

## Clinical And Radiographic Aspects Of Chronic Osteomyelitis In Amphetamine Addicts.

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Chronic osteomyelitis of the mandible and maxilla in amphetamine addicts was studied. Clinical, radiographic and bacteriologic investigations were performed. Patients were followed up for 5 years. The abnormal aggressive clinical picture of the disease and delayed healing may be attributed to amphetamine addiction.

Amphetamines (Max-Forte) abuse began in 1940. It was one of the popular stimulants which have few medical uses but high addiction potential. It is used by inhalation, oral administration or intravenous injection<sup>1</sup>. Their effect on the body is similar to that of ephedrine, but their interest is their potent central stimulation with wakefulness and heightened mood. They are sometimes medically used in the treatment of obesity, as respiratory stimulant (in barbiturate poisoning), and in depressive psychic states<sup>2</sup>.

Medical complications in chronic amphetamine addiction involving multiple organ systems as immune system, upper respiratory tract infection, hepatitis, skin abscesses and tetanus after subcutaneous injection have been reported with variable frequency, but a direct relationship between these diseases and drug abuse has not been established<sup>3-6</sup>.

Reviews of clinical experience with hematogenous osteomyelitis by Waldvogel<sup>7</sup> have referred to the possible contributory role of intravenous self-inoculation. However many cases of chronic osteomyelitis have been reported in addicts<sup>8-10</sup>.

Osteomyelitis is a serious sequelae of nonwalled off odontogenic infection. The causative organism may be introduced as a result of periapical inflammation, fracture or hematogenous spread from another site<sup>11-15</sup>. Osteomyelitis had been reported to be remarkably severe in immunosuppressed patients e.g. steroid therapy or chemotherapy, and in addiction cases<sup>8-12</sup>.

The purpose of this paper is to stress the increased incidence of chronic osteomyelitis in the jaws of amphetamine (Max-Fort) addict patients.

### Material And Method

Ten patients complaining of chronic osteomyelitis were the subject of this study. The diagnosis was based on clinical, radiographic and bacteriologic find-

ings. All the investigated patients were using illegal drugs intravenously (6 I.V. drug abusers). Four of them were referred to the outpatient clinic of the Faculty of Oral and Dental Medicine from the Main Prison, the other six patients were seeking treatment regularly in the outpatient dental clinic, and have given history of Max-Fort addiction. The patients were followed up through the last 5 years up to June 1988.

It was very difficult, in taking the case history, to find out the true period of addiction and the exact dose and type of the preparation, as most of them have used commercial preparation which contains impurities. Also they have mentioned that they were obtaining the drug from different sources. Some of them had mentioned that he, sometimes, needs up to 10 shots to calm down.

All patients were examined generally to rule out any other general disease in the bones. Skeletal survey was performed, and routine blood analysis was to rule out any underlying systemic condition.

### Results

All addict patients gave history of severe itching sensation in the skin and oral mucosa due to delusions that "bugs are crawling" under the skin and oral mucosa which lead to excoriation and ulcerations of the itched regions..

The ulcerations of the oral mucosa were followed by bone exposure and infection which lead to teeth exfoliation. The infection was severe in three cases to the extent a large segment of the jaw bones was sequestered, Fig.1. There was multiple septic and badly decayed teeth. Severe halitosis was obvious due to neglect of oral hygiene.

The clinical picture of the disease was characteristically aggressive. There was remarkably huge swelling in the affected sites with multiple sinuses oozing pus both intra and extra-orally. The disease was involving the mandible in all cases and the maxilla was involved in 3 cases. Fig. 2.

Pus samples were taken for culture and sensitivity test. Pathological fracture of the mandible could be detected clinically in 5 cases.

Although some patients were not honest in giving the details of the history of addiction, it had been found out through this period of observation (5 years) that the amount of bone destruction depended on the doses and the number of shots taken by the patient rather than the duration of addiction.

Radiographic examination of the jaw bones revealed massive bone destruction and an altered trabecular pattern in addition to the lack of the increase in width and density of the outer cortical plate of the mandible which usually occurs in chronic osteomyelitis. Pathological fractures have been detected clinically and radiographically in 5 cases. Fig. 3.

Multifocal areas of moth-eaten bone have been noticed, in areas with ragged

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