Demographic Analysis of Pediatric Patients Treated Under General Anesthesia

Kasey Hall, DMD[1], Amir Yavari, DDS[2]
NYU Langone Dental Medicine, Advanced Education in Pediatric Dentistry, Providence, Rhode Island

Department Name
Program Name

INTRODUCTION

Early childhood caries is a widespread health issue placing a large burden on dental care providers. Studies have shown that approximately 50% of children have developed caries before the age of 6 years. Many children with ECC require full mouth rehabilitation under general anesthesia which carries risks to the child's systemic health along with a financial burden for parents and insurance carriers.

Several studies were found in review of the literature. The first study explored the demographic characteristics of pediatric patients undergoing dental rehabilitation under general anesthesia at UNC-Chapel Hill. The second study identified common comorbidities in children receiving dental treatment under general anesthesia at Children's Hospital of New York-Presbyterian. Both studies resulted in data showing that the average age at which patient's underwent general anesthesia was 5 years of age while males had a slightly higher rate of incidence than females. A third study reported that females between the age of 3-6 years old showed a higher rate of early childhood caries than boys of the same age. In Providence, RI, the anticipated results would likely mirror those of the demographic studies as Providence is a similarly large city with diverse population.

This study may provide helpful information in determining when to emphasize parental education regarding early dental intervention and how to take a preventive approach to care for patients in the most at-risk demographic.

PURPOSE

The purpose of this study was to determine the average age, between 3 to 7 years old, at which boys and girls are treated for full mouth rehabilitation under general anesthesia at Our Lady of Fatima Hospital in Providence, RI. Understanding the age at which each gender most commonly requires comprehensive treatment will help us provide more accurate anticipatory guidance as well as more individualized treatment plans and treatment options.

METHOD

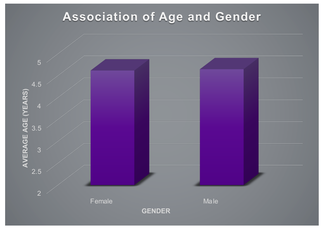
A retrospective chart review between December 2020 to July 2021 was conducted. Patient's age, gender and zip code were compiled. A mean age was calculated for each gender.

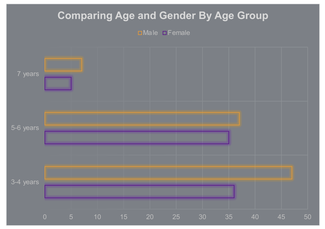
Chisquare test of association between gender and age

			Gender		
	level	Overall	F	M	p-value
n		168	76	91	
Age (mean (SD))		4.63 (1.16)	4.62 (1.17)	4.65 (1.16)	0.869

Chisquare test of association between gender and age

			Gender		
	level	Overall	F	M	p-value
Age (mean (SD))		4.63 (1.16)	4.62 (1.17)	4.65 (1.16)	0.869
Age_group (%)	3-4 years	83 (49.7)	36 (47.4)	47 (51.6)	0.777
	5-6 years	72 (43.1)	35 (46.1)	37 (40.7)	
	7 years	12 (7.2)	5 (6.6)	7 (7.7)	





RESULTS

- 168 charts were reviewed; 76 female and 91 male. The mean age for both boys and girls undergoing GA treatment was 4.63 years old (1.16 SD). For boys the mean age was 4.65 years old (1.16 SD) and for girls was 4.62 (1.17 SD). The data shows a nearly identical mean age for boys and girls receiving GA treatment (P=0.869).

CONCLUSIONS

- There is no discernable difference between the ages at which boys and girls will require full mouth rehabilitation under general anesthesia. Encouraging parents to bring children in for dental visits and emphasizing anticipatory guidance before the age of 4 is important to help prevent the need for full rehabilitation treatment.

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