The Cemetery of the Leper Hospital of St Margaret, High Wycombe, Buckinghamshire

By MICHAEL FARLEY and KEITH MANCHESTER

A CEMETERY uncovered during roadworks at High Wycombe in 1986 confirmed the location of the medieval hospital of St Margaret. Examination of the skeletal remains suggests that several of the individuals excavated had suffered from leprosy.

In August 1986 human bone was uncovered during roadworks in High Wycombe, Buckinghamshire (SU 8574 9328). Buckinghamshire County Museum was notified and work at the site was subsequently monitored at intervals. Parts of twelve bodies came to light, largely during machining as the opportunity for formal excavation was limited. Much assistance was given by the County Engineer’s Department and by members of the County Museum Archaeological Group.

The bodies are probably from a cemetery attached to the medieval hospital of St Margaret. Although it was once thought that St Margaret’s was at Wycombe Abbey, a 1596 map at All Souls College, Oxford clearly shows a building marked ‘St Margetts’ (sic) near Ash Mill to the west of High Wycombe. Part of this map is reproduced here (Plate vi). The building then lay on land belonging to the Dean and Canons of Windsor. This location is consistent with its description in 1467 as being ‘ad finem villa’. St Margaret’s was in existence in 1229 when the hospital was granted a yearly fair on the Vigil and Feast of St Margaret.

The bodies were found just west of the old borough boundary of High Wycombe (Fig. 1) in an area where human remains have been discovered on at least one previous occasion. An article by Francis Colmer in the Bucks. Free Press of 30 August 1940 referred to numerous skeletons being revealed in ‘about 1884’ when a school, now demolished, was erected (outlined on Fig. 1). A slightly earlier find is recorded by an exhibition label preserved among the papers of Francis Colmer, now in the possession of Angela and Tony Colmer. This relates to a display formerly in the Free Library, Wycombe, and refers to ‘a selection of the bones disinterred and the relics discovered on the widening of Water Lane by the Corporation of Chepping Wycombe in April 1883’. An accompanying sketch map shows Water Lane to coincide with the present Desborough Road. The 1883 find-spot can be plotted almost exactly onto the 1986 discovery. About 50–60
St Margaret's Hospital, High Wycombe

a) Location showing extent of town in 1876 (1st ed. O.S.),
b) Location with outline of Infants School,
c) Position of burial

FIG. 1
skeletons were said to have been discovered ‘laid without regard to orientation and apparently side by side ...’. Some of these bones passed eventually to the County Museum and have been included in the present study.

THE CEMETERY

Although discrete graves were excavated wherever possible, many of the bodies discovered in 1986 were fragmentary, because of both disturbance by machine and poor preservation. All appeared to have been E.–W. burials laid on their backs with heads to the west; one was flexed at the knees and lay on its left side.

The underlying geology is of poorly-sorted coarse flint gravel, giving way in places to an organic silty sand. Desborough Road at this point runs along the southern edge of the alluvial-filled Wye Valley. Overlying the gravel on part of the site was a band of clay, up to 0.4 m deep. The graves had been dug through the clay but penetrated only shallowly into the underlying flint gravel, whose well-bedded interlocking character would have made grave digging a hard task: the most damaged burials rested directly on the gravel. The base of the graves lay between 0.54 and 0.75 m below present ground level. Staining of some of the bones and patches of silty organic matter exposed during roadworks — particularly near Desborough Avenue — indicated that at times the area may have been waterlogged. The present course of the Wye runs 200 m to the north, but the First Edition 1:2,500 Ordnance Survey map shows another stream, no longer existing, running along the southern side of the valley beside Water Lane. This stream (Fig. 2, adjacent to no. 263) bounded the plot of land on which the burials occurred.

The permeability of the gravel militated against the survival of any evidence for coffins, their fittings or any other organic evidence, and indeed none was found. In one grave a dark clay at the grave base provided the only hint, apart from human bone itself, that other organic matter may have been present. Three of the graves included fragments of peg-hole roof tile of medieval or later date in their fill, confirming the general dating, and one a sherd of Roman pottery. No trace of any building was found in the area examined.

THE BURIALS. By Keith Manchester

It has not been possible to produce ‘total skeletons’ from the bone assemblages during the osteological analysis and the collection thus largely remains an assemblage of bones of discrete or mixed skeletal ‘parentage’. The bone matrix is generally well preserved, allowing clear identification of pathological lesions.

1 Total number of individuals

From a count of anatomically different recognizable bones, it is estimated that the minimum number of individuals represented in the cemetery is ten, but a count of incomplete mandibles suggests a figure of twelve.

Sex

Because bone fragmentation in many cases destroyed sexually dimorphic characteristics, a tentative assessment of sex has only been possible in seven bone assemblages. A female attribution has been given to the occupants of graves 3 and 6, male to graves 4, 7 and 10 (and unlocated bone 119, not on Fig. 1). Males and females were not therefore segregated in the cemetery.
II Age at death

All skeletal remains are of adult individuals. Ages at death of individuals were assessed, where possible, from the degree of dental attrition, the presence of degenerative joint disease, and the extent of cranial suture closure. The imprecision of these features is acknowledged, but the condition of the material did not allow the observation of other, more precise, ageing characteristics. The female of grave 6 is considered to be a young adult, possibly in her 20s, that of grave 3 an adult, further precision being impossible. The males of graves 4, 7, and the unlocated grave 119 are young adults, probably in their 20s. The male of grave 10 is adult.

III Osteometry and discontinuous morphological features

Few bones were in a sufficiently complete condition for standard osteometric examination to be undertaken, so no height assessments were possible. Nor would any record of craniomorphic or postcranial features have been meaningful.

IV Pathology

Skeletal lesions will be considered within the standard system of clinicopathological classification.

1. Congenital
   No congenital abnormalities or anatomical variants were noted.

2. Acquired
   a) Traumatic: Schmorl's nodes are lesions, usually depressed and anatomically central, of the intervertebral surface of vertebral bodies. They result from the axial herniation of the
core (nucleus pulposus) of the intervertebral disc. A precipitating factor in this herniation is compressive force on the disc resulting from loading and flexion of the spine. The lesions are commonly found in osteoarchaeological remains, but are noted in only three bone assemblages from St Margaret's. The grave 4 male exhibited them in the vertebrae of thoracic 7, 8, 12, and lumbar 1, the grave 7 male had them in lumbar vertebrae, and the unlocated 119 male had one in a single lumbar vertebra. In modern contexts, Schmorl's nodes are clinically insignificant, and would not have produced symptoms or actual physical disability in the inhabitants of St Margaret's.

No bone fractures were noted, and there were no post-traumatic exostoses indicative of soft tissue injury.

b) Degenerative: The grave 7 male exhibited slight osteophytic lipping of the right mandibular condyle. This lesion may have been a degenerative phenomenon secondary to chronic mechanical stress to the jaw, but because the teeth were lacking it is not possible to say whether changed dental architecture was a cause of the stress. The lesions probably caused little more than slight discomfort on chewing.

Grave 10 contained the skeletal remains of three individuals, one an old male. His left elbow joint exhibited eburnation and osteophytosis of osteoarthrosis. This was probably an age-related lesion which did not have any other predisposing cause. Some discomfort in the elbow on movement would have been felt.

c) Neoplastic: One adult male skeleton possessed a small button osteoma in the posterior wall of the right frontal sinus. This benign lesion was of no clinical significance. No other benign or malignant neoplasms were noted.

d) Metabolic: Mild changes of porotic hyperostosis were noted on the frontal and parietal bones of an adult male skull. This lesion was probably secondary to iron deficiency anaemia in childhood. The absence of preserved orbits prevented the observation and assessment of the prevalence of cribra orbitalia, a lesion of similar cause to porotic hyperostosis, and found in 69% of the leprous skeletons from Næstved.7

e) Dental disease: No valid assessment of the caries rate, abscess prevalence, or prevalence of periodontal disease and hypoplasia could be made, but calculus, periodentitis, caries, and abscesses were common. The indication is that among the inhabitants of St Margaret's, dental hygiene was poor and oral sepsis, irrespective of leprous change, was common.

f) Infective change: Infective change (cortical pitting, extracortical new bone plaques) was noted in both maxillary antra of the grave 4 male. Similar change was also noted in an unassociated skull of a 20/25-year-old. This change, indicative of chronic maxillary antritis, is a common problem in modern medical practice. Similar change, indicative of chronic frontal sinusitis, was noted in the skull of the young adult female in grave 6.

All skeletons, except those of graves 5, 6 and 8, exhibited gross periosteal inflammatory change of the tibiae and fibulae. The grave 7 male has the change along the entire length of the bones, whereas in other skeletons the change was confined to the distal third. Periosteal new bone was also present on the left clavicle and right linea aspera of the femur in this individual. The unassociated skull which showed an infective change also exhibited a smooth absorption of the lateral walls of the pyriform aperture, marked absorption of the anterior nasal spine, and early recession of the alveolar process of the maxilla.8 This skull had non-specific inflammatory change in the left maxillary antrum. This rhinomaxillary syndrome of absorptive change is compatible with a diagnosis of lepromatous leprosy.

No other lesions of inflammatory change were noted.

The phalanges and third metatarsal of the skeleton of grave 3, an adult, probably female, of undetermined age, exhibited narrowing indicative of early concentric diaphyseal remodelling.

The poor and fragmentary preservation of other bones of the hands and feet in the skeletal series generally prohibited the observation of leprous change.
INTERPRETATION

The overwhelming pathological change in the skeletons from St Margaret’s Hospital is gross tibiofibular periosteal inflammation. The change is confined, except for one specimen, to the lower third of the bones. This change, although not pathognomonic, is highly indicative of leprosy, a diagnosis which must be foremost in differential diagnosis. Foot change also indicative of leprosy is noted in only one skeleton, but this paucity of evidence is by accident of preservation of the relevant parts of the other skeletons.

The presence in the series of a single skull with rhinomaxillary change pathognomonic of lepromatous leprosy makes it highly likely that the tibiofibular change in all the other skeletons is of leprous cause.

Leprosy is not a fatal infection. It is one of slow, relentless, progression, death ensuing from complications or intercurrent disease. The relatively young age at death at St Margaret’s, in comparison with most other medieval cemeteries, indicates that intercurrent disease, probably infection, was responsible. In leprosy hospitals in recent years, tuberculosis has been a major cause of death. Tuberculosis was also rife in the medieval period and it is likely, therefore, that this fulminating infection was responsible for the deaths here at early age. As the pathological features suggest, the standard of hygiene and health (or illness) management at St Margaret’s was poor. Such unfavourable general health may have been conducive to superinfection by the tubercle bacillus. Since, in these circumstances, tuberculosis was likely to be fairly rapid and fatal, osseous manifestation of tuberculosis would not be expected in the skeletal remains and, indeed, none were noted.

It is considered that tibiofibular inflammatory change in leprosy is usually a toxic manifestation rather than a bacterial infection per se. The ascending toxicity results from gross ulceration and chronic sepsis of the foot. Infection by Mycobacterium leprae results in destruction and loss of function of motor and sensory nerves, thereby producing muscle paralysis and loss of skin sensitivity respectively. Injury to the insensitive skin, further embarrassed by a poor blood supply, leads to chronic ulceration. Secondary infection of the ulcers and deeper tissues by bacteria other than M. leprae ensues. This, in the feet, is the sequence of events leading to the ascending toxicity of tibiofibular change. Injury and ulceration of the feet is encouraged by inadequate footwear and by a lack of hygienic foot care. The high proportion of gross tibiofibular change in the Wycombe skeletons suggests that the inmates of St Margaret’s were illshod. The commonness of dental caries and oral sepsis suggests that they had poor health generally.

The individual with rhinomaxillary change would probably have had a persistent, profuse, and offensive nasal discharge, foetor oris, and facial disfigurement. He or she would have been highly infectious.

Leprous skeletons of the Anglo-Saxon and later periods in Britain have been described and reviewed but, except for Ilford and for South Acre, the skeletal remains have not come from systematic leprosarium cemetery excavations. The number of skeletons from individual sites is small. More substantial research is, however, in progress on the skeletal remains from the leprosy hospital of St James and St Mary Magdalen, Chichester. The gross changes of the bones of the lower
legs in the skeletons from High Wycombe indicate that the disease was fairly advanced and that little, if any, care was taken in the management of the septic and mutilating clinical features of the disease.

THE HIGH WYCOMBE HOSPITALS

About twelve hospitals are known to have existed in Buckinghamshire during the medieval period, although most had a fairly short life, some being amalgamated. There were hospitals at Aylesbury, Buckingham, High Wycombe, Ludgershall and Newport Pagnell, seven of which catered for lepers for a period at least. Knowles points out that nationally several small houses ceased to exist at the Black Death and 'afterwards when leprosy became less common, most of the remainder seem to have become hospitals for the poor or sick or almshouses'.

Four hospital dedications occur in High Wycombe: St John the Baptist, St Giles, St Gilbert and St Margaret. Part of St John's is preserved today on the east of the town. It also has the fullest extant documentation. St Giles on first impression appears to have been a second hospital intended, as its patronal name indicates, also for lepers, and also in existence in 1229. In 1233 it was granted ten oaks from the King's forest at Brill for repair of its chapel. In a footnote, however, V.C.H. ventured the opinion that St Margaret's and St Giles were 'but one foundation' and this was strongly supported by Ashford who noted that in 1392 one Richard May 'was granted the benefice of the free chapel of St Margaret, otherwise called the hospital of St Giles'. The fourth dedication, St Gilbert's, appears once when an indulgence was granted to the hospital of St Gilbert and St Margaret in 1386. As St Gilbert is not otherwise mentioned it seems possible that this should read St Giles and St Margaret.

The All Souls map includes representations of three buildings on four parcels of land. It depicts Ash Mill, Temple Mill and St Margaret's and as each building is differently drawn there is a strong likelihood that the sketch of St Margaret (enlargement, Pl. vi: the original is in colour), does indeed give an idea of its original form, i.e. a cruciform structure with pitched roof. Although not depicted on the All Souls map, it is quite clear from the First Edition O.S. map, as previously noted, that the cemetery, and probably the hospital also, was bordered by a stream on three sides. On the south it fronted Water Lane. It seems unlikely that this was the stream's natural course and suggests that either the hospital was heir to an earlier habitation site or that the hospital's precinct was deliberately defined by stream diversion.

All hospitals apparently had their own chapel, and it is presumed that most hospitals had their own cemeteries, but documentary references to cemeteries as such are not common, and surprisingly few have been examined archaeologically. Two recent excavations of parts of hospital cemeteries are reported at Nottingham and at St Andrews.

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NOTES

1 J. Parker, The Early History and Antiquities of Wycombe in Buckinghamshire (Wycombe, 1878).
3 Victoria County History, Buckinghamshire III (London, 1925), 114.
4 Calendar of Close Rolls, 1227-31, 176.
5 Kelly’s Directory of 1893 dates the school’s construction to 1888.
6 An identification confirmed by the local historian Parker, op. cit in note 1, see map, and by the First Edition 25th Ordnance Survey map.
7 V. Møller-Christensen, Leprosy Changes of the Skull (Odense Univ. Press, 1978).
8 Ibid.
9 Dr A. B. Andersen, pers. comm.
14 Calendar of Close Rolls 1227-34, 235.
18 We are grateful to Andrew Pike for the suggestion that such a diversion would be appropriate for waste disposal, as is seen at a number of monastic establishments.