

Dental Crowding: Criteria for the Decision for Extraction



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Submission: June 04, 2018; Published: July 12, 2018

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Introduction

Orthodontics treatments can be planned with extraction or not, decision for removing healthy teeth to correct the orthodontic malocclusions must be based on specific diagnostic criteria before indication. Our practice within the hospital Service of DFO of the MUHC of Algiers consolidated by the results of a study on the theme of extractions shows us important rates linked to the type of malocclusions prevail within our orthodontic populations as well as the moment of treatment. Among our objectives we decided to evaluate the level of dental crowding we consider when taking the decision to extract or not permanent teeth.

Table 1: Tabulation of maxillary and mandibular crowding among the total population.

Maxillary Crowding	n	%	Mandibular Crowding	n	%
Absence	132	19,9%	Absence	189	28,5%
Mild	50	7,5%	Mild	96	14,5%
Moderate	97	14,6%	Moderate	129	19,4%
Severe	385	58%	Severe	250	37,6%
Total	664	100%	Total	664	100%

Table 2: Statistical comparison of mean dental crowding between groups treated without and with extraction (based on t- test).

Dental Crowding	Treatment	n	Mean (mm)	SD	P
Maxillary	Nonextraction	315	3,83	3,32	0,000
	Extraction	349	8,35	4,17	
Mandibular	Nonextraction	315	2,65	2,73	0,000
	Extraction	349	5,98	3,70	

^aSD= standard deviation.

*P<.05 significant between nonextraction and extraction treatment.

Extraction frequency among the total population was 52,6%, the predominant pattern was to extract 4 teeth (66.5% of cases), with first premolars in large majority (80.6%). Our findings show a marked difference in the level of dental crowding between those treated with extraction and those treated without extraction [1].

Discussion

Decision to extract among the population seems to be

Material and Method

The total population was composed of 664 individuals. Mean age was twelve. Subjects were excluded if they had primary dentition, lost permanent teeth or were more than 16 years old.

Results

The most frequent reason for consultation among the population was the dental crowding. The role of hereditary origin was important but in many cases the jaws have not grown large enough. Another frequent etiology of the dental crowding was the early extraction of the primary teeth (Table 1 & 2).

related to the discrepancy between expected arch length and space offered in class I or in Class II or Class III. These criteria is an argument for extraction, however the dental crowding can be attributed to the early extraction of the temporary teeth, steatogenic dysfunctions and narrow dental arches [2,3]. It is important to prevent such etiology to avoid or reduce prescribing extraction for orthodontic therapy.

Conclusion

Our study revealed an important percentage of extractions among our patients. More non-extraction treatment is required with: Early age treatment, space maintenance if premature loss of primary teeth, functional appliances and transverse expansion [4,5].

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DOI: [10.19080/JOJOOS.2018.01.555573](https://doi.org/10.19080/JOJOOS.2018.01.555573)

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