

REVIEWER'S REPORT

Manuscript No.: **IJAR-51693**

Date: 18/05/2025

Title: Salivary Reservoir in Maxillary Complete Denture- A Case Report

Recommendation:

Accept as it is

Accept after minor revision...Yes.....

Accept after major revision

Do not accept (*Reasons below*)

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

Reviewer Name: Dr. Sireesha Kuruganti

Date: 18/05/2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

This case report presents a valuable and practical technique for managing xerostomia in edentulous patients using a maxillary salivary reservoir. The manuscript is well-written and provides a detailed account of the procedure, its rationale, advantages, and disadvantages.

Detailed Reviewer's Report

Manuscript Review: Salivary Reservoir in Maxillary Complete Denture- A Case Report

This report provides a detailed review of the manuscript "Salivary Reservoir in Maxillary Complete Denture- A Case Report." The review is structured by section, highlighting strengths and areas for potential improvement, with specific line number references where applicable.

Abstract (Lines 7-15)

* Strengths: The abstract clearly and concisely summarizes the importance of saliva in complete denture prosthesis, the problem of reduced saliva, and the proposed solution of a salivary reservoir. It states the purpose of the case report, which is to describe a fabrication method for a salivary reservoir in a maxillary complete denture for a patient with radiation-induced xerostomia.

* Areas for Improvement:

* Consider briefly mentioning the key outcome or benefit observed in the case report to make the abstract more impactful.

Introduction (Lines 17-65)

* Strengths:

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REVIEWER'S REPORT

* The introduction effectively establishes the context by discussing the prevalence of Oral Squamous Cell Carcinoma (OSCC) in Southeast Asia and India (Lines 17-20).

* It clearly explains the treatment modalities for OSCC and the common oral complications of radiotherapy, with a focus on xerostomia (Lines 21-29).

* The pathophysiology of radiation-induced xerostomia is well-described (Lines 29-33).

* Other causes of xerostomia are also listed, providing a broader understanding (Lines 36-42).

* The definition of xerostomia and hyposalivation is provided, along with normal salivary flow rates (Lines 43-50).

* The impact of xerostomia on oral health, quality of life, and denture retention is highlighted (Lines 51-57).

* The introduction logically leads to the rationale for using salivary reservoir dentures as a treatment option (Lines 58-62).

* The aim of the case report is clearly stated (Lines 63-65).

* Areas for Improvement:

* Line 25: "Then systemic chemotherapy was introduced as a part of combined treatment²." Consider rephrasing for better flow, perhaps by integrating it more smoothly with the preceding sentences on treatment for advanced cancer.

* Line 39: "Aging as the sole cause of decreased salivary flow is unproven." While true, ensure this statement is current by checking recent literature if possible, as research evolves.

Case Report (Lines 67-80, Procedure Lines 82-105)

* Strengths:

* The patient's demographic, chief complaint, relevant medical and dental history (including previous cancer treatment and total extraction) are clearly presented (Lines 67-74).

* Extraoral and intraoral examination findings leading to the diagnosis of radiation-induced xerostomia are mentioned (Lines 74-76).

* The initial management, including counseling, is described (Lines 76-78).

* The treatment plan to construct a salivary reservoir is justified (Lines 78-80).

* The step-by-step procedure for fabricating the salivary reservoir is detailed and generally easy to follow (Lines 83-105).

* The materials used are specified (e.g., sprue wax, Type III Dental Stone, BIOPLAST, methyl cellulose) (Lines 86, 93, 97, 102).

* The inclusion of figures (though not visible in the text provided to me, they are referenced, e.g., Fig.1-Fig.6) is good for illustrating the procedure.

* Areas for Improvement:

* Line 70: "History of Excisional biopsy in left maxillary posterior region 1 year 7months months back." The repetition of "months" is a minor typographical error.

* Line 87: "A slight undercut must be created on the inner aspect and a groove is made on the external surface of the lid rim..." Ensure clarity on why these specific features are crucial for the flexible lid attachment if not already clear from figures.

* Line 90: "The reservoir volume must be assessed at this stage..." It's good this is mentioned. If space permits, briefly stating the achieved volume in this specific case within the procedure or results could be informative. (Later mentioned in discussion line 202)

Instructions to the Patient (Lines 122-131) & Follow-up (Lines 132-138)

* Strengths:

* Clear and practical post-insertion instructions regarding oral/denture care, reservoir cleaning, and refilling are provided (Lines 123-127).

* Emphasis on hydration is good (Lines 128-129).

* The follow-up schedule and the positive outcome at the 3-month mark are reported, indicating the success of the treatment in this case (Lines 130-138).

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* Areas for Improvement:

* No specific areas for improvement noted in this brief section, assuming the instructions are comprehensive enough for a patient.

Discussion (Lines 140-198)

* Strengths:

* Reiterates the prevalence of post-radiation xerostomia and its impact, reinforcing the problem's significance (Lines 142-145).

* Emphasizes the dentist's role and the aim of xerostomia treatment (Lines 145-149).

* Clearly explains how reservoir dentures offer a solution (Lines 150-153).

* Discusses types of artificial salivary substitutes and mentions commonly used ones (Lines 153-157).

* Provides a good overview of previous approaches to fabricating reservoir dentures, including techniques for both mandibular and maxillary dentures, and discusses their limitations (e.g., time-consuming, complicated lab steps, cost) (Lines 158-183). This comparison helps highlight the novelty or advantages of the reported technique.

* Specifically mentions the advantages of a maxillary reservoir over a mandibular one (Lines 175-178) and also a potential disadvantage (increased weight affecting retention) (Lines 179-180).

* The advantages (Lines 187-197) and disadvantages (Lines 199-201) of the described technique are clearly listed and are very informative.

* The reservoir volume and working duration are specified (Line 202).

* The physiological mechanism of salivary substitute release (tongue pressure during swallowing) is a key highlight and is well-explained (Lines 203-208).

* Acknowledges a limitation of the technique (not suitable for high palatal vaults) (Lines 208-209).

* Mentions the practical aspect of preserving the working cast for future lid fabrication (Lines 209-211).

* Areas for Improvement:

* Line 163: "Hallikerimath and Jain 16." and "Burhanpurwala et al17," – check consistency in superscripting references if a specific journal style is followed.

* The discussion is comprehensive. Perhaps a brief mention of any challenges encountered during the fabrication or use in this specific case could add further practical insight, if applicable and not already covered.

Conclusion (Lines 213-223)

* Strengths:

* Summarizes the case report effectively, stating it describes a simple and economic method for constructing a maxillary salivary reservoir (Lines 214-216).

* Reiterates the benefits for xerostomic patients (enhanced oral health and quality of life) (Lines 216-218).

* Emphasizes the need for understanding different reservoir designs (Lines 218-220).

* Suggests a direction for future research (developing more physiologic salivary substitutes) (Lines 220-221).

* Highlights the importance of patient motivation and cooperation (Lines 222-223).

* Areas for Improvement:

* The conclusion is concise and relevant. No major improvements needed.

Conflict of Interest (Line 225)

* Clearly stated as "None."

References (Lines 227-278)

* Strengths:

* A good number of references are provided, suggesting adequate literature review.

* References appear to cover relevant aspects from cancer statistics, treatment complications, xerostomia management, and previous reservoir denture techniques.

International Journal of Advanced Research

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REVIEWER'S REPORT

* Areas for Improvement:

* Consistency in formatting should be double-checked (e.g., journal name abbreviations, use of et al., page number format) as per the target journal's guidelines. For example, line 229: "CA Cancer J Clin." vs. line 233: "Critical Reviews in Therapeutic Drug Carrier Systems." (full name).

* Line 236: "The journal of supportive oncology." – capitalization of "The" at the beginning of a journal title might need checking against style guides.

* Line 239: "International Journal of Radiation Oncology* Biology* Physics." The asterisks might be a formatting artifact or part of the journal title; verify.

Overall Presentation and Clarity

* Strengths:

* The manuscript is well-structured with standard sections.

* The language is generally clear and professional.

* The case is clinically relevant and addresses a common problem in patients post-radiotherapy.

* The described technique appears to offer practical advantages in terms of simplicity and cost-effectiveness.

* Areas for Improvement:

* Line Numbering: The provided PDF has line numbers on each page, which is helpful for review. However, the line numbering restarts on each page. For a formal review submission, continuous line numbering throughout the manuscript is usually preferred. (This is a comment on the PDF format itself, not the content).

* Minor Typos/Grammar: A few minor typographical errors were noted (e.g., "7months months" Line 70). A thorough proofread for grammar and spelling is always recommended.

* Figure Quality and Legends (Assumption): Although figures are not visible in the text provided for this review, ensure all figures are of high quality, clearly labeled, and have concise, informative legends that explain what is being shown and its relevance to the text.

* The "EW I" and "R" and "RP" annotations on pages 1, 2, and 5 are unclear as to their meaning/purpose within the manuscript text. If these are reviewer marks or internal codes, they should be removed for final submission. (Lines 6, 66, 186).

* The "REVIE" text on page 4, line 138 and "IN" on page 6, line 213 appear to be part of a watermark or header/footer from a review process and should be removed.

Final Recommendation

This case report presents a valuable and practical technique for managing xerostomia in edentulous patients using a maxillary salivary reservoir. The manuscript is well-written and provides a detailed account of the procedure, its rationale, advantages, and disadvantages.

The authors are encouraged to address the minor points raised, particularly regarding typographical errors, reference consistency, and ensuring clarity of figures and their integration with the text. With these revisions, the manuscript would be a strong candidate for publication, offering useful insights to dental practitioners.