

BOOK REVIEW

Bone Changes in Leprosy. By VILH. MØLLER-CHRISTENSEN, M.D. Preface by J. Engelbreth-Holm, M. D. Translated from the Danish by Anita Engelbreth-Holm. Copenhagen: Munksgaard, 1961, 49 pp. and 16 plates; paper.

People who attended the Madrid Congress (1953) will recall the author's remarkable exhibit of skulls which he had recovered from a farmyard which had been the burial place of a medieval St. Jørgens (St. George's) Hospital, as the many Danish leprosy hospitals of that period were called. In that same year was published his monograph entitled *Ten Lepers from Naestved in Denmark*, in which are described in detail—also in English—the findings in 10 skeletons selected from among material representing some 200 leprous persons buried between 400 and 700 years ago.

Since that time three further excavations have been carried out, in 1956, 1958 and 1960, with the assistance of several other diggers and with the support of the Carlsburg Foundation. This work has augmented the material by skeletons and skull bones of about 150 cases, the collection now representing more than 350 cases, including 117 complete Naestved skeletons and 6 found elsewhere. This material is the basis of the report under review.

The material was transferred for study to the Institute of Pathologic Anatomy, whose chief, the late Professor Engelbreth-Holm, wrote in the preface how very extraordinary it was that a general practitioner, without special training in pathology, had "managed to carry through this tremendous work," which included the archeologic excavation and the examination of more than 1,000 skeletons from medieval monastery churchyards. In the course of the study the author visited Bergen, Norway, and—traveling as a ship's doctor—Malaya and Thailand, to observe in living patients the changes which he had found in the skulls.

These changes—which had been observed for the first time by him, and which are perhaps still unknown to most leprologists—are, principally, atrophy of the anterior nasal spine, and partial central atrophy of the maxillary alveolar process. This condition he calls "facies leprosa," or, in commemoration of the Norwegian pioneers, the "Bergen syndrome."

There are clinical pictures of two patients whose front upper teeth had become loose without any apparent reason and had been extracted before any possible connection of that condition with leprosy had been suspected. The author suggests that this sign be watched for in conducting antileprosy campaigns.

In discussing bone changes in leprosy generally, the author cites extensively the work of D. E. Paterson (see original article in this issue), whose study, however, did not include the cranial changes. These have been dealt with by several other authors who are cited—Melsom, Waaler, Lechat and Chardome, Michman and Sagher, and Brothwell. The last-mentioned reported finding *facies leprosa* in two old British skulls, including that of Robert the Bruce, King of the Scots—which finding is regarded as supporting the historical legend that the Bruce had suffered from leprosy.

The list of sites of the pathologic changes of the skull is as follows: (1) maxillary alveolar process, (2) anterior nasal spine, (3) hard palate, (4) nasal septum and concha, (5) lacrymal bone and groove, and frontal maxillary process, (6) orbit, and (7) maxillary sinus, each of which is discussed in turn. Pictures of excavated skulls with normal maxillary alveolar processes are shown for comparison with skulls with the atrophies ascribed to leprosy. These conditions were found in 74 of the 123 complete skeletons with leprosy bone changes, and atrophy of the anterior nasal spine in 85 of them, the latter in all instances coincident with evidence of inflammatory changes of the nasal cavity. Such changes of the hard palate were found in 111 skulls from the entire skeletons. Data on 153 skulls and skull caps found apart from skeletons are tabulated separately. Various conditions found in the bones of the extremities are discussed.

Each of the 16 plates contain from 5 to 20 pictures, with a total count of 141, which are excellently reproduced but are mostly on the small side. Detailed descriptions of the pictures are lacking, so that unless they are approached by way of the text one may often be left wondering precisely what they are intended to show. The book measures 12 x 8½ inches, which makes it a misfit for ordinary bookshelves. These features, however, are minor ones of the presentation of a really remarkable study.—H. W. W.