

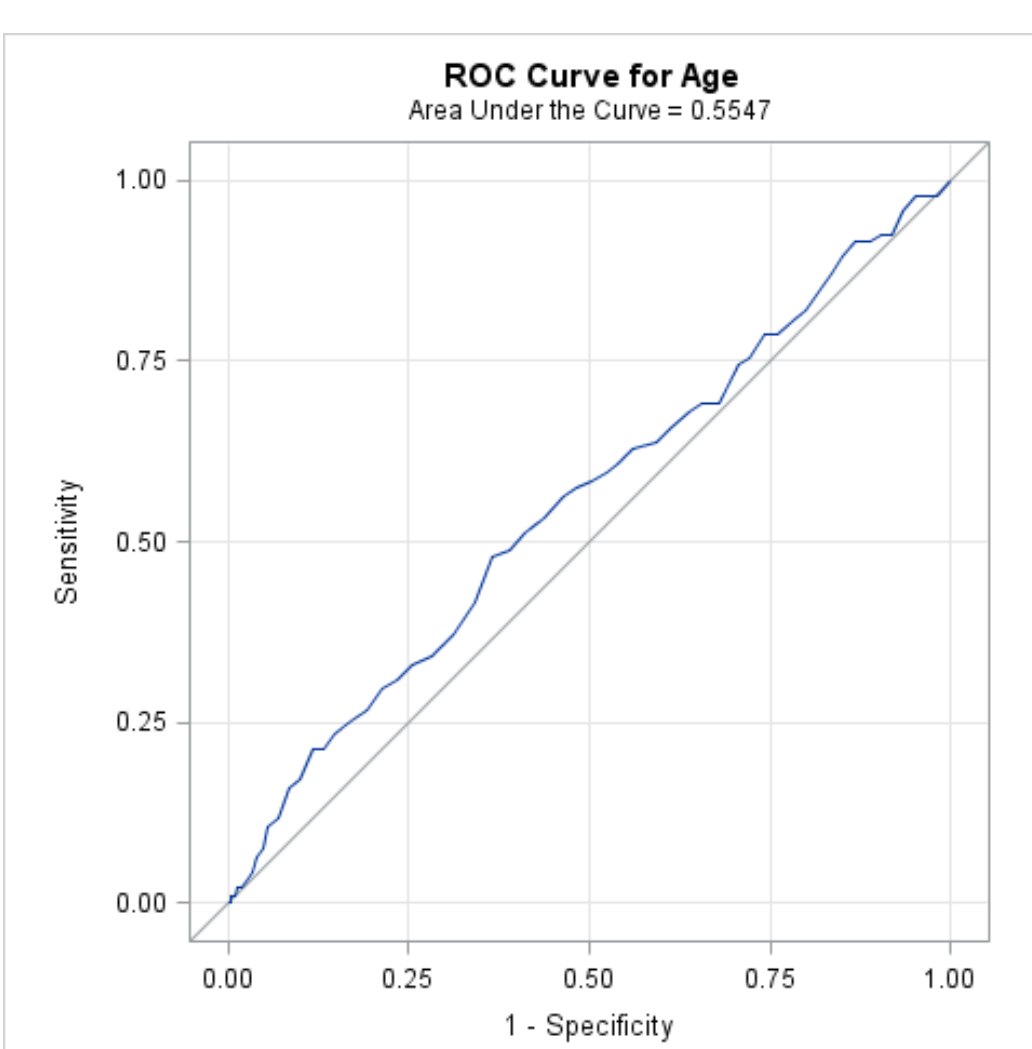
Introduction

• The 1996 Tonsillectomy and Adenoidectomy Inpatient Guidelines of the AAO-HNS Pediatric Otolaryngology Committee recommended children <3 years of age be admitted following tonsillectomy. Recommendations for hospital observation were omitted from the 2011 AAO-HNS Clinical Practice Guidelines for Tonsillectomy in Children. At our institutions, most children >10 kg recover outpatient. Our objective was to determine if there is a statistically significant relationship between tonsillectomy complication rates and the age and/or weight of children at the time of surgery.

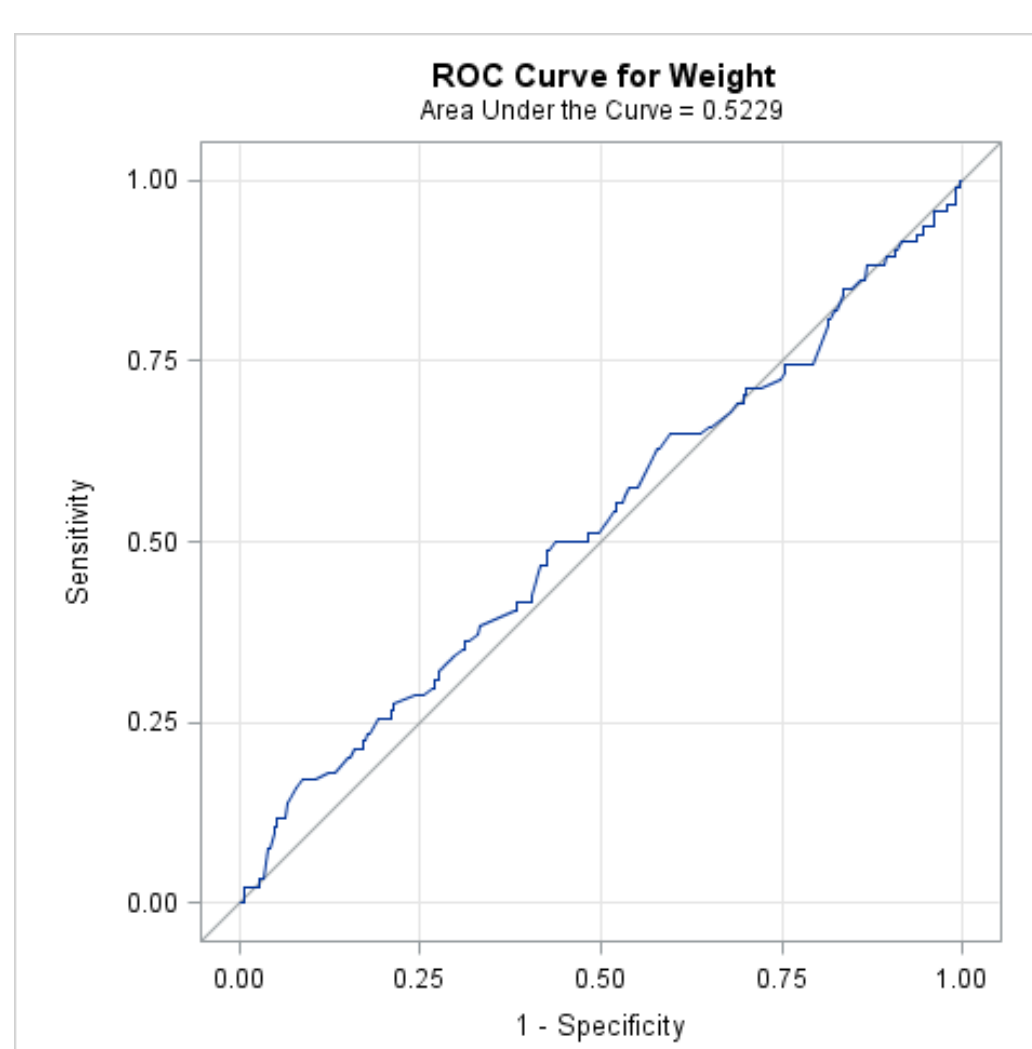
Methods

A multi-institutional retrospective analysis of 2139 consecutive children aged 12-72 months that underwent tonsillectomy at one tertiary care academic center and five acute care centers in Louisiana between 2005 and 2015. Children with moderate/severe developmental delay, bleeding disorders, and other major medical comorbidities were excluded. Complications included respiratory distress, dehydration, and bleeding.

Wilcoxon Rank Sum Test used to assess differences. Surgery duration was not normally distributed so medians are reported instead of means.



Pearson's chi-squared test was used to assess differences.



The null hypothesis is that AUC = 0.50 (area under the curve = chance level) p(age) = 0.0836; p(weight) = 0.4839

Results

• The 2139 patients, 1960 met inclusion criteria. The average age at surgery was 46.5 ± 14.2 months. The average weight at surgery was 17.5 ± 5.1 kg. For those children meeting criteria, 1382 were over 36 months and 480 were under 36 months of age. 97 children (5%) had a post-operative complication: hemorrhage (54), dehydration (10), respiratory distress (32), and other (1). Of those patients that had complications, 65 were over 36 months and 32 were under 36 months. There was no significant difference in the incidence of complications between children aged 0-35 months and 36-71 months (chi-square analysis, Fisher's exact test, p=0.1234, RR=0.7182, CI 0.4761-1.0861). When each complication (bleeding, dehydration requiring IV fluids, and bleeding) was analyzed by age <36 months or >36 months individually, again there was no statistically significant difference in complication rates (p=0.1185). The rate of complication was then analyzed by weight <10kg and >10kg; again, there was no statistical significance in rate of complications in each group (chi-square analysis, Fisher's exact test, p=0.2376, RR= 1.8823, CI 0.7017-5.0492). Complications were not related to weight on a logistic regression analysis. Power analysis confirmed our sample size was large enough to detect a statistical significance in the null hypothesis (Pearson Chi-squared test actual power 0.8, N=1864).

complications	no			yes			p
	N	Mean	SD	N	Mean	SD	
age (months)	1830	46.7	14.1	96	43.9	14.7	0.0680
weight (kg)	1739	17.1	4.6	94	17.0	5.2	0.4541
	N	Median	IQR	N	Median	IQR	
Surgery time (mins)	1830	54	(37,67)	96	58	(46.5, 70)	0.0578

complications	no	yes	Total	p	
Weight in kg	≥10 kg	1721	92	1813	0.3206
	<10 kg	18	2	20	
Age	> 3 yrs	1405	67	1478	0.1161
	< 3 yrs	425	29	454	

Discussion

Many complications, including bleeding and dehydration, occurred as late as 16 days post-op in our study population. Overnight observation with IVF for children at any age is not likely to decrease these late complications. Overnight admission thought to reduce complications relating to respiratory distress, which normally occurs in the initial post-op period. Future work: analyze results by specific complication, analyze results by indication for surgery.

Conclusions

There is no significant difference in outpatient tonsillectomy complication rates for children <3 years as compared to children >3 years in our cohort. Weight does not appear to be related to complication rates.

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