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## REVIEWER'S REPORT

**Manuscript No.: IJAR-56527**

**Title: COMPREHENSIVE REVIEW OF COMPLICATIONS IN DENTAL IMPLANT THERAPY**

**Recommendation:**

Accept as it is .....Yes.....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

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

**Reviewer's ID: Dr. Sireesha Kuruganti**

### Detailed Reviewer's Report

This comprehensive review of the manuscript "Comprehensive Review of Complications in Dental Implant Therapy" evaluates the content, structure, and clinical relevance based on the provided text.

#### I. General Overview

The manuscript provides a thorough examination of dental implant complications, ranging from planning and surgical execution to biological and mechanical failures. It effectively categorizes complications using established historical and contemporary classification systems.

#### II. In-Depth Sectional Analysis

##### 1. Abstract and Introduction

\* Life Expectancy and Demand (Lines 11–14): The authors correctly identify the rise in geriatric populations as a driver for implant-supported rehabilitation.

\* Predictability (Lines 14–17): Improvements in biomaterials and minimally invasive techniques are noted as key factors in high survival rates.

\* Defining Success (Lines 17–19): Outcomes are tied to 3D positioning, angulation, and tissue stability.

\* Specialty Integration (Lines 38–41): The text highlights the multidisciplinary nature of implantology, involving periodontics, prosthodontics, orthodontics, and maxillofacial surgery.

##### 2. Etiology and Risk Factors

\* Multifactorial Failure (Lines 54–59): The manuscript identifies primary causes such as infection, surgical trauma (thermal injury), biomechanical overload, and iatrogenic factors.

\* Anatomic Constraints (Lines 62–64): Poor bone quality (Type IV) and short implants (<7 mm) are listed as factors reducing primary stability.

\* Systemic Risks (Lines 71–76): High-risk factors include tobacco use, radiation therapy, and uncontrolled diabetes.

##### 3. Classifications of Complications

The manuscript utilizes several tables to summarize classification systems:

\* Table 1 (Line 84): Compares Goodacre (1999) and Misch (2008).

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\* Table 2 (Line 88): Lists contributors like Truhlar (1990) and Esposito (1998), distinguishing between early (healing) and late (loading) failures.

\* Table 3 (Lines 89–90): Details El Askary's seven categories, including etiology, timing, and responsible personnel.

### 4. Specific Complication Profiles

\* Biological (Lines 101–105): Focuses on peri-implant mucositis and peri-implantitis.

\* Mechanical (Lines 110–112): Includes screw loosening, component fracture, and material wear due to fatigue.

\* Esthetic (Lines 113–115, 188–207): Discusses "black triangles," recession, and malposition. The text specifies that 3D positioning errors—coronoapical, orofacial, or angulation—compromise the emergence profile.

\* Primary Stability (Lines 148–151, 153–161): Emphasized as a mechanical prerequisite for osseointegration; lack of stability leads to fibrous encapsulation.

### 5. Diagnostic and Success Criteria

\* Albrektsson & Zarb Criteria (Lines 233–244): The manuscript defines success as:

\* Absence of mobility and radiolucency.

\* Marginal bone loss  $\leq 1$  mm in the first year and  $\leq 0.2$  mm annually thereafter.

\* Functional survival rates of 90% at 5 years and 85% at 10 years.

## III. Management Strategies

The manuscript outlines a structured approach to intervention:

\* Peri-implantitis (Lines 272–282): Treatment is split into Non-surgical (plaque removal, inflammation control) and Surgical phases.

\* CIST Protocol (Lines 302–306): Cumulative Interceptive Supportive Therapy ranging from mechanical debridement (Protocol A) to regenerative/resective therapy (Protocol D).

\* Fractures (Lines 316–318): Options include complete removal with trephines or retaining stable apical fragments.

\* Maintenance (Lines 330–332): Use of plastic instruments for scaling and adjunctive chlorhexidine.

## IV. Conclusion

The manuscript concludes that preventive strategies and early identification remain the "cornerstone" of success, noting that prevention is always preferable to corrective intervention (Lines 340–345).