

Comparative Analysis of Dental Extractions in the 2013-2014 and 2018-2019 Period at the Children's Hospital of Morelia

Cristóbal Landa Román H

Dental Surgeon, Private Dental Practice, Morelia, Michoacán, México

Abstract

Aims of Study: Analyze the statistical changes of dental extractions from 2013-2014 and 2018-2019 at the Children's Hospital of Morelia.

Materials and Methods: Type of study: 1256 patients with different etiologies who had a dental extraction, data were collected on age, sex, etiology of the extraction and dental organ more frequently to the extraction. The method was quantitative, descriptive, transversal, analytical, and retrospective, without risk.

Results: The consultation in the pediatric Dentistry service in the period from January 2018 to April 2019 was 10980 patients, of which 1256, equivalent to 11% were treated with dental extraction. Being the frequency of 650 men 51.8% and 606 women 48.2% at the age of 7 years with 258 cases representing 20.5% of the reported cases, with the upper right central incisor being the one most extracted with 134 cases representing 10.7% of the extractions made. The main cause of the extractions was the dental persistence with 534 cases reported.

Conclusion: Dental persistence was the main reason why dental extraction was used, which demonstrates the implementation of health programs in Mexico has produced a significant change in the percentage of extractions related to tooth decay.

Keywords

Tooth Extraction; Dental Caries; Root Caries; Dental Hygienists

Introduction

It is important to understand in a global context the problems that entail the loss of dental organs, for this we must first clarify the indications and contraindications of the multifactorial etiology that leads to the surgical act called dental extraction; such as advanced dental caries that for economic reasons it is not always feasible to rehabilitate; bottle caries that is a common problem in Mexico because of the bad habits of parents; pathological fractures called root debris that represent a risk to the patient's systemic health; facial trauma that can generate horizontal and longitudinal fractures of the clinical crown, dental avulsions, dental intrusions and pulp necrosis that cannot be rehabilitated. The purpose of this article is to make a comparison between the factors that involve a tooth extraction, age, sex and the tooth that presents the highest number of dental extractions between the research entitled "Retrospective statistics and analytical dental extractions" [1] and the period 2018-2019. It is important to understand that teeth not only help us to the process of chewing, phonetics and aesthetics. But they are also part of the growth and development of the face in conjunction with the growth of the paranasal sinuses.

Theoretical Framework

Indications and Contraindications

In pediatric dentistry it is necessary to have special limitations for the proper management of tooth extraction. The indications for the extraction are: Destroyed pieces that are not possible for the application of the conservative treatment, root remains, pieces with very sub gingival coronary fractures, pieces with focal problems that spread bacteria that cannot be affected with Endodontic treatments especially in people with heart problems, subgingival root caries, supernumerary pieces, temporary pieces that interfere with the eruption of the permanent, orthodontic treatments in which there is a large dental bone discrepancy, without the possibility of bone growth, ectopic pieces, small pieces that we they give cystic pathology, possible root resorption, imbalance of the arches, tumor problems, etc. Due to socio-economic problems of the patient, which conservative dentistry cannot afford. In the same way the contraindications must be presented in the temporary teeth and each case needs to be treated in a particular way: Age of the child, phases of dental change in which it is found, possibility of damage to the germ of the definitive dental piece, possibly alterations as a result of exodontics, such as loss of space, occlusal alterations, etc.

Article Information

DOI: 10.31021/jddm.20192141
Article Type: Research Article
Journal Type: Open Access
Volume: 2 **Issue:** 4
Manuscript ID: JDDM-2-141
Publisher: Boffin Access Limited

Received Date: 17 December 2019
Accepted Date: 26 December 2019
Published Date: 27 December 2019

*Corresponding author:

Cristóbal Landa Román H
Dental Surgeon
Private Dental Practice
Morelia, Michoacán
México
Tel: 4431584600
E-mail: clr_31@hotmail.com

Citation: Cristóbal Landa-Román, Francisco Javier Gómez-Pamat, Alejandro Camacho Talavera. Comparative Analysis of Dental Extractions in the 2013-2014 and 2018-2019 Period at the Children's Hospital of Morelia. J Dents Dent Med. 2019 Dec; 2(4): 141

Copyright: © 2019 Cristóbal Landa-Román, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 international License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Possible medical alterations that the child may suffer from ever being in radiotherapy, in treatment with platelet antiaggregants, or cardiac pathologies. Therefore, we will make a complete medical history, oral examination, radiographic study and complementary tests if necessary as analytical to study hemostasis [2,3].

Fractures

Dental injuries can be classified according to the World Health Organization (WHO) as follows: in soft tissues: lacerations, bruises, abrasions. Dental fractures: enamel fracture, crown fracture: not complete, crown fracture: complete, crown and root fracture, root fractures. Dislocation injuries: concussion Dental, subluxation, extrusion dislocation, lateral dislocation, intrusion dislocation, avulsion. Injuries to the bones of the face: alveolar process, maxillary bone body, temporomandibular joint [4].

The WHO has defined dental caries as: "a localized process of multifactorial origin that begins after dental eruption, determining the softening of the hard tissue of the tooth and evolves until the formation of a cavity" [5]. Here the destruction of the enamel and dentin has been extensive and the pulp has been totally destroyed, therefore there is no pain, no spontaneous pain, but the complications of this caries, if they are painful, usually present with eyelids that have the need for be treated with antibiotic and drained. The symptomatology of monoarthritis is identifiable by three data that are: Pain to percussion of the tooth, Sensation of lengthening, Abnormal mobility of the piece, usually there are only remains of the crown of the tooth [6-8].

Consequences of Tooth Extraction

Time elapsed since the loss: The closure of the space occurs during the first 6 months after extraction. The stage of development of the permanent dentition: since there is great variability in the times of eruption with respect to the average dates. Amount of bone that covers the non-erupted tooth: If there is bone on the crowns of the permanent ones, a way of predicting is based on the fact that it takes four to six months to move a millimeter in the bone, although this method is less reliable than the based on root development. Sequence of tooth eruption: The relationship of these teeth in development and the eruption of those adjacent to the space created by premature loss should be observed. Delayed eruption of the permanent: Sometimes permanent teeth are delayed in their development and consequently in their eruption. Congenital absence of the permanent: decide if it is prudent to keep the space for many years to place a fixed prosthesis, allow the space to close, this will depend on each particular case and the type of malocclusion [8].

Tooth Extraction

It is defined as the surgical act by which a tooth or portion thereof is avulsed from the dental alveolus; it acts on the alveolar bone, gum and periodontium. Dental extraction is indicated in extensive caries, pulp exposure, pulp necrosis, periodontal disease, supernumerary teeth, orthodontic treatments, fractured teeth [9]. In order to perform, it is necessary to recognize the two techniques already identified, the extraction with forceps that acts as a second degree lever and the extraction with elevator that is indicated for teeth that cannot be apprehended with the forceps [3,10].

Materials and Methods

Type of Study: quantitative, descriptive, transversal, analytical, retrospective, without risk.

Sample size: All patients treated by extraction in the period January 2013 - April 2014 and January 2018- April 2019 in the Children's Hospital of Morelia

Definition of the Study Universe: All cases of extraction occurred in January 2013 - April 2014 and January 2018 - April 2019 in the Children's Hospital of Morelia.

Definition of the Observation Units: work logbook January 2013 April 2014 and January 2018- April 2019 in the Children's Hospital of Morelia.

Inclusion Criteria: patients 1 to 15 years of age who underwent a dental extraction at the Children's Hospital of Morelia.

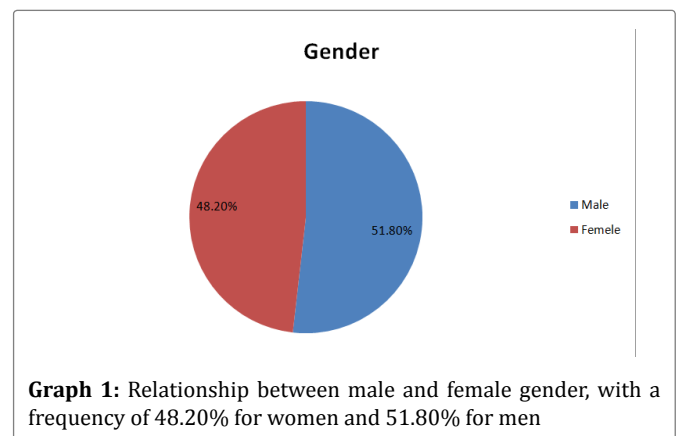
Exclusion Criteria: patients under 1 year and over 15 years, permanent teeth, conservative dental treatments at the Children's Hospital of Morelia.

Results

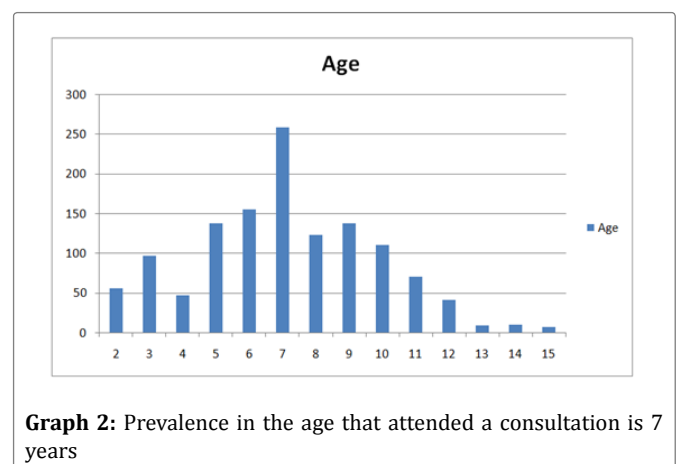
The number of patients, who attended a consultation in the Pediatric Dentistry service in the period from January 2018-April 2019, was 10980 (88.5%) patients of which 1256 equivalent to 11.5% were treated with dental extraction, while the remaining 88.5% was oriented to other dental treatments. Being the frequency of 650 (51.8%) men and 606 (48.2%) women, representing a minimum discrepancy between the genders. As can be seen in Graph 1. When specifically analyzing the age most represented in dental extractions, 258 (20.5%) extractions are counted for patients 7 years of age. As shown in Graph 2, followed by 155 (12.3%) patients 6 years of age, being appreciated in Table 1. The upper right central incisor was the most extracted with 134 cases, which represents 10.7% of the trepanations performed. As shown in Graph 3. Followed by the first upper right molar with 113 (9%) of the cases as shown in Table 2. The main cause of the extractions was dental persistence with 534 (42.5%) reported cases. As can be seen in Graph 4 followed by dental caries with 321 (25.6%) of the cases as shown in Table 3.

Discussion

The results reported in the 2013-2014 period were the following: the male gender with 51.17% and the female 48.83%. The average age in the 2013-2014 consultation was 8 years with 181 (15.67%) cases, followed by 7-year-old patients with 145 (12.55%). The dental organ with the highest number of extractions was the right upper central incisor with 211 (13.30%), followed by the left upper central incisor with 172 (10.84%) reported cases. The most frequent cause of tooth extraction was root remains with 692 (19.48%) and tooth decay with 309 (19.48%) [1].



Graph 1: Relationship between male and female gender, with a frequency of 48.20% for women and 51.80% for men



Graph 2: Prevalence in the age that attended a consultation is 7 years

Age	Frequency	Percentage	Valid Percentage	Accumulated Percentage
2	56	4.5%	4.5%	4.5%
3	96	7.6%	7.6%	12.1%
4	47	3.7%	3.7%	15.8%
5	137	10.9%	10.9%	26.8%
6	155	12.3%	12.3%	39.1%
7	258	20.5%	20.5%	59.6%
8	123	9.8%	9.8%	69.4%
9	137	10.9%	10.9%	80.3%
10	110	8.8%	8.8%	89.1%
11	70	5.6%	5.6%	94.7%
12	41	3.3%	3.3%	97.9%
13	9	0.7%	0.7%	98.6%
14	10	0.8%	0.8%	99.4%
15	7	0.6%	0.6%	100.00
Total	1256	100.00%	100.00%	

Table 1: Percentage of patients who attended a consultation in relation to their age

Tooth	Frequency	Percentage	Valid Percentage	Accumulated Percentage
51	134	10.7%	10.7%	10.7%
52	64	5.1%	5.1%	15.8%
53	38	3.0%	3.0%	18.8%
54	113	9.0%	9.0%	27.8%
55	64	5.1%	5.1%	32.9%
61	111	8.8%	8.8%	41.7%
62	82	6.5%	6.5%	48.2%
63	32	2.5%	2.5%	50.8%
64	80	6.4%	6.4%	57.2%
65	33	2.6%	2.6%	59.8%
71	52	4.1%	4.1%	63.9%
72	15	1.2%	1.2%	65.1%
73	26	2.1%	2.1%	67.2%
74	85	6.8%	6.8%	74.0%
75	55	4.4%	4.4%	78.3%
81	56	4.5%	4.5%	82.8%
82	18	1.4%	1.4%	84.2%
83	38	3.0%	3.0%	87.3%
84	95	7.6%	7.6%	94.8%
85	65	5.2%	5.2%	100.00
Total	1256	100.00%	100.00%	

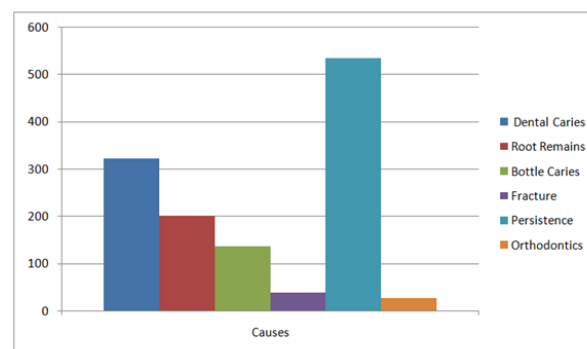
Table 2: Percentage of dental organs removed

Description: The above table demonstrates that the upper right central incisor was the one with the highest frequency with 10.7% and the lowest frequency was the lower left lateral incisor with 1.2%

Causes	Frequency	Percentage	Valid Percentage	Accumulated Percentage
Dental Caries	321	25.6%	25.6%	25.6%
Root Remains	200	15.9%	15.9%	41.5%
Bottle Caries	136	10.8%	10.8%	52.3%
Fracture	38	3.0%	3.0%	55.3%
Persistence	534	42.5%	42.5%	97.9%
Orthodontics	27	2.1%	2.1%	100.0%
Total	1256	100.00%	100.00%	

Table 3: Percentage of causes for which the teeth were extracted

Description: I feel the dental persistence with 42.5% and the lowest orthopedic treatments with 2.1%



Graph 4: Graph showing causes of tooth extractions

Description: It is appreciated that the most common cause was dental persistence and the minor cause was due to orthopedic treatment

Conclusion

The percentage of climbed dental organs was higher relation what dental persistence, which demonstrates the implementation of health programs in Mexico has produced a significant change in the percentage of extractions related to destructive pathological processes.

References

1. Landa RC, Gómez-Pamat FJ, Camacho TA. Retrospective and analytical statistics of dental extractions. [Estadística retrospectiva y analítica de extracciones dentales. Editorial academica Española]. España. 2017.
2. Franco L, Vergara L, Pérez A. Classification of exodontic instruments. [Clasificación del instrumental de exodoncia]. SliderShare. 2019 Dec.
3. Saludabilis. Infant Dental Extraction [Extracción dental infantil]. Saludabilis. 2019 Dec.
4. Suarez OC, Estrada OE. Manual of Analgesia and Anesthesia in Dentistry [Manual de Analgesia y Anestesia en Odontología]. Trillas. México. 2017; 19(67):97-110.
5. OMS. Oral health [Salud bucodental]. 2019 Dec.
6. Colombia UN. Instrumental and material to perform exodontics [Instrumental y material para realizar exodoncia]. Universidad nacional de colombia. 2019 Dec.
7. Sanchez J. Instrumental and Material for Exodonces [Instrumental y Material Para Realizar Exodoncias]. SCRIBD. 2019 Dec.
8. Andreasen JO. Types of dental injuries [Tipos de lesiones dentarias]. UNAM. 2019 Dec.
9. Diamond M. Anatomia Dental. Limusa. Colombia. 2013: 62-74.
10. Garther PL, Hiatt LJ. Histologia básica. El sevier. Barcelona. 2011: 230.