

A rare complication of idiopathic osteosclerosis

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ABSTRACT

Idiopathic osteosclerosis (IO) is described as a localized non expansible radiopacity with unknown etiology. The IO is generally asymptomatic and could appear as round, elliptical or irregular in shape. The internal aspect is usually uniformly radiopaque. IO should be distinguished from condensing osteitis of dental origin, or other alveolar bone related radiopacities such as periapical cemental dysplasia. This condition may cause changes in tooth position or problems during orthodontic treatment. The purpose of the present study is to report a case of tooth resorption caused by ectopic eruption rate caused by IO.

This condition represents a rare complication of IO.

Key words: Osteosclerosis, radiopaque, orthodontic, eruption.

INTRODUCTION

Idiopathic osteosclerosis (IO) is a localized non expansible radiopacity with unknown etiology (1,2). This condition is usually asymptomatic, but it may cause changes in tooth position or problems during orthodontic treatment. The purpose of the present study is to report a case of tooth resorption caused by ectopic eruption rate caused by IO. To our knowledge, this is the first report of this rare complication of IO.

CASE REPORT

A 20-year-old girl was referred to the oral medicine service for evaluation of an unknown lesion discovered through routine radiographic exam. An intra-oral examination revealed pain in the 46 teeth that presented without restoration. The radiographic examination showed an isolated round mass with uniform radiopacity but without a surrounding radiolucent rim, below the mandibular right second premolar region. A severe root resorption of the 46 associated with the impacted 45 was also observed

(Figure 1). The patient's medical and family histories were non-contributory. The tooth 46 was removed and the patient is under control.

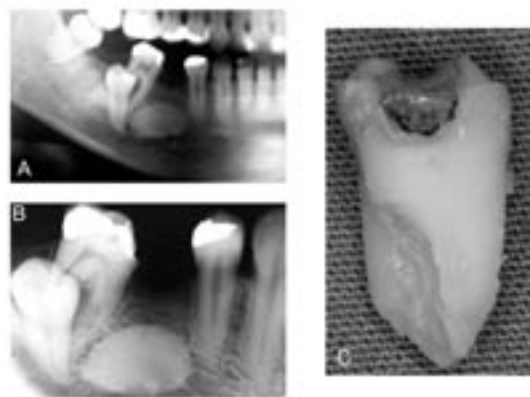


Fig. 1. Radiographic view showing a well defined round mass with uniform radiopacity associated with a severe root resorption of the 46 caused by ectopic eruption of the impacted 45 (A and B). Macroscopic view of the 46 showing severe radicular resorption (C).

DISCUSSION

IO is described as a localized non expansible radiopacity of unknown origin (1,2). This radiopacity can be found in most parts of the skeleton (3,4). In the jaws, studies have reported a predilection for the mandible in the posterior region (2,5-7). The IO could appear as round, elliptical or irregular in shape, generally asymptomatic and without any obvious etiological agent (8). The internal aspect is usually uniformly radiopaque, consisting of a ground glass/ stippled appearance (9) or coarse trabeculae that may extend beyond the area of increased density (10). The prevalence of this alteration ranges from 2.3% to 9.7% (5). The discrepancies between these surveys can be explained by different diagnoses criteria.

Although the cause and biologic behavior of IO is unknown, the suggested causes include retained primary root fragments, bone deposited in response to unusual occlusal forces (7) or anatomic variations analogous to tori (11,12). IO is clearly separated from the roots of the adjacent teeth and should be distinguished from condensing osteitis of dental origin, or other alveolar bone related radiopacities such as periapical cemental dysplasia and ossifying fibroma (1, 13, 14).

The local complications of IO in jaws are changes in tooth position, complication of any future orthodontic treatment (15). Inclination of teeth induced by IO was recently reported (16), but as far as we are concerned, there is no report of concomitant resorption of associated tooth.

Root resorption is observed in association with impacted teeth (16). The deviation in eruption path was suggested as the responsible factor to the resorption of the tooth (17). In conclusion, the present report describes a rare case of ectopic eruption rote caused by IO that induced root resorption.

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