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Reprinted Article

This paper, published in the *Journal of Archaeological Science*, 1974, **1**, 205-207, and reprinted here with permission, will be of interest to all our readers, as it provides strong evidence for the existence of leprosy in Britain as far back as the 4th century AD, and carries back by five centuries the first reliable record of leprosy in Northern Europe.

New Evidence for the Antiquity of Leprosy in Early Britain

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Examination of skeletons excavated in Dorset has probably produced the earliest example of leprosy known in northern Europe. The site, Poundbury Camp, Dorchester, was excavated under the direction of C. J. S. Green for the Dorchester Excavation Committee from 1966 to 1973. It is a Romano-British cemetery, apparently Christian, and the leprous bones are dated by their archaeological context to the middle of the fourth century AD.

The specimen consists of the distal portions of right and left tibiae and fibulae, and the right and left feet. The right intermediate cuneiform is missing, but this may be a post-mortem loss. All parts of the skeleton above the mid-shaft of the tibiae and fibulae have been lost due to modern disturbance. It is therefore impossible to estimate the sex of the individual or its age, but the bones are certainly those of a mature adult.

The following pathological changes were noted.

Tibiae and Fibulae

The lateral and posterior aspects of the tibiae, and the medial and posterior aspects of the fibulae, show extensive pitting and furrowing, with small irregular osseous deposits. The effect is of chronic inflammatory periostitis. The right tibia shows a groove on the lateral aspect which crosses the longitudinal furrows, and may be vascular. These changes correspond with Møller-Christensen's (1961) descriptions of pathological tibial and fibular changes in leprosy.

Left Foot

This shows periostitic pitting and grooving on all the tarsals and on the distal articular facets of the first, second, third and fourth metatarsals. The fifth

metatarsal (arrowed, Fig.1) is almost completely resorbed to an irregularly-shaped fragment articulating with the proximal lateral facet of the fourth metatarsal. The medial cuneiform is ankylosed to the first metatarsal, with medial flexion of the proximal phalanx of the hallux. On radiographic examination, the distal articular end of the medial phalanx of the second metatarsal shows a small area of sub-periosteal destruction of pseudo-cyst type (arrowed, Fig.1).

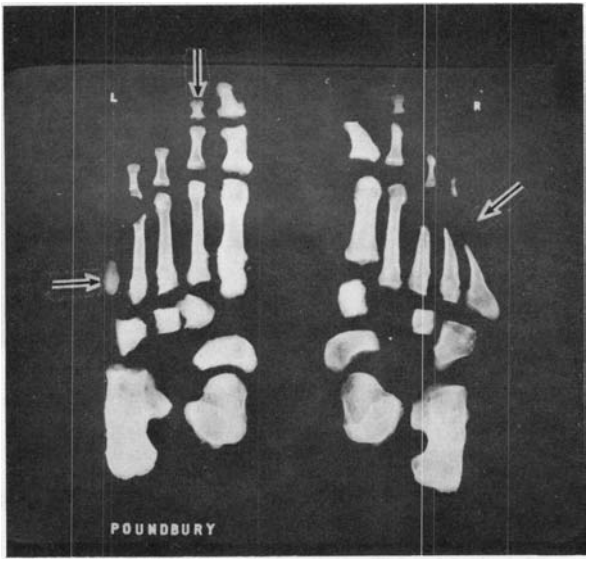

Fig.1. Radiograph of the feet of the Poundbury Roman leprosy skeleton.

Right Foot

This shows a similar generalised periostitis of the tarsals. The third, fourth and fifth metatarsals show marked resorption of the capitula, with extreme tapering of the shafts (arrowed, Fig.1). The proximal phalanges of the third and fourth metatarsals show distal disorganization and atrophy. The proximal phalanx of the hallux is laterally eroded and medially flexed.

These changes in the feet are closely parallel to those described by Møller-Christensen.

The tentative diagnosis of leprosy in the specimen from Poundbury Camp indicated by these changes has been confirmed by Dr W. H. Jopling, F.R.C.P., Consultant Leprologist to the Hospital for Tropical Diseases, London. The extensive nature of the bone changes suggests a type of leprosy similar to the modern lepromatous leprosy where the patient is incapable of producing a cell-mediated response to contain the spread of the bacillus (Jopling, 1974). Deformities of the hands and feet due to leprosy are frequently bilaterally symmetrical. This is not the case with the feet of the Poundbury Camp skeleton, which show a far more severe level of deformity to the right foot than to the left.

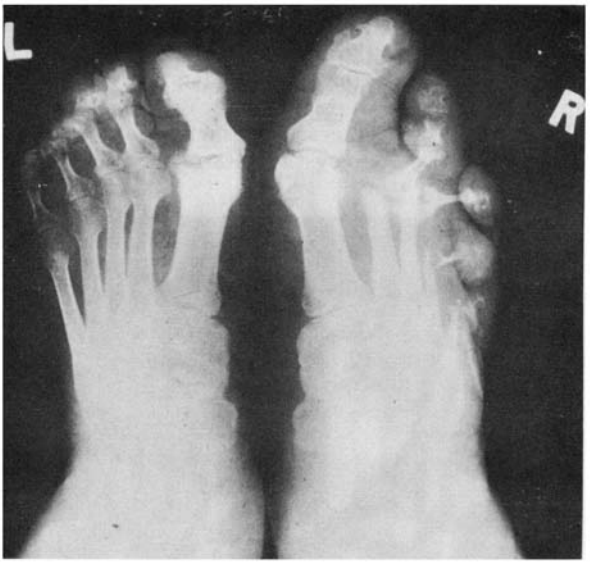

Fig.2. Comparable radiograph of the feet of a modern leprosy patient, showing similar pathological changes.

However, Fig.2 shows a very similar pattern of asymmetrical change in the feet of a present-day leprosy patient.

Despite the incomplete state of the skeleton from Poundbury Camp, there would seem little doubt that it represents a case of leprosy in Roman Britain. Work on the skeletal material from this site is not yet completed, and it is possible that further evidence of leprosy may emerge.

Acknowledgements

Figure 2 appears by courtesy of Dr Jopling, to whom I am extremely grateful for his examination of the specimen and of radiographs at very short notice, and for his advice and helpfulness. I should also like to thank Mr D. R. Brothwell and Miss Theya Molleson of the British Museum (Natural History) for advice and for providing radiographs. I am grateful to Mr J. Musty of the Ancient Monuments Laboratory, Department of the Environment, for arranging for the skeletal work on this site to be carried out, and for providing laboratory facilities.

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