

## MOUTH BREATHING – AN ETIOLOGICAL FACTOR OF DENTAL AND MAXILLARY ABNORMALITIES

Cuc Albinita<sup>1</sup>, Cuc Octavian<sup>2</sup>

1- Faculty of Dental Medicine, Oradea, 2 - Faculty of Medicine And Pharmacy,  
Faculty of Dental Medicine, P-ța 1 Decembrie, no. 5, Oradea, e-mail: cucalbinita@yahoo.com

### Abstract

*Mouth (oral) breathing has adverse consequences on the entire body, as well as on the development of the dental and maxillary apparatus. The purpose of this paper is to follow the frequency of mouth breathing in children with dental and maxillary abnormalities. Material and method: a study lot of 307 children, of ages between 5 and 16 years, were selected, and the frequency of mouth breathing, the types of associated abnormalities, the etiology of mouth breathing were followed up. Results: of the study lot, 14% were oral-breathers, 69.8 % were aged over 10 years, and x % had their etiology in adenoids 60%.*

**Keywords:** Mouth (oral) breathing, associated abnormalities, maxillary-dental anomaly, malocclusions incidence rate.

### INTRODUCTION

Mouth breathing usually occurs as a vicious habit out of the need to adapt due to partial nasopharyngeal obstructions (Fratu,2002). Mouth breathing has adverse consequences on the entire body, as well as on the development of the dental and maxillary apparatus. This dysfunction can occur as a symptom in a syndrome but most often manifests itself as a vicious habit (Glavan et al,2008). Obstructive causes can be tonsil or adenoid hypertrophy, nasal septum deviation, or allergic rhinitis which may occur singly or in combination (Maniglia et al,2002)

Abreu (2007) shows in a study a prevalence of 55% in children aged between 3 and 9 years (Abreu, 2007).

Bayrado (1996) shows that 56% of children have mouth breathing (Bayrado,2006).

There is a strong correlation between oral breathing and dental malocclusions, which is manifested by dental and skeletal and functional changes (Zicari et al,2009.)

All mouth-breathers have malocclusions, mostly class II abnormalities, followed by class I type(Oliveira et al2008, Lagana et al 2013). Angle, Izard, Turner (quoted by Cocarla, 2000) assigns tonsils an important role in the development of mandibular prognathism.

The aim of the study – we followed up the frequency of mouth breathing among children with dental and maxillary abnormalities, as well as association with other pathological conditions.

#### **MATERIAL AND METHODS**

The study was conducted on a lot of 307 children, of ages between 5 and 16 years, from a primary and middle school in Oradea. This study was carried out by analyzing the medical chart and clinical observation of children with dental and maxillary abnormalities. The frequency of mouth breathing in children with dental and maxillary abnormalities was studied, its distribution by sex, age and provenance background, the type of dental and maxillary abnormalities associated with mouth breathing, etiology and other disorders associated with mouth breathing.

#### **RESULTS AND DISCUSSION**

Thus, of the 307 children under study, 43 were mouth-breathers, which makes up a percentage of 14 %.( chart no 1)

Chart no.1

Distribution by age and sex: of the 307 children, 161 were girls representing 52.45% and 146 were boys representing 47.55%. The 43 mouth-breathers were distributed as follows: 24 girls and 19 boys (chart no 2).

Table no. 1

Distribution of oral-breathers by gender		
	<b>Girls</b>	<b>Boys</b>
Total patients	161	146

Percentage%	52,45%	47,55%
MB	24	19
Percentage%	55,8%	44,2%

Chart no.2

Analyzed the data in the table no.1, we have seen – in terms of malocclusion distribution by gender as from children with dental malocclusion the girls abnormalities rate – 51,25% with abnormalities are higher than the boys abnormalities rate – 48,75% (See chart no.2)

Chart no.3

Distribution by age – the study lot included children of ages between 5 – 16 years, most of them aged between 10 – 12 years (second period of mixed dentition), in a percentage of 62.8%.

Table no 2

Distribution of oral-breathers by age

Age	<6 years	6-9 years	10-12 years	> 12 years
No. patients	1	12	27	3
%	2.3%	27.9%	62.8%	7%

Chart no 4

The share among children under 9 years (period of primary dentition and first period of mixed dentition) was of 30.2% and among those of 10 years and older the share was of 69.8%.

In terms of backgrounds, we found that out of the total number of 307 subjects with dental and maxillary abnormalities (DMA), 225 representing 73.3% were from urban areas and 82, representing 26.7%, were from rural areas. Of the 43 oral-breathers, 34 (79%) were from urban areas and 9 (21%) were from rural areas.

Table no 3

Distribution of mouth-breathers by provenance background

	URBAN	RURAL
DMA	225	82
%	73.3%	26.7%
Mouth-breathers	34	9
%	79%	21%

Chart no.5

Etiology of mouth-breathing. In this respect, we found three factors: adenoids, deviated septum and habitual mouth breathing after an adenoidectomy.

Table no.4

Etiology of mouth-breathing

Etiology	Adenoids	Deviated septum	Habitual mouth breathing
Number	26	12	5

Chart no.6

Types of dental and maxillary abnormalities associated with mouth breathing. We found the following types of dental and maxillary abnormalities in mouth-breathers: narrow upper jaw prognathism (31), functional mandibular retrognathism, frontal open bite associated with narrow upper jaw, eugnathic occlusion.

Table no.5

DMA associated with mouth breathing

DMA	Narrow upper jaw	Lower jaw retrognathism	Open bite	Eugnathic occlusion
No.	31	2	9	1
%	72%	4.65%	21%	2.35%

Chart no.7

Other disorders or vicious oral habits associated with mouth breathing that we found were the following:

Table no.6

Vicious habits associated oral breathing	
Sucking nipple	1
Sucking thumb	2
Child swallowing	5
Vacuuming lower lip	3

Mouth breathing has a frequency of 14% among children with dental and maxillary abnormalities, girls being more affected, 55.8%, as well as children in urban areas, 79%.

The etiology of mouth breathing is largely given by adenoids: 60%, then by septum deviation and a smaller share is based on habit. The dental and maxillary abnormalities that cause it are, most frequently, narrow upper jaw prognathism: 72%. functional mandibular retrognathism, open bite.

The age at which parents bring their children for treatment is quite high 10.2 years – despite the fact that this impairment has pronounced adverse effects on the physiognomy and overall development of children.

Mouth breathing is accompanied by various vicious habits (thumb sucking or feeding bottle sucking, lower lip sucking, tongue interposition in deglutition).

## CONCLUSIONS

Cases of mouth breathing among children with dental and maxillary abnormalities are relatively common.

In our study we found a frequency of 14%.

The most common etiology is that of adenoids.

Mouth breathing occurs primarily with narrow upper jaw prognathism.

Vicious habits are associated with 25.6% of cases.

Parents ignore this condition, come late for treatment with their children and are uninformed.

Treatment gives best results if set in during primary dentition or the first period of mixed dentition.

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