Venous Thromboembolism in Otolaryngology

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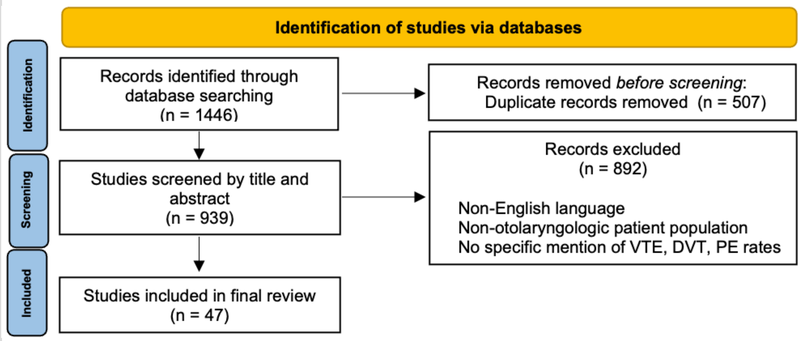
Background and Introduction

- Venous thromboembolism (VTE) is a common cause of preventable death in the United States, affecting up to 200,000 Americans annually with approximately 1/3 occurring after surgery[1].
- VTE rates may be underestimated due to subclinical or delayed presentation, especially in outpatient procedures.
- There are no consensus recommendations for VTE prophylaxis or monitoring in otolaryngology[2].
- There remains significant heterogeneity in the reported rates of VTE in otolaryngology and evidence for role of monitoring and prophylaxis[3].

Methods and Materials

- A systematic literature review was performed to assess all reported VTE rates in ENT literature.
- A retrospective review of operative otolaryngology patients was performed at two tertiary medical centers (7/2016-12/2022).
- VTEs were categorized into deep venous thrombosis (DVT) or pulmonary embolism (PE), and the surgery that was conducted prior to VTE events occurring was recorded as well as other patient demographics and Caprini scores.



Aims

1. Determine current rates of VTE in otolaryngology, stratified by subspecialty

2. Evaluate risk factors for the development of VTE in otolaryngologic procedures

Results

Systematic Review

- 47 studies included in review (n=1,160,889 patients), demonstrating an overall VTE rate of 1.33% (0.17%-2.30%) across all specialties
- H&N patients demonstrated highest VTE rates (3.29%) while facial plastics lowest rates (0.10%)

Retrospective Institutional Review

- 9871 otolaryngologic procedures were reviewed at two tertiary medical centers
- 176 VTE events were identified (1.78%)
- H&N patients demonstrated highest VTE rates (58.5%, 103/176)

Figure 1.

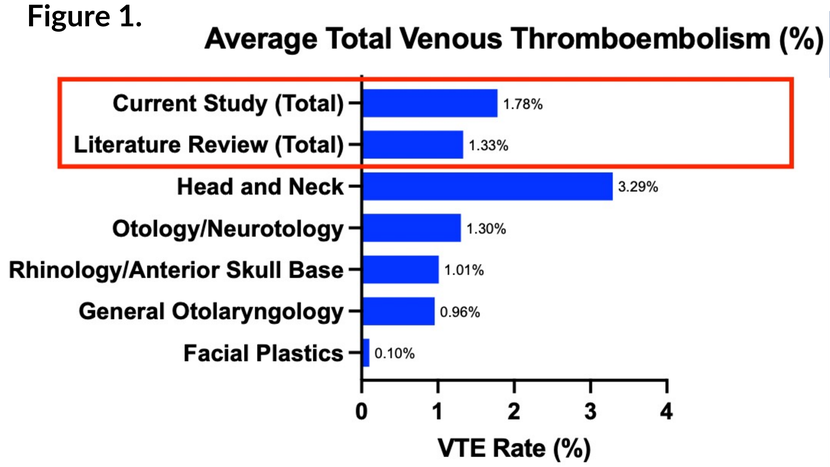
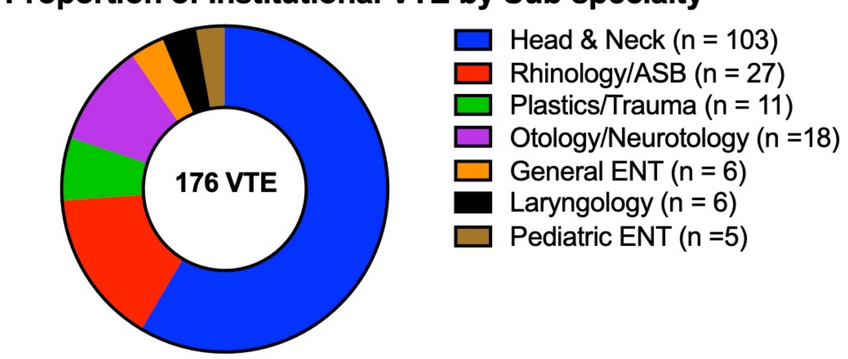


Figure 2.



Discussion

- There remains significant heterogeneity with regards to reported VTE rates in the otolaryngology literature, with no clear consensus on optimal prophylaxis or monitoring regimens
- H&N remains the highest risk category with regards to development of VTE
- Despite attempts to quantify, VTE may be underreported in the literature.
- The identification of risk factors for development of VTE may help guide clinical decision making

Conclusions

- Further studies are needed to determine common risk factors for the development of VTE in otolaryngology, as well as the development of optimal monitoring and management strategies to determine the impact of VTE in this population
- This systematic review is the most comprehensive review of VTE in otolaryngology to date, further meta-analysis will help elucidate improved reported rates
- Further analysis on risk factors including preoperative Caprini scores and prophylaxis regimens of our institutional data will further elucidate high risk patients that may guide clinical decision making

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