

**ANCIENT MONUMENTS LABORATORY
REPORT 102/90**

**THREE POST MEDIEVAL BURIALS FROM
SCHOOL STREET, IPSWICH, SUFFOLK
EXCAVATED 1983-85**

IAS 4801

S A Mays

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Summary

Three adult inhumations (2 females, 1 male) of Post Medieval date were recovered from the School Street site.

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spondylolisthesis. This seems to have occurred in 1170; the body of the 5th lumbar vertebra is fused to the 1st sacral segment, and is displaced forwards by about 1.5-2cm. There is slight lipping at the left sacro-iliac joint, and severe osteoarthritis of both hip joints with eburnation of weight bearing areas. These degenerative changes are probably sequential to the awkward gait induced by the displacement of the body of L5 (Amuso & Mankin 1967). It seems that there is strong inherited component to spondylolysis (e.g. Wynne-Davis & Scott 1979).

Cribrra orbitalia takes the form of pitting or perforations in the orbital roofs. Burial 1170 showed lesions of Brothwell's (1981: Fig 6.17_ porotic type. It seems probable that cribrra orbitalia is associated with anaemia (Hengen 1971; Stuart-Macadam 1987). Iron deficiency anaemia is the most common anaemia in all parts of the world (Steinbock 1976). In addition to dietary deficiency intake of iron, iron deficiency anaemia can be caused by gut parasites, frequent in unhygienic conditions which were doubtless prevalent in antiquity.

Many joints show osteoarthritis changes and many vertebrae show osteophytosis (see Appendix).

Context: Burial 1172. Inhumation with evidence for a coffin. Orientation W-E. Located to the south of the site of the Blackfriars church choir adjacent to, and likely to be contemporary with, burial 1170.

Material: Skeleton poorly preserved, 40-60% complete.

Sex: Female (Workshop of European Anthropologists 1980).

Age: About 25-40 (cranial suture closure – Perizonius 1984 and pubic symphseal morphology – Suchey et al 1988).

Dental formula:

	C	C																				
	T	T																				
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8						
	8	7	6	5	4	3	2	1	1	2	3	4	5	6	7	8						
	LEFT								RIGHTS													

Key: . = tooth in socket X = tooth lost post-mortem, socket present
 * = tooth lost ante-mortem C = caries A = Abscess
 T = loose tooth present (socket missing or damaged post-mortem)

Stature: 160.0cm (5' 3") (Trotter & Gleser 1952, 1958).

Notes: The second lumbar vertebra shows a compression fracture of its body in the fairly early stages of healing; the centrum is wedged anteriorly. The inferior border of the third lumbar vertebra shows osteophytosis, and there is a pitted area on the anterior border of the superior surface of the fourth lumbar vertebra: probably anterior herniation of the disc

taking into account the young age at death of this adult, suggests that this interment dates to the period from the 17th century onwards when diets tended to be much more cariogenic than in the medieval period.

There is a porosis of interdental septa and some show concave profiles; in addition there is a slight alveolar resorption. These changes are probably a result of periodontal disease. This an inflammation of the gums and other periodontal tissues associated with poor oral hygiene (Costa 1982).

The 12th thoracic vertebra has lumbar-type facet joints. There is a pit 5 x 2mm & 2mm deep lined with trabecular bone on the proximal joint surface of the left ulna. Probably osteochondritis dissecans. Osteochondritis dissecans is the death of a section of sub-chondral of the joint with eventual cleavage away from the dead fragment, which forms a loose body in the joint. The precise aetiology is obscure but trauma seems to play a part. The elbow is a frequent site for lesions (Jacobs 1976).

The proximal parts of the tibiae and the R fibula are bowed laterally. The distal parts of the femora are bowed anteriorly. The changes are much more marked on the R leg bones. The R tibia is thickened transversely and its inter-osseous border is more pronounced than that on the L tibia. The R femur is thickened anterior-posteriorly compared with the L femur, and in both femur the linea asperae are very pronounced. The bones are rather light and poorly mineralised.

This appears to be a defect of bone mineralisation, mainly confined to the R leg-bones. Healed rickets is one possible diagnosis, but the changes observed are insufficient to justify a firm diagnosis, and in addition, the asymmetry of the changes is atypical of rickets.

There is green staining on the L mandibular condyle and the R distal fibula.

There is cribra orbitalia of Brothwell's (1981) cribriotic type (see notes for 1170).

There are 2 depressed lines on most anterior teeth; these are dental enamel hypoplasias. Dental enamel hypoplasias form during the development of the enamel crown during childhood and are associated with a wide variety of stressors, including infectious diseases and nutritional deficiencies (Pindborg 1970: 138-210). The location of the defects on the dentition of 1367 suggests that the stress episodes giving rise to them occurred when the individual was about 3.7 and 4.1 years (using the methodology of Goodman et al 1980).

The inferior surface of the body of the 10th and the superior surface of the body of the 11th thoracic vertebra each show a pit. These lesions represent Schmorl's nodes. An intervertebral disc consists of a tough outer layer (the annulus fibrosus) surrounding an inner core (the nucleus pulposus) which, until young adulthood, is composed of semi-gelatinous material. In younger individuals excessive compression of

the spine, as might result through heavy lifting, may result in extrusion of material from the nucleus pulposus into the adjacent vertebral body. The bony manifestation of this is a pit or cleft – the Schmorl's node. In some individuals congenital weakness in the cartilaginous end plate of the vertebral body may predispose to Schmorl's node formation but there is no doubt that a single trauma may produce a Schmorl's node in a normal spine (Schmorl & Junghanns 1971: 158-168).

Summary and discussion

All 3 individuals are adults, 2 females, 1 male. The stature, general build and, in so far as it can be assessed, cranial morphology of these individuals is not markedly different to that of the Medieval skeletons interred in the Blackfriars complex excavated on the School Street site. The severity of the dental caries suffered by burial 1367 (a young adult) is certainly atypical of the pattern seen in the medieval burials from the site; perhaps this suggests that 1367 consumed a more cariogenic diet.

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APPENDIX: DATA FOR INDIVIDUAL BURIALS

CRANIAL MEASUREMENTS

SKEL	GOL	XCB	BBH	BNL	XFB	FMB	PAC	MDH	FRC	ASB	WNB	OBB	OBH
1170	183.0	141.0	128.0	97.0	125.0	-	107.0	28.9	111.0	109.0	8.4	-	-
1367	-	-	-	-	107.0	85.9	113.3	-	107.5	103.6	9.5	38.5	32.2

Key: The symbols are those of Howells (1973).

LONGBONE LENGTHS

SKEL	LFeL1	RFeL1	LTiL1	RTiL	LFiL1	RFiL1	LHuL1	RHuL1	LRaL1	RRaL1	LUIL1	RUIL1	LCIL1	RCIL1
1170	469	464	383	382	-	-	-	-	251	255	273	277	149	159
1172	-	433	332	339	-	-	-	-	-	-	-	-	-	-
1367	-	-	344	-	-	-	-	-	232	-	247	-	-	-

Key: The symbols are those of Brothwell (1981).

MISCELLANEOUS POST-CRANIAL MEASUREMENTS

SKEL	HHD	RHHD	LHEW	RHEW	LFHD	RFHD	LFeD1	LFeD2	RFeD1	RFeD2	LFeE1	RFeE1	LTiD1	LTiD2	RTiD1	RTiD2
1170	-	-	65.1	64.2	-	-	-	-	26.8	33.5	-	-	38.7	25.0	37.1	25.1
1172	41.6	-	-	-	-	-	-	-	-	-	-	-	31.5	26.0	32.1	25.6
367	-	-	54.7	56.9	-	-	25.8	31.7	-	-	-	-	26.6	19.9	25.5	26.7

Key: L=left R=right HHD=maximum humeral head diameter HEW=humeral epicondylar width
FHD=vertical diameter of the femoral head. Otherwise abbreviations from Brothwell (1981).

SPINAL OSTEOPHYTOSIS

SKEL	Cervical grades				Thoracic grades				Lumbar grades			
	0	1	2	3	0	1	2	3	0	1	2	3
1170	0	0	1	4	0	0	10	1	1	2	1	0
1172	0	0	0	0	0	0	0	0	3	1	0	0
1367	6	0	0	0	12	0	0	0	5	0	0	0
*** Total ***												
	6	0	1	4	12	0	10	1	9	3	1	0

GRADE I OSTEOARTHRITIS

1170: MED RCLAVICLE, P LHUMERUS, P RHUMERUS, 3L RIBS, 4R RIBS, R GLENOID, P LULNA, P RULNA, L PATELLA, R PATELLA, D LFEMUR, L TALUS, R TALUS

GRADE II OSTEOARTHRITIS

1170 MED LCLAVICLE, 1L RIB, 1R RIB, L GLENOID

GRADE III OSTEOARTHRITIS

1170 L ACETABULUM, R ACETABULUM, P LFEMUR, P RFEMUR