

DENTAL CONDITION OF THE SHANG DYNASTY SKULLS EXCAVATED FROM ANYANG AND HUÜ-XIAN

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Part 1 Dental Caries and Periodontoclasia

Dental disease is generally considered as a product of civilization. Our present study concerns, besides the incidence of dental caries and periodontoclasia, a number of other dental conditions of the Shang Dynasty skulls. From this investigation we can presume that there might be some relationship between the dental condition and the living condition of this group of ancient people. In addition, this material also provides us with a basis of comparison between the ancient and the modern Chinese.

The material on which this report is based was recovered during a series of archaeological excavations carried out from 1950—1953, at Anyang and Huü-Xian, Honan Province. The chronology of these sites is estimated approximately to be the late period of the Shang Dynasty (B. C. 1766—1122).

According to the study made on 894 teeth found on the skulls excavated from Anyang, 622 teeth were found to be sound and 272 diseased. The diseased teeth formed 30.52 per cent of the total number. Observation was also made on 80 teeth found on skulls collected from Huü-Xian. They consisted of 59 sound teeth and 21 diseased teeth. The diseased teeth formed 26.3 per cent of the total number.

Reports are to be published in two parts. The items for analysis in this first part are dental caries and periodontoclasia found in the skulls. Other dental conditions will be reported in part two.

The findings are recorded as follows:

1. Susceptibility to periodontoclasia was found to be remarkably high in the skulls. As to sex difference, males seemed to be more affected than females. As far as tooth group difference was concerned, first molars were the leading group, followed in order of predominance by second premolars, lower incisors, and then the remaining groups. The high incidence of periodontoclasia might be related to the living condition of these groups of people at that time. According to the archaeological findings, these groups of people belonged mainly to the slave class, and so they might have suffered from malnutrition resulting in the high incidence of this disease.

2. The incidence of dental caries was higher in the females than in the males. Of the Anyang skulls the total number of carious teeth was 38, forming 4.3 per cent of the total number of teeth. This percentage is lower than that found in the present-day Chinese, which is 7.6%. The order of susceptibility of the tooth surface was as follows: proximal, occlusal, buccal, labial and lingual. The susceptibility of the different groups of teeth was as follows: M1, M2, M3, P3, P4, and C.

3. The antemortem loss of teeth was determined and classified according to causes into three categories: those caused by caries of which the percentage was 20.51%, those caused by periodontoclasia with a percentage of 64.1%, and those with unknown causes, constituting 15.39%.

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Explanation of the plate

1. Occlusal caries of the lower right third molar of a Shang Dynasty skull. Cat. No. 94. (natural size).
2. Showing antemortem loss of the lower left first molar of a Shang Dynasty skull. Cat. No. 51. (natural size).
3. Showing advanced periodontal atrophy of the upper left 2nd and 3rd molars of a Shang Dynasty skull. Cat. No. 11. (natural size).
4. Bucco-cervical caries of the upper right first molar of a Shang Dynasty skull. Cat. No. 16. (natural size).

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Plate

