

A study on the efficacy and safety of combining dental surgery with tonsillectomy in pediatrics

Faizaan Syed, MBBS; Joshua C. Uffman, MD, MBA; Dmitry Tumin, PhD; Catherine M. Flaitz, DDS, MS; Joseph D. Tobias MD; Vidya T. Raman, MD

Purpose

- Few data exist on combining pediatric surgical procedures under a single general anesthetic encounter (GA).
- We compared perioperative outcomes of combining dental surgical procedures with tonsillectomy during one anesthetic versus separate encounters.

Results:

- 34 patients, age 4 ± 1 years, underwent TA and DS in combination (n=7) or separately (n=27).
- No differences in total anesthesia time (C: median: 150, IQR: 99, 165 vs. S: median: 109, IQR: 92, 132; 95% CI of difference in medians: -58, +10 minutes; p=0.115) and total recovery time (C: median: 54, IQR: 40, 108 vs. S: median: 72, IQR: 58, 109; 95% CI of difference in medians: -16, +48; p=0.307).
- Overnight stay (C: 4 of 7, S: 20 of 27; p=0.394) did not differ between the groups.
- No postoperative complications in either group.

Funding: None

Patient Characteristics for Combined Vs. Separate Surgical Procedures

Variable	Group S: Separate procedures (N=27)	Group C: Combined procedure (N=7)	p ^a
	Median (IQR) or N (%)	Median (IQR) or N (%)	
Age (years) ^b	4 (3, 6)	4 (3, 5)	0.604
Gender (male/female)	13/14	3/4	>0.999
ASA status ^c			>0.999
1	1 (4%)	0	
2	21 (78%)	6 (86%)	
3	5 (19%)	1 (14%)	
BMI (kg/m ²) ^b	17 (15, 18)	16 (16, 18)	0.815
Obesity ^d	6 (22%)	1 (14%)	>0.999
Total anesthesia time (minutes)	109 (92, 132)	150 (99, 165)	0.115
Total PACU time (minutes)	72 (58, 109)	54 (40, 108)	0.307
Prolonged PACU stay ^e	22 (81%)	3 (43%)	0.061
Overnight stay required ^e	20 (74%)	4 (57%)	0.394
Asthma	3 (11%)	0	>0.999
Seizure disorders	1 (4%)	0	>0.999
Developmental delay	8 (30%)	1 (14%)	0.160
Cerebral palsy	1 (4%)	0	>0.999

^aFisher's exact test for categorical variables ; Mann-Whitney U-test for continuous variables.

^bAverage of encounters, for patients undergoing separate procedures.

^cMaximum across encounters, for patients undergoing separate procedures.

^dBMI-for-age equaling or exceeding 95th percentile.

^eAfter either surgical procedure (> 60 minutes), for patients undergoing separate procedures.

ASA, American Society of Anesthesiologists; BMI, body mass index; IQR, interquartile range; PACU, post-anesthesia care unit

Methods

- Retrospective sample over a 12 month period
- Classified tonsillectomy ± adenoidectomy (TA) and dental surgery (DS) as combined (C) or separate (S).
- Variables included anesthesia time, recovery duration, the need for overnight hospital stay, and postoperative complications.

Conclusion

- These preliminary data support the potential feasibility of combining dental procedures with tonsillectomy during a single anesthetic encounter.
- Such care may not only reduce costs, but also limit parental work absences and increase convenience for patient families.
- When compared to procedures performed separately, combined procedures did not result in increased morbidity or significant changes in postoperative outcomes.

References

- Balraj A, Kurien M, Job A. J Laryngol Otol 2004;118:31-33.
- Stapleton M, Sheller B, Williams BJ, et al. Pediatr Dent 2007;29:397-402.
- Sinno S, Shah S, Kenton K, et al. Ann Plast Surg 2011;67:272-274.