Evaluation of fibrin sealant as a wound closure agent in mandibular third molar surgery - A prospective, randomized controlled clinical trial.

Authors: Gogulanathan M., Elavenil P., Gnanam A., Krishnakumar Raja V.B.

Publication Date: 2015

Abstract:

The aim of this randomized controlled trial was to assess the effectiveness of fibrin sealants in achieving haemostasis and wound closure following mandibular third molar extraction, in comparison with conventional suturing. Thirty patients with bilateral mandibular third molar impactions were recruited for the study. Using a split-mouth study design, wound closure following extraction was done using fibrin sealant on the study side and suturing on the control side. Sample allocation was done by simple randomization. The primary outcome measures were (1) the time taken to achieve wound closure and haemostasis and (2) postoperative mouth opening, pain, and swelling. Data analysis involved descriptive statistics and paired t-tests ($P < 0.05$). IBM SPSS software (v.20.0) was used for the data analysis. The study group demonstrated a statistically significant reduction in duration to achieve haemostasis (1.2 vs. 251.9 s; $P < 0.001$) and wound closure (152.8 vs. 328.8 s; $P < 0.001$) in comparison with the control group. The study group also exhibited significantly reduced pain scores (2.0 vs. 3.5; $P < 0.001$) and increased post-surgical mouth opening ($P < 0.001$). No adverse effects of fibrin sealant were observed. In conclusion, fibrin sealant is a superior intraoral wound closure and haemostatic agent and a worthy alternative to suturing.