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REVIEWER'S REPORT

Manuscript No.: IJAR- 50433

Date: 25/02/2025

Title: "Coverage of Loss of Substances Following Necrotizing Fasciitis"

Recommendation:

/Accept as it is
Accept after minor revision
Accept after major revision
Do not accept (<i>Reasons below</i>)

Rating	Excel.	Good	Fair	Poor
Originality		>		
Techn. Quality		\checkmark		
Clarity		\checkmark		
Significance		\checkmark		

Reviewer Name: Dr. S. K. Nath

Date: 26/02/2025

Reviewer's Comment for Publication:

A valuable study highlighting effective wound coverage techniques after necrotizing fasciitis. Findings support skin grafting as the primary treatment, with VAC therapy as an advanced option. Future research should expand sample size, include statistical analysis, and assess long-term outcomes.

Reviewer's Comment / Report

This study presents a retrospective analysis of 20 patients treated for necrotizing fasciitis (NF), a rare but severe soft tissue infection requiring urgent surgical and medical management. The research focuses on wound coverage strategies post-debridement, including directed healing, skin grafting, and VAC therapy, comparing findings with existing literature.

Strengths of the Study

1. Clinical Relevance: NF is a life-threatening condition with a high mortality rate (20–30%), making research on effective wound coverage techniques crucial. The study offers practical insights into treatment strategies, emphasizing multidisciplinary management (surgery, physiotherapy, post-op rehabilitation).

2. Structured and Clear Methodology: Patient selection criteria and data collection methods (medical records, operative reports) are well-defined. Stepwise treatment protocol (surgical debridement \rightarrow directed healing \rightarrow wound coverage) is clearly explained.

3. Comparative Analysis with Existing Literature: The study compares patient outcomes (hospitalization duration, wound healing, patient satisfaction) with published data from other institutions. Hospital stay (13 days avg.) is shorter than in similar studies, suggesting possible protocol advantages.

4. Use of Modern Treatment Techniques: VAC negative pressure therapy (5% of cases) is highlighted as an advanced wound healing strategy. Physiotherapy referral (100% of cases) demonstrates a commitment to long-term functional recovery.

5. Strong Outcome Presentation: 90% of cases required skin grafting, reinforcing its role as the most effective reconstruction method. 95% patient satisfaction rate supports the success of the chosen treatment protocol.

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Areas for Improvement

1. Small Sample Size & Limited Follow-Up: Only 20 patients were included, limiting generalizability. There is no long-term follow-up data on complications like contractures, recurrent infections, or functional outcomes.

2. Lack of Statistical Analysis: The study reports percentages but does not apply statistical significance testing (e.g., chi-square, t-tests). A larger study with statistical validation would strengthen the findings.

3. Minimal Discussion on Risk Factors & Comorbidities: The paper briefly mentions diabetes as a key risk factor (case of a 55-year-old patient) but does not analyze how comorbidities impact healing rates. Future studies should explore how factors like immunosuppression, obesity, or malnutrition affect treatment outcomes.

4. Limited Description of Surgical Techniques: Skin grafting is the most common approach (90%), but there is no discussion on graft success rates, complications (e.g., infections, rejections), or alternative techniques (e.g., flap-based reconstruction). A detailed comparison of coverage techniques would enhance clinical value.

5. Language & Formatting Issues: Grammar & sentence structure need improvement for clarity.

Example: "The coverage of the loss of substance secondary to the flattening of the FN uses several means ranging from the simplest (primary and secondary healing, skin grafting) to the most complicated (Locoregional or free flaps)."

Suggested revision: "Wound coverage after necrotizing fasciitis debridement includes various techniques, from simple healing (primary/secondary intention, skin grafting) to complex reconstructive methods (local or free flaps)."

Suggestions for Improvement

1. Expand the Sample Size: A multi-center study with at least 50–100 patients would improve the reliability and generalizability of the results.

2. **Introduce Statistical Analysis**: Use p-values and confidence intervals to validate differences in healing times, graft success rates, and patient satisfaction.

3. Long-Term Follow-Up & Functional Assessment: Collect 1-year follow-up data on scarring, contractures, recurrent infections, and quality of life. Evaluate functional outcomes (mobility, pain levels) using standardized scoring systems.

4. **Discuss Comorbidities & Their Impact**: Assess how diabetes, chronic illnesses, or immune status influence treatment outcomes.

5. Expand the Discussion on Wound Coverage Strategies: Compare skin grafting vs. flap reconstruction, discussing success rates and complications. Include case studies illustrating different approaches.

6. **Refine Language & Improve Formatting**: Proofread for grammar and clarify complex sentences. Organize tables/figures more effectively for easier interpretation.