

# **Autologous fibrin sealant reduces pain after tonsillectomy.**

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## **Abstract:**

**Objectives/Hypothesis:** Pain is a major cause of morbidity after tonsillectomy. Although various efforts have been made to reduce pain, the use of oral analgesics, which can have adverse side effects, remains the standard of care. It is hypothesized that fibrin sealant, used to achieve hemostasis and enhance healing in many surgical procedures, might help decrease pain after this operation. **Study Design:** A prospective, randomized, blinded study was performed on 20 children aged 5 to 17 years who were undergoing tonsillectomy, to evaluate the efficacy of FIBRIN SEALANT in reducing postoperative pain. **Methods:** All patients pre-donated 40 mL of blood from which autologous concentrated fibrinogen was prepared by cryoprecipitation. In the fibrin sealant group, fibrinogen and topical bovine thrombin were sprayed onto the surgical site to form fibrin sealant at the conclusion of tonsillectomy. The 10 patients in the control group (C) received no fibrin sealant. Patients rated their level of pain immediately after surgery and at regular intervals for 3 days after surgery using the Wong-Baker Faces Pain Rating Scale (1-6). Emesis, postoperative bleeding, medications, and adverse events were also evaluated. **Results:** At 7:00 P.M. on postoperative day (POD) 0, the mean  $\pm$  SD fibrin sealant group pain score ( $2.9 \pm 0.41$  units) was significantly lower than for the C group ( $4.1 \pm 0.43$  units;  $P \leq .05$ ). There was also a trend in favor of less pain in the fibrin sealant group at 7:00 P.M. on POD 1, with a mean of  $3.5 \pm 0.43$  units versus  $2.4 \pm 0.48$  units for C ( $P = .15$ ). The odds of a patient in C experiencing emesis were 8.16 times higher, ( $P \leq .05$ ) than for patients in the fibrin sealant group. **Conclusions:** Fibrin sealant significantly reduced pain the evening after pediatric tonsillectomy and also decreased the chance of experiencing

emesis. Thus fibrin sealant may be clinically useful as an adjunct to tonsillectomy.