

Effects of COVID-19 Pandemic on Incidence of Peritonsillar Abscess

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Introduction

- Peritonsillar abscess (PTA) is an infection that can occur as a common complication following acute tonsillitis.¹
- Patients typically present with sore throat, dysphagia, trismus, and otalgia.
- Treatment of PTA includes antibiotics, incision and drainage.²
- The prevalence of tonsillitis was previously shown to decrease significantly during the pandemic.³
- This study aims to determine if the incidence of PTA in the pediatric population followed a similar pattern.

Methods

- A retrospective chart review was conducted at a tertiary care children's hospital between 2018 and 2022
- Electronic health records were found with ICD-10 code J36 for "peritonsillar abscess"
- Patient age, gender, race, treatment, comorbidities, admission status and length of hospital stay were recorded
- Statistical analyses were conducted with the Kruskal Wallis and Fisher Exact tests

Results

- There were 105 patients included in the study with a mean age of 13.0 ± 4.3 years ($p = 0.09$).
- The incidence of pediatric PTA decreased during and after the COVID-19 pandemic in 2020-2022.

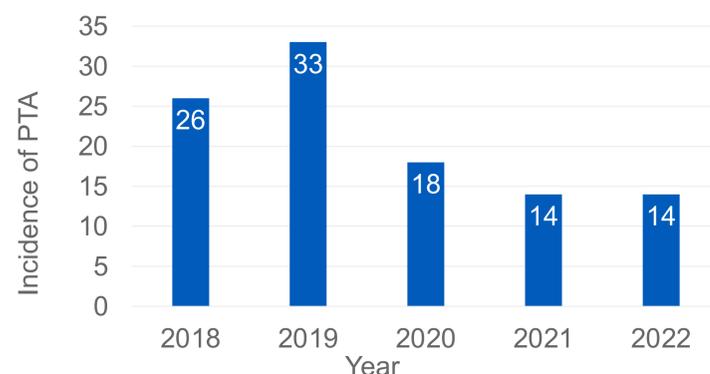


Figure A. PTA frequency by year

- The age of patients diagnosed with a PTA was similar from 2018-2022 ($p=0.9$).

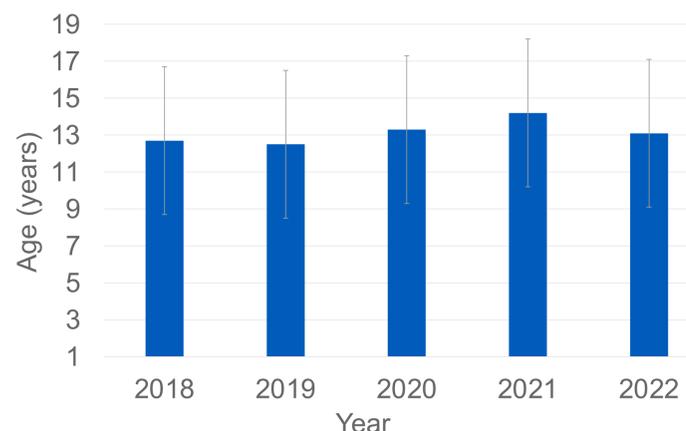


Figure B. Mean age of patients diagnosed with PTA

Mean Age	12.7 ± 3.9	12.5 ± 5.1	13.3 ± 4.2	14.2 ± 2.8	13.0 ± 4.3
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- There was no significant difference in emergency vs. inpatient location ($p=.1$), admission status ($p=.59$), or length of stay ($p=.15$).

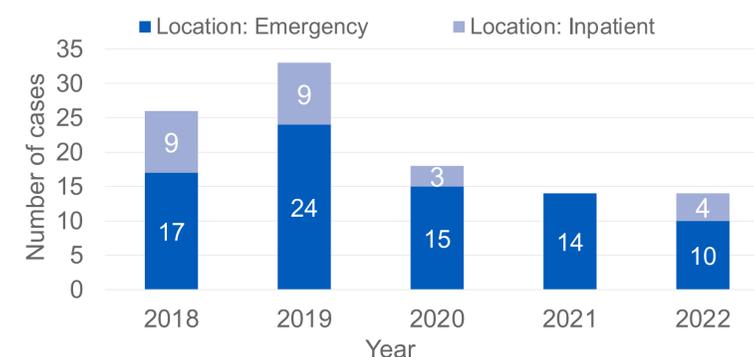


Figure C. PTA Incidence based on admission status

- There was a 51% decrease in mean number of PTA cases before pandemic closures (2.5 ± 1.2 per month), to after COVID closures in March 2020 (1.2 ± 1.2 per month, $p<.001$).

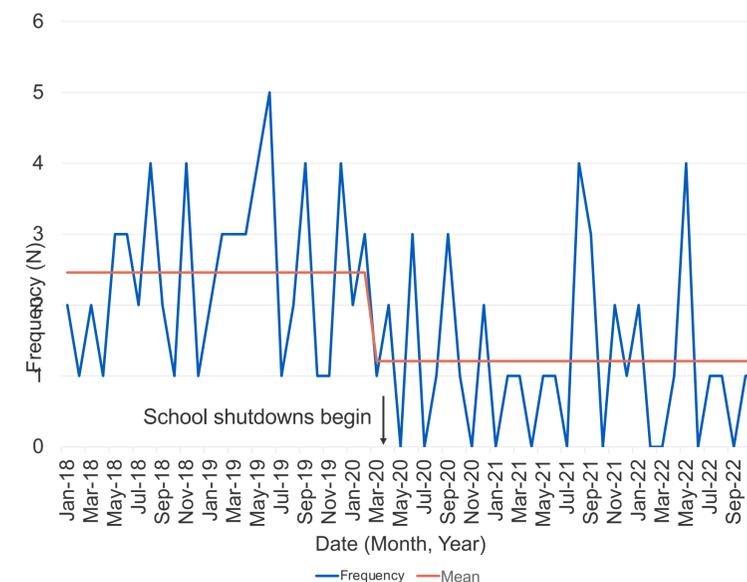
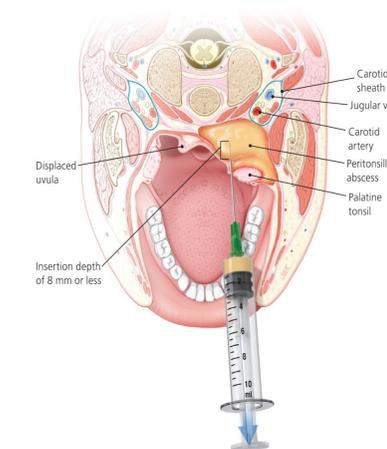


Figure D. Run chart analysis of monthly incidence of PTA

Conclusions

- Following pandemic-related isolation and masking, the incidence of pediatric PTA decreased significantly in this population.
- The decline of upper respiratory infections is hypothesized to play a role in the decreased incidence of PTA.⁴
- Contrastingly, recent literature reveals infections of Weber glands may be contributing to the pathogenesis of PTA, rather than tonsillitis.⁵
- Further studies investigating the incidence of PTA after the discontinuation of airborne precautions and isolation would further validate our hypothesis.



References

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