



Analyzing the Efficiency of Dermal Substitute in Wound Management segment

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Introduction

1. Dermal substitutes are advanced products replacing damaged skin, enhancing wound healing by supporting cellular processes and reducing infection risks.
2. They improve clinical outcomes by accelerating healing, enhancing scar quality, and potentially reducing healthcare costs.
3. Patient satisfaction increases due to improved cosmetic results, pain management, and convenience in application, making dermal substitutes valuable for treating acute and chronic wounds.

Objectives

This research project has the following specific objectives:

- To assess the efficacy of dermal substitutes in promoting wound closure and reducing healing time.
- To investigate the impact of dermal substitutes on patient outcomes, such as pain levels and infection rates.
- To analyze the cost-effectiveness of dermal substitutes compared to traditional wound care approaches.

Methodology

Study Type :- The research was of a cross-sectional descriptive design, aiming to procure a clear, complete, and accurate description of the situation. Descriptive research design was a type of research design that aimed to obtain information to systematically describe a phenomenon, situation, or population

- **Data Collection:**

Primary data: The study is conducted through Plastic surgeons, General & Laproscopic surgeons & Vascular surgeons at government hospitals, encompassing various departments including emergency, outpatient, trauma centre and private hospitals.

Secondary Data: The secondary data relating to the study were collected from books, journals, research articles, reports, newspapers, and websites.

Study Area: Wound Care

Duration of the study: 3 months

Sample size: 50

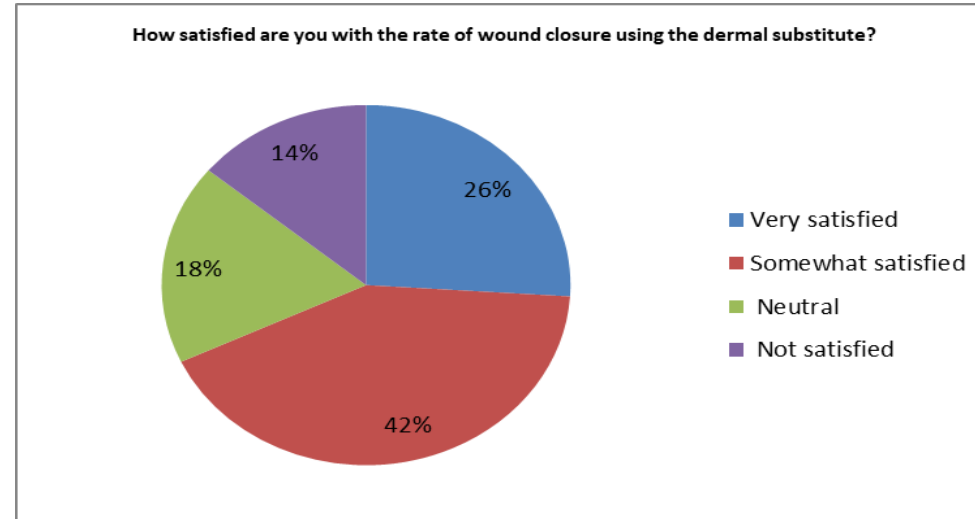
Sample Techniques: Convenient Sampling

Data collection: Primary Data collection

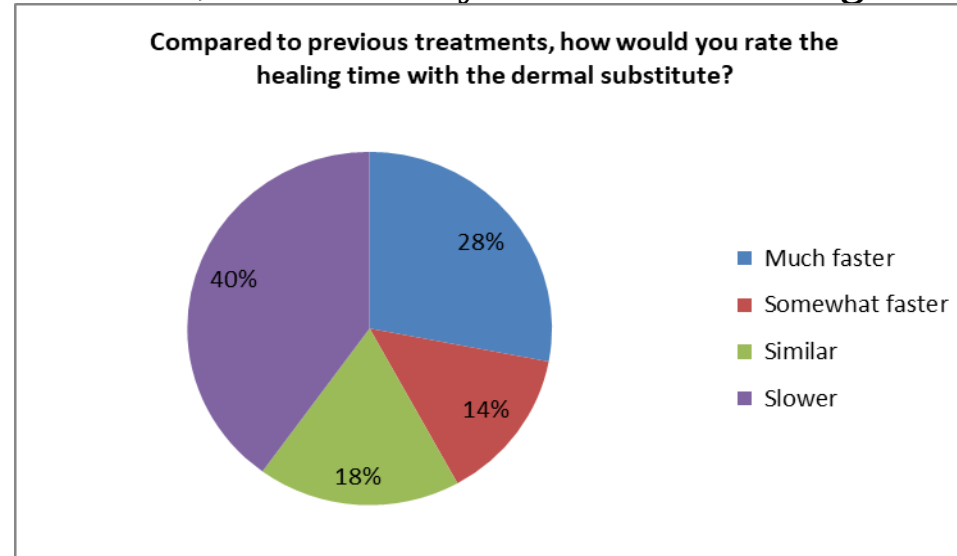
Data Analysis: MS Excel

Research Questions

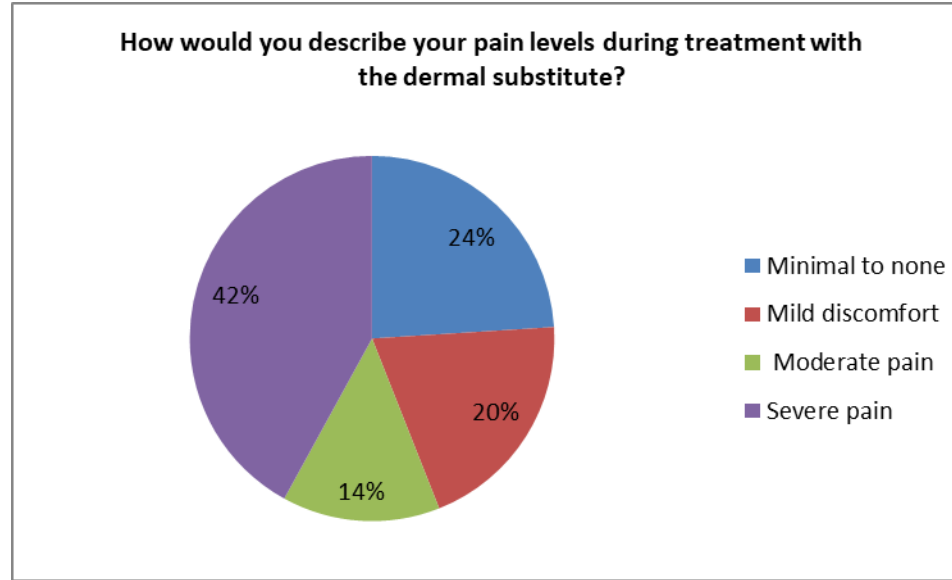
1. How satisfied are you with the rate of wound closure using the dermal substitute?



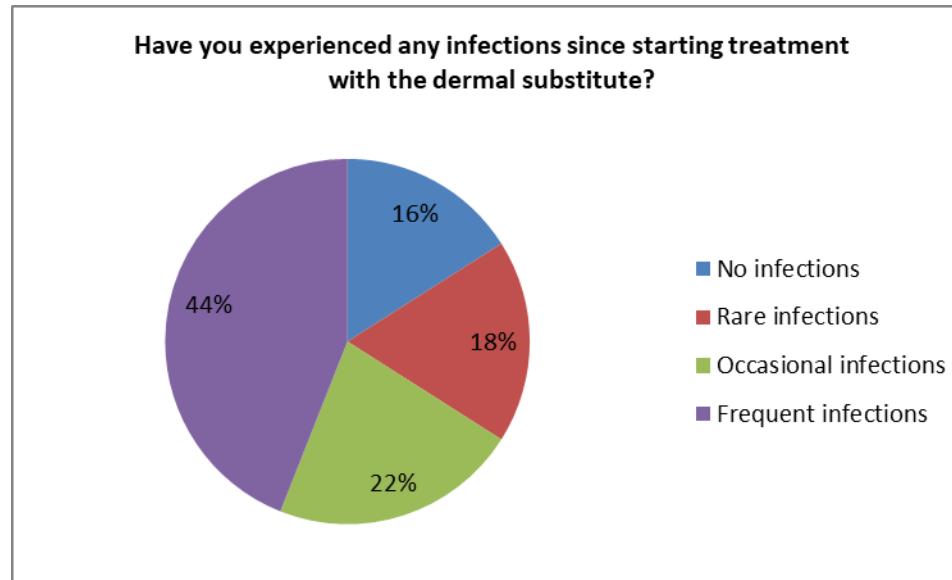
2. Compared to previous treatments, how would you rate the healing time with the dermal substitute?



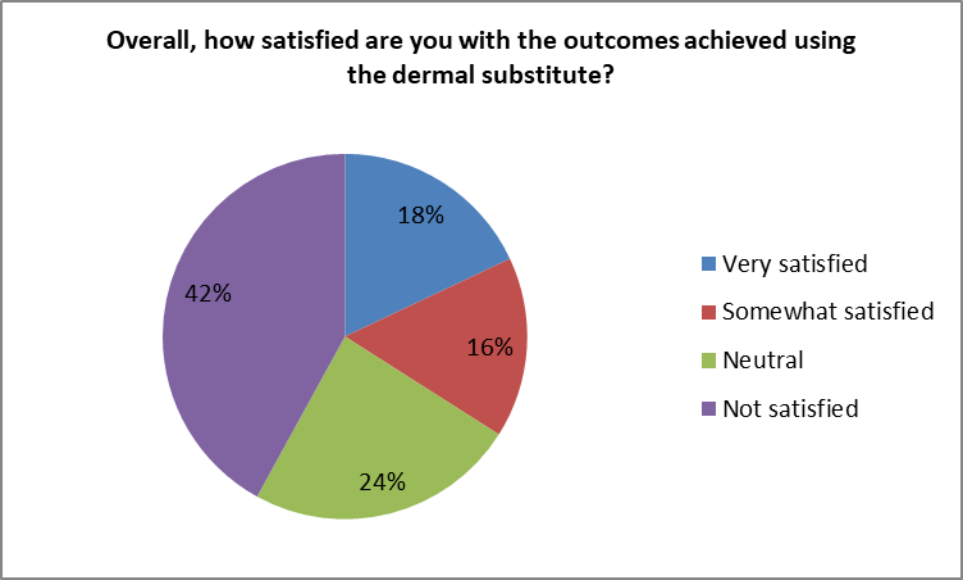
3. How would you describe your pain levels during treatment with the dermal substitute?



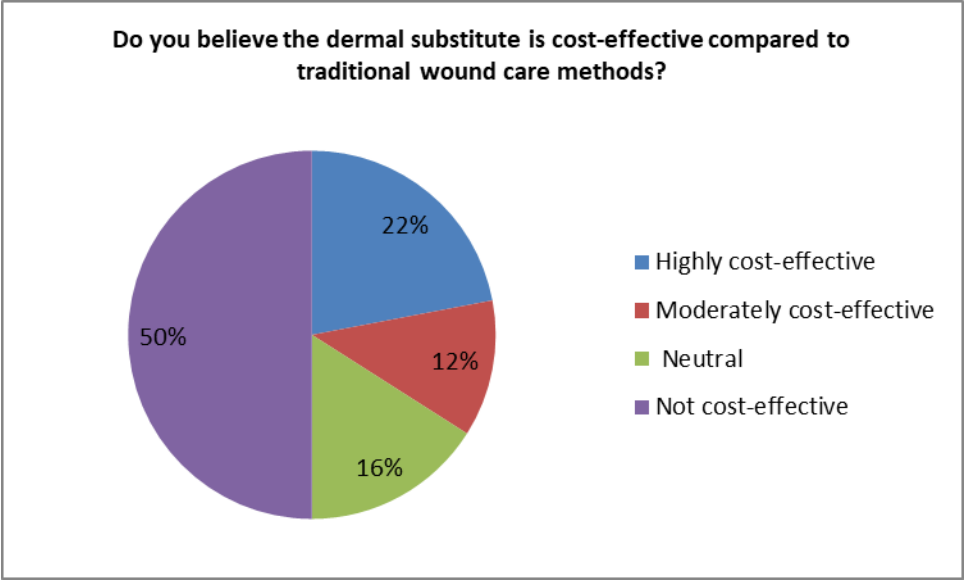
4. Have you experienced any infections since starting treatment with the dermal substitute?



5. Overall, how satisfied are you with the outcomes achieved using the dermal substitute?



6. Do you believe the dermal substitute is cost-effective compared to traditional wound care methods?



Findings

1. Analysis showed that what remained of wounds treated with dermal substitutes healed much faster than those with conventional management
2. The rates of infection were less in those wounds which were treated with substitutes
3. While the dermal substitute was higher front-end in cost, its use resulted in a lower total cost for wound care
4. Patients were more satisfied with the care provided by dermal substitutes than with standard wound care

Suggestions

- The products in this segment needs to be manufactured in India as right now it needs to be Imported from Germany, USA and other countries as well.
- Studies on Cost-Effectiveness
- Improve Patient Education
- Encourage Innovation and Research

Conclusion

- The integrated working of advanced biomaterial science and tissue engineering principles, dermal substitutes make healthcare providers quite unique in offering better treatment results while improving quality of life.
- 78% surgeons from the sample size of 50 found the wound closure due to dermal substitutes satisfied.
- These substitutes excel at producing an efficient wound closure by active support of the healing process through cellular ingrowth, vascularization, and deposition of the extracellular matrix.