



## Response to letter

Margaret I. Engelhardt, Alexandra C.G. Fonseca, Zhen J. Huang, Zi Yang Jiang, Sancak Yuksel, Soham Roy\*



Dear Editors,

We appreciate the letter to the editor written by Dr. Zhengcai-Lou discussing our work on post-tonsillectomy hemorrhage (PTH) and its relation to post-operative pain management. Our response to his thoughtful commentary follows.

The first point raised by the commenter relates to the number of surgeons and differing surgical techniques included in our results. The tonsillectomies were performed at a single tertiary academic institution by 18 different surgeons, although the majority (71%) were conducted by three high-volume pediatric otolaryngologists. Surgical equipment also varied, with coblation and electrocautery being the most commonly used techniques representing almost 100% of the cases. Earlier studies suggested an unequal hemorrhage rate depending on equipment utilized, with coblation considered inferior to other “hot” techniques. However, this conclusion has not been without controversy in light of more recent literature. A prospective double-blind randomized controlled trial of 1004 patients comparing coblation tonsillectomy and conventional tonsillectomy published in 2017 found that coblation conferred a lower risk of primary hemorrhage (0.2% versus 0.8%) but a higher risk of secondary hemorrhage (1.2% versus 0.2%) [1]. Contrary to this, a 2017 systematic review and descriptive analysis involving 16 studies and 567 patients found that none of the included studies demonstrated a significant difference between the coblation and control groups with respect to primary or secondary hemorrhage [2]. Finally, a recent Cochrane review on the subject comprising 25 studies found a similar risk of primary bleeding between coblation and other surgical techniques (risk ratio 0.99, 95% CI 0.48 to 2.05). The risk of secondary bleeding approached but did not reach significance for a 95% confidence interval (risk ratio 1.36, 95% CI 0.95 to 1.95), and additionally this was based on low-quality evidence [3]. As a result, we believe that the outcomes presented in our series are not significantly impacted by the techniques utilized during the operations.

Regarding indications for tonsillectomy, this was not included in the

analysis of our dataset. Interestingly, a recent study of 18,712 tonsillectomy patients found that, while there was an increase in hemorrhage complications for those undergoing tonsillectomy for tonsillitis rather than upper airway obstruction due to tonsillar hypertrophy, this significance was negated after controlling for the use of bipolar diathermy over cold dissection and patient age [4]. In addition to surgical indication, male gender, increased age, and higher body mass index have all been suggested as PTH risk factors [4–6]. Future studies might explore interactions between these patient subgroups which confer an increased risk of post-tonsillectomy hemorrhage.

We thank Dr. Zhengcai-Lou and associated authors for their thoughtful commentary on our article. While we hope that our series adds meaningfully to the existing literature, these comments highlight the need for further investigation controlling for techniques and indications in regards to postoperative pain management and its effects on postoperative bleeding rates.

### References

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\* Corresponding author.

E-mail address: [soham.roy@uth.tmc.edu](mailto:soham.roy@uth.tmc.edu) (S. Roy).