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Selective Root Canal Retreatment as an Alternative Option in Patient at Risk of MRONJ: A Case Report

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Abstract

Aims: This case report aims to demonstrate an alternative treatment approach of a failed endodontically treated tooth (ETT) in a patient at risk of medication-related osteonecrosis of the jaw (MRONJ), in which conventional retreatment of all canals had limited access and surgical interventions possessed osteonecrotic risk.

Methods and Results: A 65-year-old female presented with discomfort at the upper right posterior region, where a sinus tract opening was observed adjacent to maxillary right first molar. She had osteoporosis and had been taking oral Alendronate for more than five years, placing her at a higher risk of MRONJ. A preoperative radiograph of maxillary right first molar revealed prefabricated fibre posts in the palatal and distobuccal canals, and an absence of root canal filling material in the mesiobuccal root canal. The diagnosis of maxillary right first molar was previously treated with chronic apical abscess. Selective root canal retreatment was performed as one of the plans following comprehensive, patient-centred consideration. After a 1.5-year follow-up period, the patient remained asymptomatic, and both clinical and radiographic evaluations demonstrated favourable healing.

Conclusions: Selective root canal retreatment may serve as a viable and effective alternative treatment for managing failed ETTs when conventional and surgical approaches pose increased risks. Successful outcomes depend on prudent case selection, prognosis assessment, and thorough informed consent.

Keywords: endodontic retreatment, medication-related osteonecrosis of the jaw, minimal invasive approach, root canal retreatment, selective root canal retreatment, special care dentistry