

REVIEWER'S REPORT

Manuscript No.: IJAR- 58378

Title: Three -Year Clinical and Radiographic Healing Following Nonsurgical Root Canal Treatment of a Maxillary Lateral Incisor with Symptomatic Apical Periodontitis: A Case Report,

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity			✓	
Significance	✓			

Reviewer's ID: Bilqees Hamza

Detailed Reviewer's Report

The manuscript titled *"Three-Year Clinical and Radiographic Healing Following Nonsurgical Root Canal Treatment of a Maxillary Lateral Incisor with Symptomatic Apical Periodontitis: A Case Report"* presents a clinical case managing symptomatic apical periodontitis in a 55-year-old patient. The authors employ contemporary endodontic protocols, specifically focusing on intracanal heating and ultrasonic activation of sodium hypochlorite (IHAN) for disinfection, alongside the Hot Modified Technique using a bioceramic sealer for obturation. The primary strength of the submission lies in its long-term clinical and radiographic follow-up, which documents substantial reduction of the lesion at one year and four months, leading to complete osseous healing and re-establishment of the normal periodontal ligament space after three years. Despite minor apical extrusion of the obturation material, the treatment successfully preserved the tooth and resolved all symptoms. However, while the clinical outcome is highly favorable, the manuscript lacks a deep critical analysis of its limitations and requires structural refinement to elevate its academic rigor. The transitions between descriptive clinical reporting and academic discussion must be smoothed out, and the biological implications of sealer extrusion should be discussed more robustly before publication.

Recommendations for Improvement

1. Expand on the Implications of Sealer Extrusion

The postoperative radiograph clearly reveals extrusion of the obturation material beyond the apical foramen. While the discussion briefly notes that limited extrusion did not prevent healing, the manuscript would be significantly improved by citing specific biological properties of the utilized "Ceraseal"

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bioceramic sealer. The author should discuss why bioceramic sealers—due to their biocompatibility, bioactivity, and ability to release calcium hydroxide—are well-tolerated by periapical tissues even when extruded, thus facilitating periapical healing rather than causing chronic foreign-body inflammation.

2. Address the Inherent Limitations of Case Reports

As noted in the text, the principal limitation of this study is its reliance on a single clinical case. To strengthen the scientific contribution, the author must expand the discussion to compare this outcome with larger-scale clinical trials or retrospective studies evaluating the success rates of thermoplasticized obturation techniques versus lateral condensation. Explicitly state how the findings from this single case align with or challenge current clinical consensus on the success rates of nonsurgical retreatments.

3. Refine Technical Details of the Disinfection Protocol

The description of the IHAN protocol indicates that sodium hypochlorite was heated intracanal to 180°C for 5 seconds using a heat carrier. In endodontic literature, applying such a high temperature carries a potential risk of damaging the periodontal ligament or surrounding alveolar bone. The author should elaborate on the safety aspect of this protocol, clarifying if the heat dissipates rapidly enough to avoid thermal injury to adjacent external root structures, thereby justifying the safety of the IHAN technique.

4. Restructure Narrative Data into a Timeline

The case presentation describes two distinct treatment visits and a series of long-term follow-up intervals. The clarity and scannability of the report would be greatly enhanced by consolidating these clinical steps and follow-up milestones into a structured timeline or table. This will allow the reader to easily trace the clinical workflow from the initial diagnostic findings to the final three-year healing assessment.

Recommendation to the Editor

Recommendation: Accept with Minor Revisions

Comments to the Editor:

This case report provides highly valuable, long-term clinical evidence demonstrating the success of contemporary disinfection and obturation protocols in treating periapical pathology. The three-year follow-up period is a major strength, as it demonstrates complete biological healing of the bone and periodontal ligament space despite minor initial extrusion of the bioceramic sealer. The manuscript is well-written and clinically sound, but it requires minor revisions to address the safety margins of the intracanal heating temperature (180°C), expand slightly on the biocompatibility of the extruded bioceramic sealer, and represent the clinical steps in a clear chronological timeline. These minor adjustments will enhance the academic quality and safety considerations of the paper. Once these minor points are addressed by the author, I recommend this manuscript for publication in the journal.

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