Differential diagnosis of endodontic-related inferior alveolar nerve paraesthesia with cone beam computed tomography (CBCT): a case report

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Aim • To discuss the use of cone-beam computed tomography (CBCT) in the differential diagnosis of a case of labiomandibular paraesthesia caused by extrusion of sealer into the mandibular canal.

Introduction. Endodontic filling materials can induce pain and paraesthesia when in contact with alveolar nerves. But using traditional radiographs, it is not always possible to visualize contact between nerve and filling material.

Case presentation: A 59-year-old woman suffering from a paraesthesia on the left posterior mandible and numbness of the left lower lip was referred 1 month after multiple root canal treatments. Radiographic exam showed multiple extrusions of beyond the apex of the mesial root of the mandibular left second molar and of the first premolar. CBCT examination (fig.2) confirmed the presence of the filling material in the periapical area of the second molar, and revealed that the material was inside the mandibular canal. No extruded filling material was found inside the mental foramen (fig 3).

Discussion: CBCT was able to identify the exact position of the extruded sealer, limited only to the second molar area. This was considered to be a positive prognostic factor and a wait and see approach was chosen. Symptoms progressively vanished in the following 6 months.

Conclusions and Clinical Relevance: Small field of view CBCT (where possible) is an effective diagnostic device when endodontic-related inferior alveolar nerve or mental foramen paraesthesia are suspected.