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Comparative Study of Absorbable and Non-Absorbable Sutures in Intraoral Surgical Wound Healing.

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Introduction

Suturing is a fundamental aspect of oral surgical procedures, serving to approximate wound edges, promote hemostasis, and facilitate optimal healing. Intraoral wound closure presents unique challenges due to the moist environment, continuous mechanical stress from mastication, and high microbial load. The selection of suture material significantly influences the healing process, postoperative comfort, and risk of infection [1, 2, 3, 4, 5].

Broadly, sutures are categorized into absorbable and non-absorbable types. Absorbable sutures, such as polyglactin 910 and polyglycolic acid, undergo hydrolytic or enzymatic degradation within the tissues, eliminating the need for removal. These are often preferred in intraoral surgeries to minimize patient discomfort and follow-up visits. Non-absorbable sutures, including silk, nylon, and polyester, retain tensile strength over prolonged periods and must be removed post-healing, but they are valued for their knot security and handling characteristics.

The debate over the optimal choice for intraoral surgical wound healing continues, with various studies suggesting differences in inflammatory response, tissue reaction, healing time, and postoperative complications between the two categories. A comparative analysis of absorbable and non-absorbable sutures can help guide clinical decision-making, aiming to balance patient comfort, surgical efficiency, and wound healing outcomes.

Conclusion

The choice between absorbable and non-absorbable sutures in intraoral surgical wound closure should be guided by the nature of the procedure, patient compliance, and desired healing outcomes. Absorbable sutures offer the convenience of no removal and may reduce postoperative visits, while non-absorbable sutures can provide better tensile strength in situations demanding prolonged wound support. Clinicians must weigh the benefits and limitations of each type, considering factors such as tissue reactivity, cost, and patient-specific requirements. Further controlled clinical trials with standardized protocols are essential to establish definitive recommendations for suture selection in oral surgery.

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