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Comparative Evaluation of the Placement of Drain Versus Normal Suturing to Eliminate Postoperative Complications After the Surgical Removal of Impacted Third Molar

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Sarmatha Selvaraj [1], Indra Kumar Periyasamy [1], Gayathri P. Elangovan [2], Arrvinthan Su [1], K. Srinath [1], B. Sivaragahvi [1]

1. Oral and Maxillofacial Surgery, Vivekanandha Dental College for Women, Tiruchengode, IND 2. Periodontology, Vivekanandha Dental College for Women, Tiruchengode, IND

Corresponding author: Indra Kumar Periyasamy, kumarjeeth@yahoo.com

Abstract

Objective

This study aimed to compare the efficiency of corrugated rubber drains and sutures in preventing complications after the surgical removal of impacted mandibular molars.

Methodology

Sixty patients enrolled for surgical extraction of wisdom teeth were studied. The patients were divided into two groups of 30. After extraction, Group A received a corrugated flat rubber drain and Group B had only conventional knotted sutures in the extraction site. Patients were evaluated for postoperative pain, edema, and trismus. Before the procedure and on postoperative days 1, 2, and 7, all parameters were measured and compared.

Results

Patients in Group A with surgical drains showed a significant reduction in all postoperative challenges in contrast to Group B with normal sutures. The intergroup comparison indicates that pain was highest before surgery and showed a significant reduction by day 7 in both groups. Similarly, trismus was also at its peak before surgery for both groups. However, in contrast to Group A, Group B with suturing alone demonstrated a substantial reduction in trismus by day 7. By the end of day 7, edema had substantially decreased in both groups, but it was not statistically significant ($P < 0.05$).

Conclusions

The placement of surgical drains and the use of sutures alone have both shown similar and significant benefits in preventing postoperative challenges. However, intraoral drainage with a flat drain after mandibular third molar removal showed a significant reduction of pain, as measured by the visual analog scale (VAS) scale, or postoperative swelling.

Categories: Dentistry
Keywords: sutures, trismus, flat drain, surgical drain, third molar extraction

Introduction

Surgical extraction of impacted third molars is one of the most common surgical treatments provided by oral surgeons in dental clinics. Erupting third molars is the most common cause of pain, and it may be complicated by periapical inflammation, abscess, phlegm, or cyst [1]. Typical side effects experienced following extraction of an impacted tooth are reportedly pain, trismus, edema, and dry socket. Aside from the economic implications, the side effects of third molar surgery can result in significant morbidity, which may be severe enough to impede daily activities. These issues may be related to the type of suturing technique used depending on the length of the surgical procedure and the placement of intraoral drainage in the extraction site [2].

Partial wound closure, as opposed to complete wound closure, is used to alleviate pain, edema, and trismus following the extraction of the third molar [2]. The purpose of placing a drain after surgically extracting an impacted mandibular third molar is to provide a path for excessive exudate to flow out of the surgical site thus minimizing the possibility of subsequent hematoma formation [3]. Surgical drains are categorized as active or passive. Passive drains include tube drains, sheet drains, flat drains, open and closed drains, and external and internal drains [4]. For a variety of surgical procedures, including plastic and reconstructive surgery, flat drains are employed. Flat drains operate by the forces of gravity or changes in intracavity