

Frequency of open bite, overbite and overjet in children with clefts of the lip and/or palate

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ABSTRACT: Cleft lip and palate causes functional disturbance such as malocclusion. This study evaluated the frequency of open bite, overbite and overjet in children with cleft lip and/or palate and compared with children without clefts. The Experimental Group had 42 children with cleft lip and/or palate and the Control Group had 26 children without clefts. In the Experimental Group, overbite appeared in 38.1% of the cases, followed by overjet, 19% and open bite, 2.4%. The results showed that malocclusion had a higher incidence in the Experimental Group and the open bite occurred more in the Control Group.

KEYWORDS – cleft lip and palate, malocclusion, deciduous dentition.

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Introduction

Cleft lip and palate causes functional disturbance such as malocclusion that might occurs for intrinsical problems from the cleft or deriving from surgeries who interferes on the upper jaw growth (1). The literature reported a lot of cases of overbite (11.4% to 43.8%) but open bite was rare, 2.9% to 10.5% (2,3,4,5). The overjet appeared in 80% for the cases documented in Hendelman and Pruzansky (6) and confirmed by Webb et al (7) and Liao, Huang and Noordhoff (1), Lombardo et al (8). The purpose of this study was to evaluate the frequency of open bite, overbite and overjet in children with cleft lip and/or palate and to compare with children without cleft lip and/or palate.

Material and methods

A total of 135 children with cleft lip and/or palate were examined at the Cleft Palate Ambulatory from University of São Paulo. The local ethical committees approved the study protocol. The inclusion criteria were children with complete deciduous dentition and the

exclusion criteria were children in orthodontic treatment. The Experimental Group had 42 children. To the Control Group, 80 children were examined and 26 were chosen. The inclusion criteria were children without cleft lip and/or palate and those who were not in orthodontic treatment. The personal data (name, age, family history, type of the cleft) were obtained from each patient. Clinical examination included the length of the cleft and maxillary and mandibular dental-arch relationship. To evaluate the occlusion, impressions were made with alginate and each children bite a wax to establish the occlusion. Plaster casts were fabricated and put in position according to the wax. All occlusion analysis were made by the same person and the statistical analysis were made using Fischer's exact test.

Results

Open bite appeared in 2.4% of the cases from Experimental Group and 30.8% from Control Group (Figure 1), overjet had 19% and 11.5% (Figure 2), and overbite had 38.1% and 23.1% respectively (Figure 3).

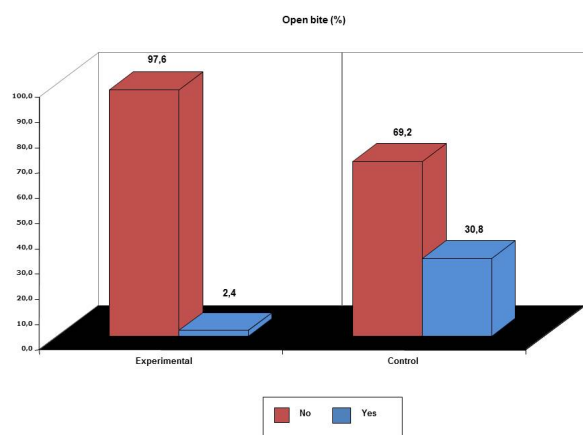


Figure 1. Frequency of open bite obtained in this study

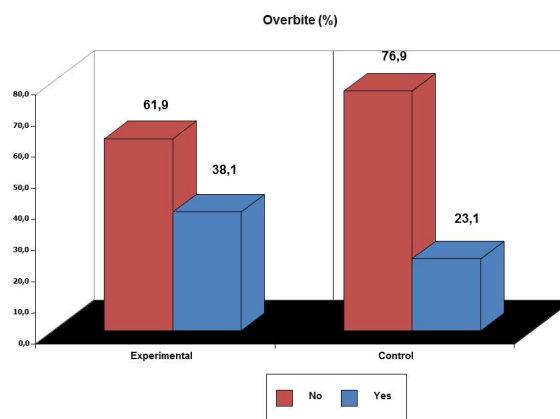


Figure 3. Frequency of overbite obtained in this study

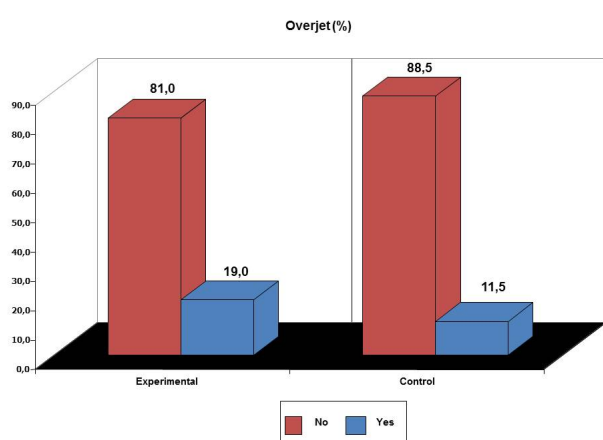


Figure 2. Frequency of overjet obtained in this study

Discussion

Malocclusion might to occur for a lot of reasons like the tension of the tongue on the lip muscle, that results in a prognathism of the premaxilla, and disturbance at the facial growth and development. The Experimental Group showed a higher incidence of malocclusion, 85.71% of the cases (9,10,11,12). Overbite were more common, followed by overjet and open bite (2,3,5,7,14). The Control Group had 57.69% cases with malocclusion (15,16,17), and the open bite had more cases, followed by overbite and overjet (18,19,20,21). In conclusion, the results indicated that there were no significant difference between the types of the cleft in open bite (Table 1). Overjet had significant difference for bilateral cleft lip and palate, $p=0.030$ (Table 2) and overbite had significant difference for unilateral cleft lip and palate, $p=0.039$ (Table 3).

Table 1. Frequency of open bite in the Experimental and Control Group.

Open Bite	Experimental				Control
	Cleft				
	Lip	Unilateral Lip and Palate	Bilateral Lip and Palate	Palate	
	n	n	n	n	n
Absence	8	19	8	6	18
Presence	1	0	0	0	8
Total	9	19	8	6	26
	* $p < 0,214$	* $p < 0,548$	* $p < 0,810$	* $p < 0,857$	* $p < 0,001$

Table 2. Frequency of overjet in the Experimental and Control Group.

Overjet	Experimental				Control
	Cleft				
	Lip	Unilateral Lip and Palate	Bilateral Lip and Palate	Palate	
	n	n	n	n	n
Absence	8	17	4	5	23
Presence	1	2	4	1	3
Total	9	19	8	6	26
	* $p < 0,443$	* $p < 0,190$	* $p < 0,030$	* $p < 0,681$	* $p < 0,322$

Table 3. Frequency of overbite in the Experimental and Control Group.

Overbite	Experimental			Control	
	Cleft				n
	Lip	Unilateral Lip and Palate	Bilateral Lip and Palate	Palate	
Absence	5	15	3	3	20
Presence	4	4	5	3	6
Total	9	19	8	6	26
	* p< 0,471	*p< 0,039	p*< 0,121	p*< 0,413	p*< 0,154

Resumo

ANTONIAZZI, Tatiana Fioresi; COTO, Neide Pena; ANDRÉ, Márcia; FRIGGI, Maria Naira Pereira; BRITO E DIAS, Reinaldo. **Frequência de mordida aberta, sobremordida e sobressaliência em crianças com fenda labial e/ou palatina.** Oral Sci., jan/jun. 2012, vol. 4, nº 1, p. 6-9.

As fissuras labiopalatinas acarretam distúrbios funcionais, como a maloclusão. Este estudo avaliou a frequência da mordida aberta, sobremordida e sobressaliência em crianças portadoras de fenda de lábio e/ou palato e comparou com crianças não portadoras de fissura labiopalatina. O Grupo Experimental constituiu-se de 42 crianças com fenda de lábio e/ou palato e o Grupo Controle foi formado por 26 crianças sem nenhum tipo de fenda. No Grupo Experimental, a sobremordida apareceu em 38,1% dos casos, seguida da sobressaliência, 19% e da mordida aberta, 2,4%. Os resultados mostraram alta incidência de maloclusão no Grupo Experimental, sendo que a mordida aberta ocorreu com maior frequência no Grupo Controle.

PALAVRAS-CHAVE: fissura labiopalatina, maloclusão, dentição decídua

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