



# Peritonsillar abscesses in children: morbidity and clinical outcomes from ACS-NSQIP data

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Figure 1. Age distribution of children in cohort

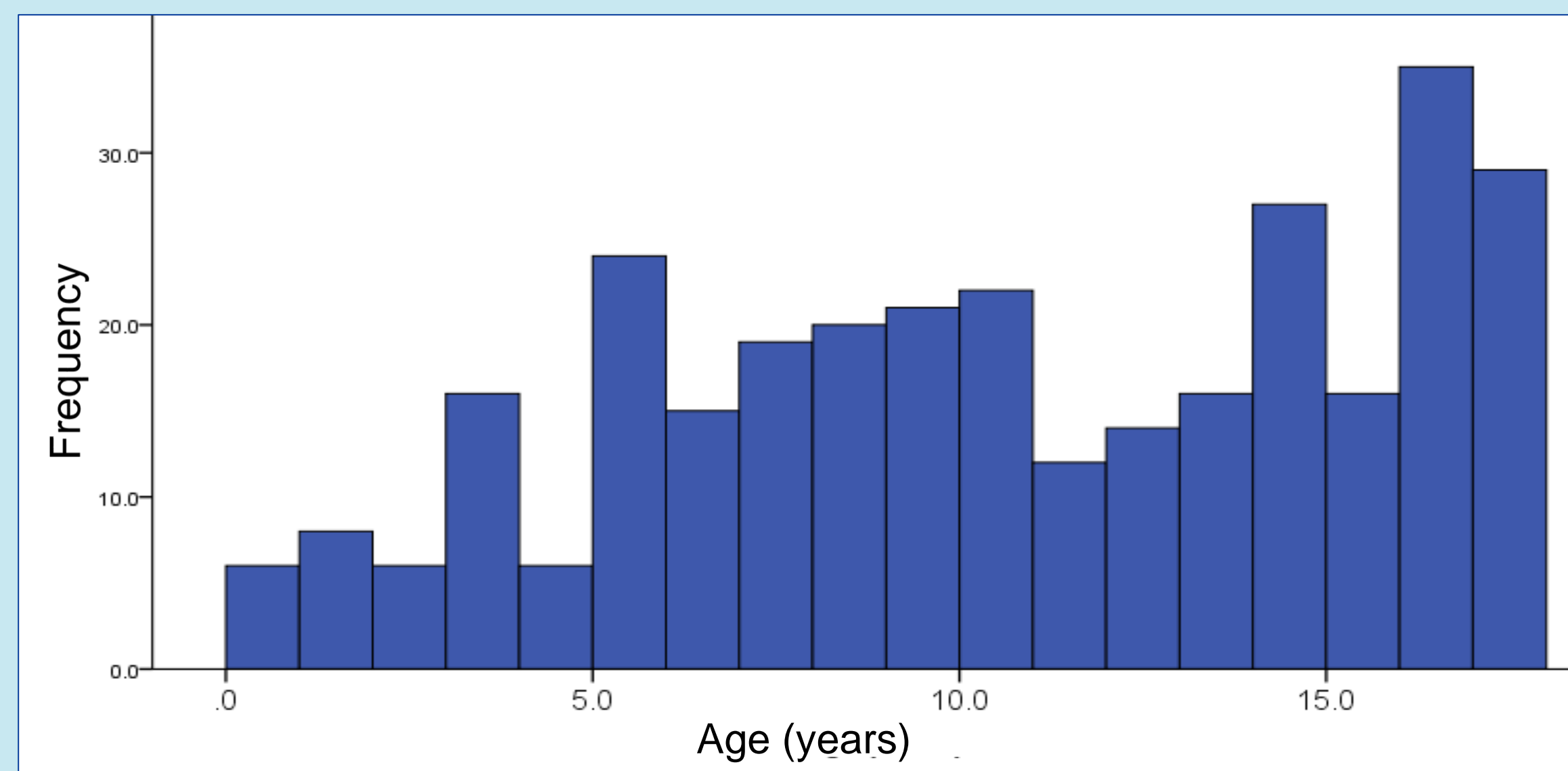


Table 1. Setting from which patients were admitted

Admitted from:	N (%)
Emergency Department	259 (82.5%)
Outpatient clinic	44 (14.0%)
Transfer from outside hospital	9 (2.9%)

Table 2. Unplanned reoperation procedure types and frequencies

Procedure type	Number of subjects (N, (%))
Insertion of central venous access device	1 (0.3%)
Mediastinotomy with exploration	1 (0.3%)
Incision & drainage of PTA	2 (0.6%)
Retropharyngeal or parapharyngeal space abscess drainage via internal approach	2 (0.6%)
Tonsillectomy, primary or secondary, age 12 or over	2 (0.6%)

Table 3. Clinical outcomes for patients with sepsis and SIRS

	Readmission (N)	Reoperation (N)	Average LOS (days)	Average age (years)
Sepsis	5	3	1.9	10.7
SIRS	31	0	1.9	9.5
Neither	36	3	1.4	11.1
P-value	<0.001*	<0.001*	<0.001*	0.386

\*Significant difference (P<0.05)

Table 4. Clinical outcomes for patients based on age (years)

	<4	4 to 12	12 to 18	P-value
BMI (%)	16.8	18.7	24.5	<0.001*
Asthma (%)	5.6	10.8	5.1	0.183
Steroids (%)	5.6	10.8	13.9	0.356
Admission location (%)				
Admitted from ED	80.6	81.3	83.9	0.018*
Outpatient clinic	5.6	15.8	14.6	
Transfer from outside hospital	11.1	2.2	1.5	
Total operative time (minutes)	16.1	11.9	13.8	0.015*
Total anesthesia time (minutes)	48.0	43.4	46.4	0.226
Total LOS (days)	2.75	1.44	1.7	0.030*
Unplanned reoperation (%)	2.8	0.7	2.9	0.008*
Readmission (%)	2.8	0.0	4.4	0.175

\*Significant difference (P<0.05)

## Discussion

- PTA is the most common complication resulting from acute tonsillitis<sup>4</sup>
- Few studies have examined complication rates and clinical outcomes for children with PTA
- 11.5% of children were treated with steroids, which is lower than previously reported from studies conducted in Canada and the UK<sup>4,5</sup>
- We found that steroid usage did not reduce LOS; however, prior data on this are mixed<sup>4,6</sup>
- 41.7% of children met criteria for sepsis or SIRS, which is consistent with what has been previously reported<sup>5</sup>
- Children with sepsis and SIRS had longer hospital stays, readmissions, and reoperations
- Younger children required longer operative times and hospital stays

## Conclusion

Steroid use in this cohort was lower than in prior studies, which may reflect international differences in PTA management. Steroids did not reduce length of hospital stay. A subset of patients with PTA meet criteria for sepsis or SIRS and require additional care and interventions in the postoperative period.

## References

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## Introduction

Peritonsillar abscess (PTA) is the most common abscess within the head and neck.<sup>1</sup> Management typically includes drainage via needle aspiration or incision and drainage, both typically in the outpatient setting.<sup>2</sup>

There is a paucity of literature describing the complications and clinical outcomes for children following PTA drainage.

Accordingly, the aim of this study is to describe the morbidity and clinical outcomes for pediatric patients who have undergone PTA drainage using American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) data.

## Methods

### Study design:

Multicenter retrospective cohort study of children undergoing PTA drainage using the 2012-2014 ACS-NSQIP Pediatric Database.<sup>3</sup>

### Methods:

Eligible pediatric patients were identified using current procedural terminology (CPT) code 42700. Demographic data, patient comorbidities, and 30-day postoperative events (unplanned reoperation, readmission, and complications) were collected. Data analysis was performed in SPSS 22 (IBM, Armonk, NY). Multivariate logistic regression was used to identify predictive factors for major adverse events.

## Results

### Demographics:

314 children ages 23 days to 18 years were identified. 52.5% were female, and the average age was 10.7 years (Figure 1). 41.6% were underweight, and 21.4% were overweight or obese.

### Hospital admission and course:

The majority (81.5%) were treated in an inpatient setting, and the average length of stay (LOS) was 2 days. 90.8% had 1 day or less in the hospital prior to surgery. 11.5% received steroids. Remaining data are depicted in Table 1.

### Reoperation and readmission:

6 patients required unplanned reoperation (Table 2) within 30 days, and 7 were readmitted for related reasons.

### Complications and clinical outcomes:

39.2% and 2.5% met sepsis and SIRS criteria, respectively. Clinical outcomes for patients with sepsis are depicted in Table 3. Children with higher BMIs required longer anesthesia time. Steroid use was not correlated with shorter LOS. Age-based outcomes are shown in Table 4.