

# Hot Tonsillectomy: How Do Risks Compare to Routine Tonsillectomy?

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## Educational Objective

- At the conclusion of this presentation, participants should be able to compare the risks associated with hot tonsillectomy to the risks of tonsillectomy as treatment for recurrent tonsillitis.

## Objectives

- Compare risks of hot tonsillectomy to tonsillectomy done for recurrent tonsillitis (RT) in adults.
- Identify whether specific variables are predictive of higher risk of PTA.

## Introduction

- Tonsillectomy is one of the most common surgical procedures performed in the field of otolaryngology; it is most commonly indicated for recurrent/chronic tonsillitis (RT) and peritonsillar abscess (PTA).
- Hot tonsillectomy refers to removal of a tonsil in order to drain a PTA. This tends to be a last option for treatment of PTA due to perceived risks.
- Recent studies have found that risks such as postoperative bleeding are not significantly different between hot tonsillectomies and tonsillectomies for recurrent/chronic tonsillitis.<sup>1,2</sup>



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## Methods

- Retrospective study, using the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database, of adults who underwent tonsillectomy (CPT code 42826).
- Postoperative diagnosis: either PTA or recurrent/chronic tonsillitis/pharyngitis.
- Demographics [Tables 1, 2] and Measures of Outcome [Table 3] were collected.

**Table 1.** Demographics of patient population; <sup>a</sup>*p*<0.001

Demographic	Total	PTA	RT
<b>Sex</b>			
Male N (%) <sup>a</sup>	2135 (33.4)	104 (52.0)	2031 (32.8)
Female N (%)	4248 (66.7)	96 (48.0)	4152 (67.1)
<b>Race N (%)</b>			
White	3844 (60.2)	119 (59.5)	3725 (60.2)
Black/African American	669 (10.5)	31 (15.5)	638 (10.3)
Unknown	1583 (24.8)	41 (20.5)	1542 (24.9)
Asian	229 (3.6)	8 (4.0)	221 (3.6)
American Indian/Alaska	20 (0.31)	0 (0)	20 (0.31)
Native Hawaiian or Pacific Islander	38 (0.60)	1 (0.5)	37 (0.6)
<b>Mean Age Years (95% CI)<sup>a</sup></b>	<b>28.3 (28.1-28.6)</b>	<b>31.8 (29.9-33.6)</b>	<b>28.2 (28.0-28.5)</b>
<b>Total, N</b>	<b>6383</b>	<b>200</b>	<b>6183</b>

**Table 2.** Comparison of preoperative comorbidities between patient populations of the two indication groups; CHF = congestive heart failure, COPD = chronic obstructive lung disease; <sup>a</sup>*p*<0.001

Comorbidity	Total, N (%)	PTA, N (%)	RT, N (%)
Hypertension <sup>a</sup>	391 (6.1)	26 (13)	365 (5.9)
Current Smoker within One Year <sup>a</sup>	879 (13.8)	58 (29)	821 (13.3)
Diabetes	168 (2.6)	10 (5)	158 (2.6)
Dyspnea	63 (1.0)	2 (1)	61 (1.0)
History of Severe COPD	14 (0.2)	1 (0.5)	13 (0.2)
Steroid Use for Chronic Condition	81 (1.3)	5 (2.5)	76 (1.2)
Bleeding Disorders	10 (0.2)	1 (0.5)	9 (0.15)
Systemic Sepsis	30 (0.5)	27 (13.5)	3 (0.05)
Renal Failure on Dialysis	2 (0.03)	0 (0)	2 (0.03)

## Results

- PTA group had a greater proportion of males, higher mean age.
- More smokers and patients on hypertensive meds in PTA group.
- Sepsis or SIRS was more prevalent in PTA group.
- Risk of returning to OR 1.8x higher for PTA group.
- PTA group had longer operative time, 35 min vs 25 min (*p*<0.001).
- 1 death, in PTA group.

**Table 3.** Measures of outcome; <sup>a</sup>*p*<0.001 <sup>b</sup>*p*=0.043

Complication	Total, N (%)	PTA, N (%)	RT, N (%)
Failure to Wean <sup>a</sup>	4 (<0.001)	2 (1) (<0.001)	2 (<0.001)
Sepsis or SIRS <sup>a</sup>	50 (0.8)	33 (16.5)	17 (0.3)
Return to Operating Room <sup>b</sup>	219 (3.4)	12 (6)	207 (3.3)
Related Readmission	140 (2.2)	4 (2)	136 (2.2)
Bleeding <sup>a</sup>	170 (2.7)	7 (3.5)	163 (2.6)

## Discussion/Conclusions

- Previous studies have found a significant correlation between Type 2 diabetes mellitus and the risk of PTA,<sup>3</sup> but our data did not show such a correlation, and instead supports previous findings linking smoking history<sup>4</sup> with PTA risk, along with hypertension.
- Adults undergoing hot tonsillectomy have more comorbidities than those undergoing tonsillectomy for recurrent infections.
- Presence of PTA was not predictive of reoperation or readmission. Prior studies have shown prevalence of other complications including mediastinitis and airway obstruction.<sup>5</sup>

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