

The efficacy of topical fibrin sealant in the reduction of post-operative pain after transoral surgery

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Background and Importance	Objective	Results	Conclusions and Relevance
Postoperative pain after surgery of the oral cavity and oropharynx can be a debilitating problem for the head and neck cancer patient. This can adversely impact recovery and slow progression through the treatment course. Postoperative pain from the initial transoral surgery can result in opioid dependence, delays in resuming oral intake, and prolonged hospital stay. This impacts overall quality of life, return to function, and compliance with downstream treatment. Fibrin sealants are commercially available and have been used in surgical wounds to aid in hemostasis, anastomotic integrity, and reduction of fluid collections. Fibrin glue is currently used following some transoral surgeries with the goal of preventing postoperative hemorrhage. The role of fibrin sealants in the reduction of postoperative pain in transoral surgery has not yet been established.	Our goal is to evaluate the role of fibrin glue in mitigating postoperative pain following transoral surgery. We conduct a retrospective review of all head and neck surgical oncology patients at a single institution providing tertiary care for head and neck cancer patients. Postoperative discomfort in patients where fibrin sealant has been used is compared to control. Related functional outcomes and quality of life measures following transoral surgery among these cohorts is also evaluated.	All patients in the experimental cohort received application of fibrin sealant to the operative defect during surgery with healing by secondary intention versus control (no fibrin sealant applied). Application of fibrin sealant to the transoral surgical defect reduced postoperative pain, opioid usage, time to oral intake, hospital stay, and 30-day hospital readmission related to the procedure. Patients who received fibrin sealant to the operative defect during transoral surgery in the oral cavity had a decrease in opioid requirements and length of hospital stay, as well as a faster time to resumption of oral nutritional intake versus controls. Interestingly, these patients reported a mild increase in postoperative discomfort beginning at two weeks postoperatively, but this did not disrupt nutritional achievement nor result in an increase in opioid requirement. All patients who received fibrin sealant during transoral surgery for oropharyngeal cancer resumed oral intake on postoperative day one without significant odynophagia or dysphagia and had decreased opioid requirements versus control.	Application of fibrin sealant at the time of transoral surgery mitigates pain in the immediate postoperative period. Additionally, improved functional and quality of life achievements by these patients may improve downstream compliance with nutritional goals and adjuvant treatment protocols.
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