

ABSTRACT

Background : Surgical removal of impacted mandibular third molars involves manipulation of both hard and soft tissues, so it is usually associated with a number of post-operative complications. Trismus, pain, swelling, lingual nerve damage and compromised periodontal status of the preceding second molar are complications which are unpleasant and uncomfortable for the patients. Therefore, reducing the incidence of complications becomes necessary. Flap designs are modified in order to minimize the post-operative complications.

Aim of the study : The aim of this study was to compare the effects of three types of flap designs used during surgical removal of impacted mandibular third molars and to investigate the consequences between Comma-shaped incision or Koener's incision over the standard Ward's incision in terms of post-operative complications.

Materials and Methods: A prospective, randomized in vivo study was conducted in the DEPARTMENT OF ORAL AND MAXILLOFACIAL SURGERY, TAMILNADU GOVERNMENT DENTAL COLLEGE AND HOSPITAL, CHENNAI. Sixty healthy patients with unilateral or bilateral partially impacted mandibular third molars were selected for this study. Patients were randomly divided into three groups namely group 1, group 2 and group 3. Ward's incision, Comma-shaped incision and Koener's incision were used in group 1, group 2 and group 3 respectively. The influence of these incisions on ease of access, time required for surgery, post-operative mouth opening, swelling, pain and wound healing was evaluated.

Results: The results of this study show difference with respect to accessibility to surgical site, time required for the surgery, post-operative decrease in mouth opening, post-operative swelling and post-operative pain. Ward's incision provided excellent access to the surgical site as compared to comma shaped incision and Koener's incision. Time required for the surgery was least with the use of comma shaped incision, while it was more with Ward's incision amongst three incision groups. Post-operative mouth opening, post-operative swelling and post-operative pain were

affected more adversely with the use of Ward's incision while these parameters were least adversely affected with the use of Comma shaped incision, Koener's incision being the intermediate. Significant differences were not noted with respect to post-operative pocket depth distal to second molar, wound dehiscence, wound infection, dry socket and paresthesia.

Conclusion: Comma shaped incision is more preferable when compared to Ward's and Koener's incision, although it may require some practice initially and a more broader study group of patients under each category is recommended.

Keywords: Impacted mandibular third molar, flap design, Ward's incision, Comma shaped incision, Koener's incision, post-operative complications.