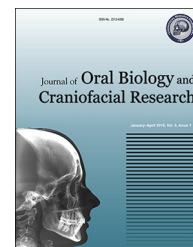


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## Case Report

# Management of 'labial' type of dens invaginatus: A rare case report

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## ABSTRACT

Dens invaginatus is a developmental anomaly resulting in an infolding of the enamel organ into the dental papilla prior to calcification of the dental tissues. The invagination predisposes the tooth for the development of dental caries. Conventional radiographs do not provide detailed information concerning the three-dimensional image, which would help the clinician in making a confirmatory diagnosis and planning the treatment before undertaking the actual treatment. This report describes a case where Oehlers type II dens invaginatus was diagnosed with the help of spiral computed tomography. The locations of the primary root canal and the invagination were assessed from spiral computed tomography scan images. Usually, the invagination is present on palatal/lingual side. However, in this case, the invagination was unusually located on labial side, which has yet not been reported. The tooth also showed certain unusual morphological features.

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## 1. Introduction

Developmental disturbances of teeth present a challenge to the clinician in diagnosis and treatment in view of their complex morphology. Dens invaginatus is a developmental anomaly that results in an enamel-lined cavity intruding into the crown or root before the mineralization phase.<sup>1</sup>

The etiology of this anomaly is still unclear. Most commonly affected tooth is the permanent maxillary lateral incisor. The

reported incidence varies from 0.04% to 10%.<sup>2</sup> It has been classified by Oehlers into three types, namely Type I, II and III.<sup>3</sup>

The clinical presentation of dens invaginatus varies from deep gingulum pit to a deep infolding reaching the apical foramen.<sup>2</sup> Clinical significance of dens invaginatus lies in the increased risk of caries and pulpal pathosis.<sup>2</sup>

This article describes the successful diagnosis and management of unusual type II dens invaginatus with 'labial' invagination with the help of spiral computed tomography scan.

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## 2. Case report

A 24-year-old Indian male described an episode of recent severe throbbing pain in maxillary left lateral incisor over the past 4 days; there was no previous history of any symptoms.

Examination of the dentition revealed a peg-shaped maxillary left lateral incisor. There was no decay or discoloration in relation to maxillary left lateral incisor.

The labial surface showed a small cusp-like elevation on the mesial half with a semilunar groove. The incisal surface

showed a groove extending mesiodistally and a small pit. The palatal surface was smooth and rounded, without any groove or pit (Fig. 1).

The intraoral periapical radiograph showed an invagination in the crown extending to the junction of coronal and middle 1/3rd of the root, suggestive of Oehlers Type II dens invaginatus (Fig. 2A). There was no family history of similar dental findings.

For further accurate diagnosis and to evaluate the position of the invagination relative to the main canal, spiral computed tomography scan of the area of interest was

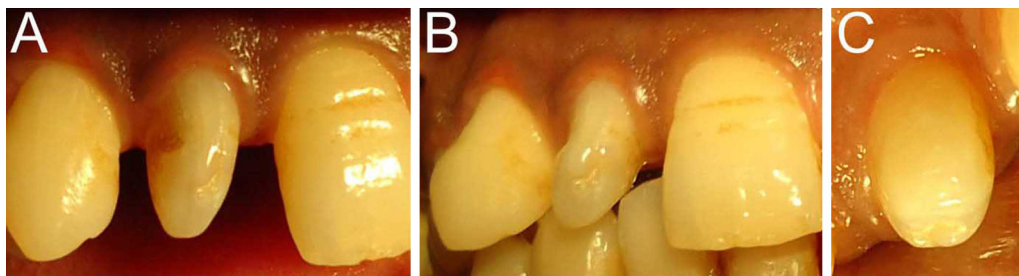


Fig. 1 – (A) and (B) The preoperative intraoral photographs showing peg-shaped maxillary left lateral incisor with cusp-like elevation and semilunar groove on labial surface. (C) Smooth, rounded palatal surface and incisal groove.

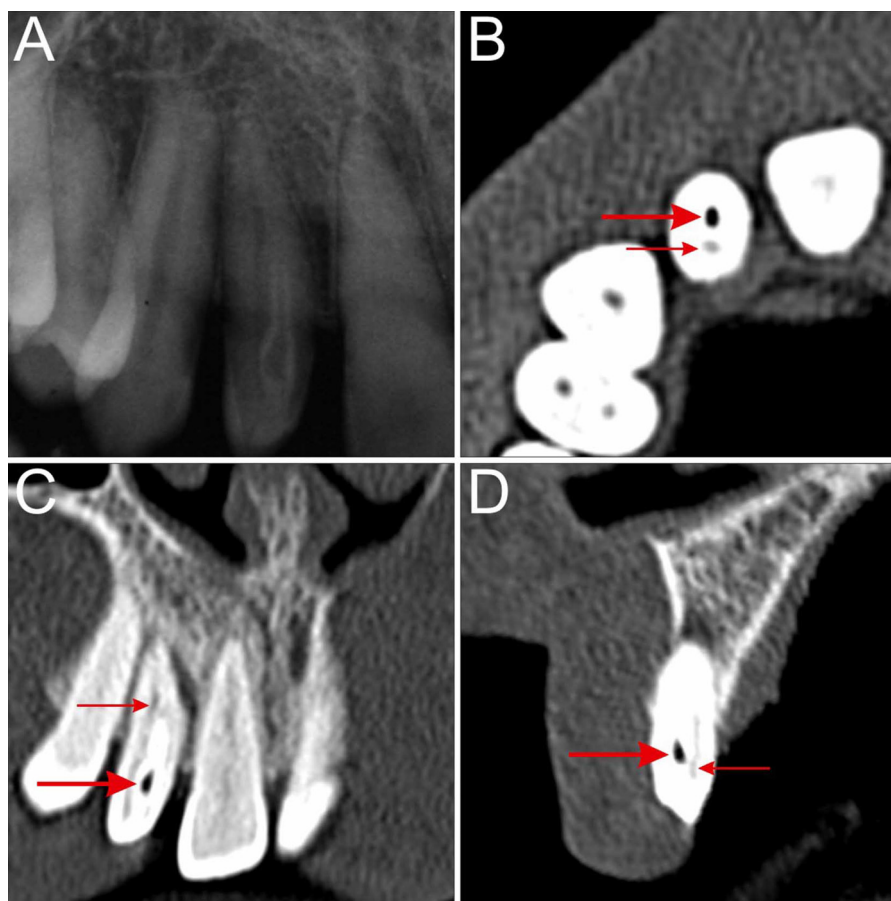


Fig. 2 – (A) Intraoral periapical radiograph suggestive of Oehlers Type II dens invaginatus. (B) Axial, (C) Coronal and (D) Sagittal spiral computed tomography scan images showing relative positions of the invagination (labially) and main root canal (palatally) [Larger arrow indicating the invagination and the smaller one indicating the main root canal].

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