A Human Skeleton from Ryhope Dene, Sunderland

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Introduction

A human skeleton was discovered partially protruding from the cliff edge at Ryhope Dene (NGR NZ 4199 5195) in February 1987 and was excavated shortly afterwards. A short report on the circumstances of the discovery is included in Tyne & Wear HER (HER ref 5225).

Condition

The skeletal material was in fair condition, although the skull was fragmentary and not reconstructable. The remains comprised fragments of cranial vault and mandible, most of the teeth, fragments of both clavicles and the right scapula, the right humerus and radius, the distal left humerus and shaft fragments of radius and ulna, bones of both hands, fragments of the innominates (pelvis), both femora, the right patella, and fragments of both tibiae. The latter were truncated midshaft, consistent with the rest of the lower legs having been lost due to erosion of the cliff face.

Age and sex

The estimated age from tooth attrition was 17-25 years. The pubic symphysis was not present. The epiphysis of the proximal radius appeared to be recently fused. The coronal and lambdoid sutures of the skull had not united, although the sagittal suture was fused and almost completely obliterated. Considering these factors as a whole suggests an age of c.20-25 years, o r possibly slightly older, at the time of death. If the individual had a diet made up of soft foods it is possible that the degree of attrition was misleading, but the fusion of the sagittal suture was likely to be premature and the individual is unlikely to have been older than c.30 years.

The pelvic bones were too fragmentary to provide a good indicator of sex, but the robust nature of the mandible, supraorbital ridges and mastoid processes of the skull, together with the general appearance and size of the long bones (femoral head diameters 52-53mm) indicated that the individual was male.

Metrical analysis

The length of only one long bone, the right radius, could be recorded, although a number of other measurements were taken from the other long bones (Appendix 1). Based on the radius, the estimated living stature was calculated as 1.735m or 5’ 8” (based on the formulae of Trotter 1970).

Non-metric traits

Non-metric variations of the cranium and post-cranial bones were not systematically scored owing to the poor condition of most of the relevant areas. However parietal foramina were present bilaterally, which is a relatively common trait in most groups. The frontal bone was not metopic and no sutural variations or wormian bones were observed.

Teeth

Most of the maxillary bone was missing. Three upper right teeth (the second incisor, canine and first molar) had been lost, but the remaining 29 were present. Of these, seventeen showed signs of dental caries, with all three surviving first molars so badly

affected that the enamel had been lost and only roots survived. The carious lesions were all interstitial in origin, with none having started on the occlusal surfaces. The dentition was recorded as follows:

R																**L**
			C	C				C	C			C	C			
8	7	-	5	4	-	-	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	
	C	C	C	C	C					C	C	C	C	C	C	

Notes: numbers = teeth present; - = missing; C = carious

There was a slight degree of calculus (tartar), but no enamel hypoplasia or alveolar resorption. Molar attrition scores (following Brothwell 1981) could not be determined for the first molars due to the degree of caries, but were ‘2+’ for the second molars and ‘2’ for the third molars. It is likely that the chronic decay had resulted in periodontal disease and abscesses may also have been present.

Summary and conclusions

The skeleton from Ryhope Dene is that of a young male of slightly above average stature for most medieval or post-medieval groups. No pathological lesions were observed in his bones, but he had suffered from bad tooth decay in almost two-thirds of his teeth. The degree of caries present probably indicates a date for the death of this individual in the 17th century or later, associated with an increase of sugar in the diet of the average Englishman, which occurred from this period onwards (Moore and Corbett 1983). A radiocarbon date was forthcoming at the time this report was originally prepared, but it is unknown whether this was carried out.

References

Brothwell, D.R., 1981, *Digging Up Bones*. British Museum (Natural History)/Oxford Univ. Press.

Moore, W.J. and Corbett, M.E., 1983, ‘Dental and alveolar infection’, in Hart, G.D. (ed.), *Disease in Ancient Man*. Canada.

Trotter, M., 1970, ‘Estimation of stature from intact long limb bones’, in Stewart, T.D. (ed.), *Personal Identification in Mass Disasters*. Washington.

Appendix: Measurements

Mandible			
Bigonial breadth	GoGo		100
Foramen mentale breadth	ZZ		43
Min ramus breadth R.	RB’		25
Min ramus breadth L.	RB’		28
Coronoid height	CrH		72
Femur			
Head diameter	FeHead	R	53
		L	52
Min subtrochanteric A-P diameter	FeD1	R	30
		L	30
Max subtrochanteric M-L diameter	FeD2	R	33
		L	32
Meric Index 100(FeD1/FeD2)		R	90.9
		L	93.8
Tibia			
A-P diameter at nutrient foramen	TiD1	R	33
		L	33
M-L diameter at nutrient foramen	TiD2	R	26
		L	25
Cnemic Index 100(TiD2/TiD1)		R	78.8
		L	75.8
Humerus			
Head diameter	HuHead	R	49
		L	-
Radius			
Maximum Length	RaL1	R	250
		L	-
Stature			1735

Measurements in mm