

REVIEWER'S REPORT

Manuscript No.: IJAR-53249

Date: 11/08/2025

Title: Anterior Cervical Discectomy and Fusion (ACDF): A Review of Surgical Approaches

Recommendation:

- ✓ Accept as it is
 Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

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

Reviewer Name: Dr. S. K. Nath

Date: 11/08/2025

Reviewer's Comment for Publication:

The paper effectively summarizes the evolution, techniques, and clinical implications of ACDF in cervical spine surgery. It emphasizes that while ACDF remains highly effective with excellent fusion and symptom relief rates, it carries risks like adjacent segment disease and dysphagia. The ongoing advancements toward minimally invasive approaches and better biomaterials aim to enhance patient outcomes and reduce complications.

Reviewer's Comment / Report

Strengths:

- Comprehensive Scope:** The review spans historical development, technological advancements, clinical outcomes, and complications, offering a holistic understanding of ACDF.
- Detailed Historical Background:** It traces the evolution from the original techniques by Smith, Robinson, and Cloward to modern minimally invasive methods.
- Inclusion of Multiple Techniques & Materials:** Discusses various graft and fixation options, including PEEK, titanium cages, and anterior plating.
- Clinical Outcomes:** Presents long-term outcomes, fusion rates (>95% for single-level), and patient-reported outcomes such as pain relief and functional improvements.
- Discussion on Complications:** Highlights common risks like dysphagia, adjacent segment disease, pseudarthrosis, and nerve injuries.
- Current Trends:** Incorporates recent advances like minimally invasive and endoscopic techniques aimed at reducing perioperative morbidity.

Weaknesses:

- Limited Quantitative Data:** While it cites success rates and complication incidences, there is a scarcity of detailed statistical analyses or meta-analyses summarizing comparative effectiveness.
- Lack of Specific Patient Selection Criteria:** The review broadly discusses indications but provides limited guidance on selecting optimal candidates for different approaches.
- Insufficient Critical Appraisal:** The paper summarizes existing literature but does not critically evaluate the quality of the included studies, such as levels of evidence or bias.
- Limited Discussion on Long-term Outcomes & Motion Preservation:** Though it mentions cervical disc arthroplasty as an alternative, the discussion on long-term comparative outcomes between fusion and motion-preserving techniques is minimal.
- Few Visual Aids:** The review lacks illustrative figures, tables, or diagrams that could help clarify surgical approaches and devices.