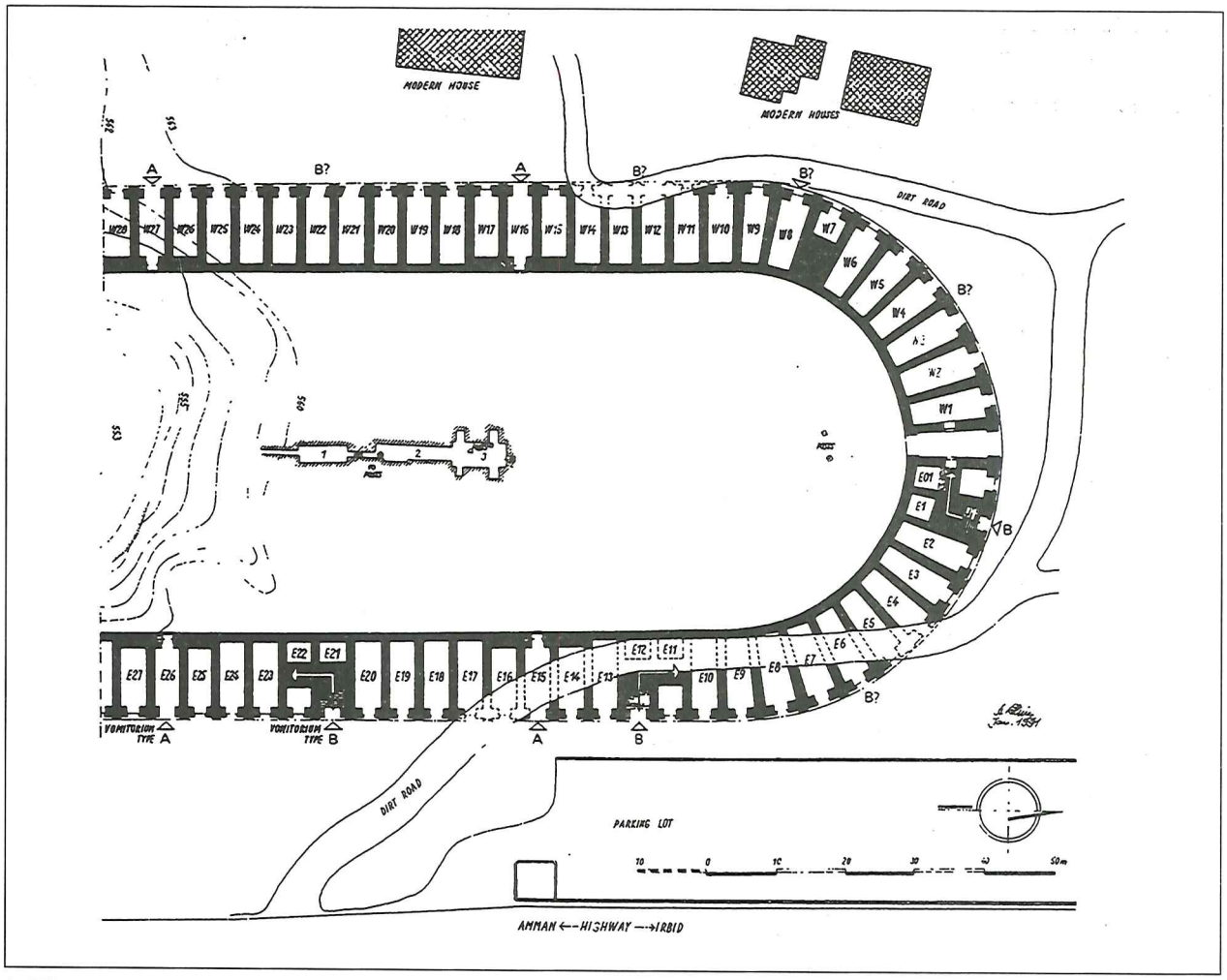
3. Further study of te skeltal remains in the chamber W2 is planned for the nextyear when a full report on the two chambers will be prepared.
4. Ankylosing spondylitis is a condition which effects the vertebral column and fuses the vertebrae together (White 1991: 335).



1. Hippodrome. Plan of north part.

ally attributed to iron deficiency anaemia) was observed on a cranial fragment of an immature individual.

A large number of teeth exhibited a high incidence of extensive wear (in some cases teeth were worn through to the dentine), although few caries were noted.

Summary

The results obtain to date indicate that W3 chamber was reused for a mass burial of approximately 60 individuals of variable health, sex and age. It is unlikely that the collapse of the chamber roof killed any of these individuals. The vast majority of bone seemed to have been shattered post mortem and when the bone was "dry", indicating that the collapse of the chamber took place some considerable time after their death.[5]

Under present conditions of analysis it is difficult to identify a cause of death. However, historical evidence suggests a endemic and re-occurring plague effected the re-

5. The rate of which bone loses its organic component and becomes "dry" is variable and dependant on the depositional environment. However, it is possible to distinguish the difference between a fracture of "dry" bone from that of "fresh" bone by reference to the characteristics of the broken surface (White 1991:358).

Table 1. (For Adults only)

Box	Patellae		Calcanei		Femora	
	L	R	L	R	L	R
50	1	1	1	1	1	1
52	1	2	-	2	1	-
53	1	1	-	-	-	-
54	1	1	2	2	1	1
55	4	4	-	-	-	-
56	3	1	1	-	-	-
57	4	2	1	-	3	2
58	2	2	-	2	3	2
59	5	5	-	-	3	2
62	2	1	-	-	1	-
63	2	1	-	-	1	1
65	1	3	-	2	-	-
66	4	2	3	3	2	1
67	1	1	-	-	1	1
68	1	-	-	-	-	-
69	5	5	-	1	3	2
70	2	4	-	-	3	2
71	1	2	1	1	5	5
74	1	-	-	-	-	-
Total	42	38	9	14	28	20

gion for more than a 200 year period. It seems likely that this deposit is related to one or more of these incidences (Conrad 1986:143).

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Bibliography

Conrad, L.I.

1986 "The Plague in Bilad al-Sham in Pre-Islamic Times". Pp. 143-163 in *Proceedings of the Symposium on Bilad al-Sham*, M.A. Bakhit and M. Asfour(eds). Amman: University of Jordan.

Ostrasz, A.A.

1994 Gerasa, Hippodrome AJA 98:546-547.

1993 1993 "Gerasa, Hippodrome AJA 97:498-500

1991 The Excavation and Restoration of the Hippodrome at Jerash: A Synopsis". ADAJ 35 (1991):237.

White, T.D

1991 *Human Osteology* Academic Press Inc. New York