

**THERAPEUTIC PLANNING OF REGIONAL ODONTODYSPLASIA: FOLLOW-UP  
OF A CLINICAL CASE**

***PLANEJAMENTO TERAPÊUTICO DA ODONTODISPLASIA REGIONAL:  
ACOMPANHAMENTO DE UM CASO CLÍNICO***

***PLANIFICACIÓN TERAPÉUTICA DE LA ODONTODISPLASIA REGIONAL:  
EVOLUCIÓN DE UN CASO CLÍNICO***



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**ABSTRACT:** Regional odontodysplasia (ROD) is an alteration in the development of dental structures that presents a rare prevalence and unknown etiology. This difficult to unify information on the condition and makes it difficult to establish a standard of care for affected patients. The aim of this study was to report the progress of a clinical case of ROD and to discuss the importance of individualized planning and multidisciplinary treatment, comparing the case in question with the therapeutic approaches of similar cases. A search was made for the subject in the main databases, with a time frame of the last five years, and a comparative table of clinical cases was constructed. Seven similar cases were selected and arranged in the table, organized into six categories. The study concludes that despite the form of treatment implemented, therapeutic planning and a multidisciplinary approach optimize satisfactory treatment results.

**KEYWORDS:** Odontodysplasia. Ghost Teeth. Diagnosis. Planning. Therapeutics.

**RESUMO:** A odontodisplasia regional é uma alteração de desenvolvimento das estruturas dentárias, que apresenta prevalência extremamente rara e etiologia ainda não comprovada. Isso dificulta a unificação de informações sobre a condição e desfavorece o estabelecimento de um padrão de tratamento dos pacientes afetados. Este estudo teve o objetivo de relatar o andamento de um caso clínico de odontodisplasia regional e discutir a importância do planejamento individualizado e do tratamento multidisciplinar, comparando o caso em questão com as condutas terapêuticas de casos similares presentes na literatura. Realizou-se busca sobre o tema nas principais bases de dados, com recorte temporal dos últimos cinco anos, e a construção de um quadro comparativo de casos clínicos. Nove casos similares foram selecionados e dispostos no quadro, organizados em seis categorias. O estudo conclui que apesar da forma de tratamento implementada, o planejamento terapêutico e a abordagem multidisciplinar otimizam os resultados satisfatórios do tratamento.

**PALAVRAS-CHAVE:** Odontodisplasia. Dentes Fantasma. Diagnóstico. Planejamento. Tratamento.

**RESUMEN:** Odontodisplasia regional (OR) es una alteración del desarrollo de las estructuras dentales que tiene una prevalencia extremadamente rara y una etiología aún no demostrada. Esto dificulta la unificación de la información sobre la afección y dificulta el establecimiento de un estándar de atención para los pacientes afectados. El objetivo consistió en relatar la evolución de un caso clínico de OR, discutir la importancia de la planificación individualizada y del tratamiento multidisciplinar, comparando el caso en cuestión con los abordajes terapéuticos de casos similares. Se realizó una consulta sobre el tema en las principales bases de datos, abarcando los últimos cinco años, y se elaboró un cuadro comparativo de casos clínicos. Se seleccionaron siete casos similares y se dispusieron en el cuadro, organizados en seis categorías. El estudio concluye que, a pesar de la forma de tratamiento aplicada, la planificación terapéutica y un enfoque multidisciplinar optimizan los resultados satisfactorios del tratamiento.

**PALABRAS CLAVE:** Odontodisplasia. Dientes Fantasma. Diagnóstico. Planificación. Terapéutica.

## Introduction

The odontodysplasia (OR) is a rare localized disorder, with a prevalence of less than 1/1,000,000, marked by a developmental disorder of the tissues that form the dental organ, and can affect both dentures, deciduous or permanent (BANU *et al.*, 2022; CAMACHO-ESCALERA, 2019; ZEGARELLI *et al.*, 1963). This condition morphologically and histologically compromises the affected teeth, and may even affect the process of eruption of these structures in the oral environment (CARREIRA *et al.*, 2011). OR affects specific dental quadrants, with the upper left quadrant having the highest incidence (REGEZI; SCIUBBA; JORDAN, 2017). However, there is no predilection for specific race, age group or sex (NEVILLE *et al.*, 2012; NIJAKOWSKI; WOŚ; SURDACKA, 2022).

Radiographic examinations are essential for an assertive diagnosis, since, from these, teeth whose pulp chambers are larger can be highlighted, as well as open foraminal apices and changes in the transition between the layers of enamel and dentin, which exhibit lower radiopacity compared to unaffected tissues (MATHEW *et al.*, 2015; PONRANJINI; JAYACHANDRAN; BAKYALAKSHMI, 2012). This image radiolucency denoted in imaging findings is its pathognomonic sign and the factor responsible for the alternative name of the disorder, “phantom teeth” (ARGUELLO; BAUER; SUÁREZ, 2022; NIJAKOWSKI; WOŚ; SURDACKA, 2022).

Due to the wide variation in characteristics presented by patients with this condition, there is no single approach for treating OR and there is a wide range of factors to be observed to create a treatment plan, including medical history, the number of teeth involved and even the patient's wishes (BOWDEN *et al.*, 2018; HAMDAN *et al.*, 2004; VOLPATO *et al.*, 2008). Given the points and counterpoints exposed in the dental literature regarding the different treatment approaches for this odontogenic malformation, the objective of the present work was to report the diagnosis of a clinical case of OR in a female patient, its therapeutic progress and, also, support the importance of individualized therapeutic planning of multidisciplinary dental treatment.

This article is organized into the following sections: theoretical framework, from which we base the topic according to the available dental literature; case report, in which we present the particularities about the object of study of this article; materials and methods, section that covers information about carrying out the study; results, which presents the comparative table; discussion, where results are interpreted; and conclusion.

## Theoretical Reference

The odontodysplasia is a developmental change in dental structures and little is known about this condition. Its extremely rare prevalence and still unproven etiology justify this fact. Data infer that until mid-2019, around only 168 cases of OR had been published in the English language, and, until September 2021, just over 180 cases were documented in the same language (ELMEZWGHI *et al.*, 2023). The most recent studies demonstrate that the growth curve of the population prevalence of this pathology continues to show the same pattern (ELMEZWGHI *et al.*, 2023; NIJAKOWSKI; WOŚ; SURDACKA, 2022).

Its etiopathogenesis remains unknown, with only suggestions regarding environmental and genetic factors, which compromises the full understanding of its manifestation in the population. The various factors associated with its etiology range from more common hypotheses, such as trauma, infections and vascular changes, to less frequent suggestions, such as ischemia, neural damage, nutritional deficiencies and somatic mutations (ALOTAIBI; ALOTAIBI; ALFAWAZ, 2019; HESS *et al.*, 2020; KORUYUCU *et al.*, 2019).

Courson 's biochemical study *et al.* (2003), delimited the complexity linked to the origin of this disorder, suggesting a possible relationship of its etiology to an imbalance between matrix metalloproteinases (MMPs) and their natural inhibitors (TIMP-1 and TIMP-2). In this case, the increase in natural inhibitors would not be able to keep up with the increase in MMPs, being insufficient for their enzymatic inhibition and causing tissue destruction of dental structures still in formation.

With the aim of investigating genetic involvement in the origin of regional odontodysplasia, Koskinen *et al.* (2019), suggested the participation of the PAX9 gene in the etiology of this disorder. In the study, the authors reported that OR may have a common etiology to tooth agenesis due to the mutation of the gene in question. However, they state that the need to carry out genetic tests in patients with such conditions is essential to confirm this correlation. Other biochemical and genetic studies that explore such hypotheses were not found.

The recent study by Njakowski, Wós and Surdacka (2022), collected and analyzed data present in reported cases of regional odontodysplasia published in the main scientific databases and, according to the results found, presented conflicting data to those present in previous studies. While literature prior to the study in question presents a predilection of OR for females in a ratio of 1.4:1 – 1.7:1, Njakowski and collaborators found a prevalence of 1.04 for females versus 1 for males.

The authors justify this result with the high number of OR cases evaluated in their study. In any case, the central idea is that, if this result is repeated in future similar studies, the predilection factor of regional odontodysplasia for a specific sex will no longer be significant, and it can be said that the disorder affects equally in individuals of both biological sexes. This scenario, of conflicting information, confirms the argument that little is known about OR.

The histological findings present in the thesis by Camacho-Escalera (2019) proved the deficient mineralization of dental tissues affected by OR. Their tissue analyzes showed enamel with an irregular structure, a wavy surface and the absence of prisms, although an organic matrix rich in amelogenin was also detected. In dentin, a small amount of dentinal tubules was identified, with significant interglobular dentin. The reduced thickness was presented by both enamel and dentin.

Although some evidence suggests that at the beginning of the development of teeth, still in the bud phase, changes may occur that impact the formation of their tissues (KOSKINEN *et al.*, 2019), other histological findings suggest that the process of formation of the tooth germ starts without changes, problems occurring only at the time of cellular differentiation of teeth affected by OR, in addition to confirming the hypoplastic nature of enamel and dentin (IDE *et al.*, 2023). Results from research such as that by Camacho-Escalera (2019) show that the histopathological study can favor the differential diagnosis of pathologies that affect the mineralized tissues of the dental organ, based on the understanding of their structural changes.

It is known that, in many cases, the clinical examination is paramount in constructing a diagnosis, however, in the case of regional odontodysplasia, complementary imaging examinations – radiographic and tomographic – end up being fundamental and, almost always, conclusive (ELMEZWGHI *et al.*, 2023; GONZÁLEZ *et al.*, 2021). This occurs because erupted teeth affected by OR can also be clinically characterized as structures affected by amelogenesis and dentinogenesis imperfecta or, even, dentin dysplasia (CAMACHO-ESCALERA, 2019). In this context, it is essential that the professional knows how to recognize the characteristics of these disorders of formation of the dental structure, in addition to knowing how to differentiate them based on their generalized or segmental manifestation (VIEIRA *et al.*, 2019).

The diagnosis of regional odontodysplasia is often not correctly made, which, associated with the fact that it is a rare and not completely established condition, makes it difficult to create unequivocal data in the dental literature (NJAKOWSKI; WÓS; SURDACKA, 2022). Thus, in addition to favoring documentation, the correct and early diagnosis characterizes an ideal scenario for preventive or conservative actions to be adopted in order to avoid unwanted

developments, such as, for example, coronary fractures or the development of caries and aesthetic injuries (MABROUK *et al.*, 2022).

In the reported case, after a detailed anamnesis, the patient underwent imaging tests, which showed the pathognomonic sign of phantom teeth throughout the entire length of the left hemimaxilla, crossing the midline and affecting the right upper canine. The majority of affected teeth were impacted, corroborating what has been described in the literature (BANU *et al.*, 2022; CRAWFORD; CRAWFORD; ALDRED, 1989; TERRERO-PÉREZ *et al.*, 2020). Therefore, functional and aesthetic complaints are present in this case and are one of the main factors to be taken into consideration in the treatment plan.

Furthermore, in the case of the present study, it is possible to observe moderate horizontal bone resorption in the left maxillary region. Although not frequent, structures surrounding the affected teeth may also present structural changes, as is the case of alveolar bones, which may exhibit a decrease in their density and greater radiolucency in imaging exams (CAVALCANTE *et al.*, 2018; NEVILLE *et al.*, 2012).

There is unanimity in the literature consulted regarding the controversial treatment of regional odontodysplasia. The issue that remains in the literature consulted is the dichotomy between more conservative approaches, carrying out restorative procedures, or more invasive approaches in the short or long term, such as, for example, performing surgeries to remove affected teeth, followed by prosthetic rehabilitation. In cases of young and pediatric patients, priority should be given to maintaining these structures until complete pubertal bone maturation and then performing the surgical approach, as maintaining teeth preserves the height of the alveolar bone and the development of the jaws (CAHUANA; GONZÁLEZ; PALMA, 2005; CHO, 2006).

Although theoretical and practical implications are supported by different therapeutic approaches, planning is the main point of reference and security for the correct treatment to be applied. However, some factors must be taken into consideration when choosing a form of treatment, otherwise the individual characteristics of patients affected by OR may pose limitations to therapeutic success.

## Materials and methods

In the period between January and March 2023, a search for articles on the subject was carried out in the PubMed and Google Scholar databases, published within the period 2019-2023. Data collection was performed by a single researcher, using the descriptors "Odontodysplasia" and "Ghost Teeth". In order to construct a comparative table, the stage of selecting the articles began. Based on the results, the following inclusion criteria were adopted: only case report articles, published in Portuguese, Spanish and English and open access. In addition, only studies that reported cases of regional maxillary odontodysplasia were included.

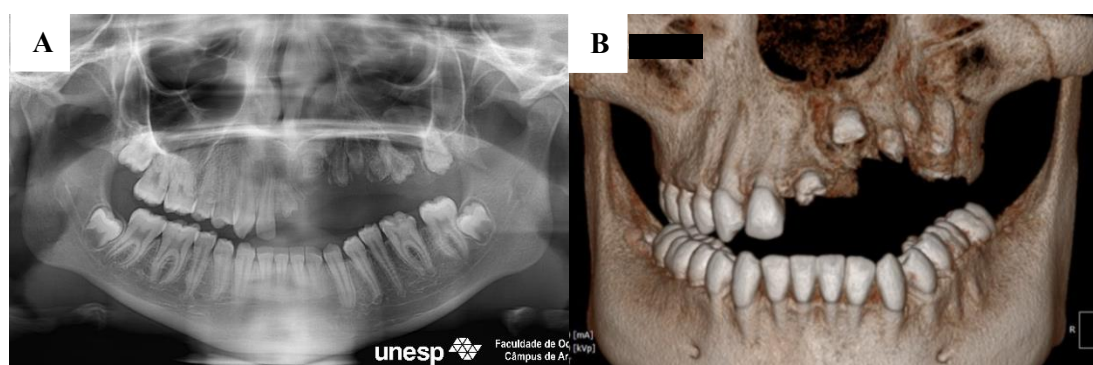
Therefore, by reading abstracts and the "case report" section, articles that addressed cases of OR in the jaw and case reports published in a language other than the three mentioned were excluded. Cases of OR associated with other diseases were also not used to construct the table, due to the changes that such an association can bring to therapeutic planning. The included articles were read in full and are presented in the results section. The ethical procedures carried out consist of collecting the patient's Consent Form to publish the clinical case and complementary exams for scientific dissemination purposes, as well as the care taken to avoid exposing her image unnecessarily.

## Case report

In 2014, a 14-year-old female patient sought dental care complaining of missing teeth in the upper arch, with no relevant medical or family history. During the extraoral physical examination, the patient presented symmetry and hemangioma in the right upper lip and lateral-nasal region on the same side. Intraorally, a complete permanent denture was identified in the mandibular arch, with the exception of the third molars. However, in the maxillary arch, the presence of edentulous space was noted in the entire left quadrant and partially in the right quadrant (missing teeth: 11, 21, 22, 23, 24, 25, 26, 27 and 28).

Additional imaging tests, panoramic radiography (RP) and computed tomography (CT) were requested. From the patient's first panoramic x-ray, the radiographic findings showed aspects of normality in the already erupted teeth, however, they denoted a diffuse aspect between the transition of the mineralized tissues of the impacted teeth in the left and anterior maxillary region (Figure 1A). The results of the computed tomography showed extensive horizontal bone resorption in the left maxilla and also in the anterior region (Figure 1B).

**Figure 1** – Panoramic radiography and computed tomography from 2014



(A) It is possible to visualize, in the upper arch, phantom teeth included in the region of the left quadrant, crossing the midline. Lower arch presents teeth with a normal appearance. Nolla stage 6 third molars. (B) In the upper arch, it is possible to visualize teeth that are semi- impacted in the alveolar bone in the region of the left quadrant, crossing the midline. Moderate horizontal bone resorption can also be seen in the same area. In the lower arch, the structures denote a normal appearance.

Source: UNESP – Faculty of Dentistry (Araçatuba Campus), 2014

The pathognomonic sign of regional odontodysplasia, supporting the diagnosis of the abnormality in the left upper quadrant region with involvement of the right upper central incisor. The patient and her guardian were then advised about her condition and, taking into account her pubertal immaturity, long-term multidisciplinary treatment was proposed. The planning consisted of a three-phase treatment plan, the first being characterized by the temporary rehabilitation of the adolescent, followed by the orthodontic treatment and surgical-rehabilitative treatment stages.

**Table 1** – Therapeutic planning

	<i>Frame</i>	
<b>1ST PHASE</b>	<b>Temporary rehabilitation:</b>	Creation, installation of temporary PPR and continuation of the case until the patient's pubertal maturity.
<b>2ND PHASE</b>	<b>Orthodontic treatment</b>	Traction of affected teeth, using orthodontic mini-implants for tooth extrusion and increase of the left and anterior maxillary alveolar crest.
<b>3RD PHASE</b>	<b>Surgical-rehabilitative treatment</b>	Extraction of affected teeth, bone grafting, installation of titanium implants and installation of prostheses on implants.

**Abbreviations.** PPR (*removable partial prosthesis*).

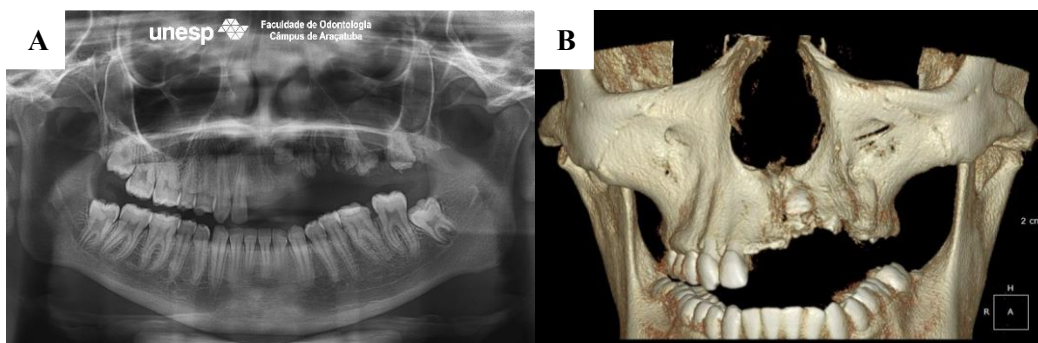
Source: Prepared by the authors, 2023

Treatment was initiated and subsequent management focused on taking an impression to create an adapted removable partial denture (RPD). After installing the prosthesis, it was decided to continue the case. During follow-up, in 2018, small adaptations were made to the patient's prosthesis, due to the partial eruption of tooth 23 (Figure 2), and new imaging exams



were carried out, which showed development of the lower third molars, but minimal change in the quadrant affected by OR.

**Figure 2** – Panoramic radiography and computed tomography from 2018



(A) It is possible to visualize, in the upper arch, phantom teeth in the region of the left quadrant, crossing the midline. Lower arch presents teeth with a normal appearance. Nolla stage 9 lower third molars. (B) In the upper arch, it is possible to visualize teeth that are semi- impacted in the alveolar bone in the region of the left quadrant, crossing the midline. Extensive horizontal bone resorption can also be visualized in the same area. In the lower arch, the dental and bone structures appear normal.

Source: UNESP – Faculty of Dentistry (Araçatuba Campus), 2018

In 2022, the patient underwent a new computed tomography scan, which revealed the absence of improvement in the extensive maxillary bone resorption, as well as the absence of complete eruption of the dental structures. Therefore, taking into account the fact that the patient was over 21 years old, the first phase of treatment was completed (Table 1), requesting orthodontic documentation (Figure 3) starting the second phase – the stage in which the case found at the time of this work.

**Figure 3** – Part of the orthodontic documentation: intraoral photos



(A) Front view. It is possible to see a difference in color between healthy teeth and tooth 23, affected by regional odontodysplasia and semi-impacted and oral cavity. Furthermore, unevenness of the left maxillary ridge is also noted, resulting from horizontal bone reabsorption. (B) Left lateral view, showing tooth 23 not completely erupted and absence of the rest of the teeth in the upper left quadrant.

Source: Images provided by Dr. Melyna Marques de Almeida, 2023.

## Results

From the selection of nine case reports, a comparative table was produced (Table 2) with six categories, namely: “age”, “sex”, “affected quadrant”, “type of denture affected” and “treatment implemented”.

**Table 2** – Literature review from the last five years (2018-2023), comparing the different therapeutic approaches for cases with characteristics similar to the patient in question, presented in this article

<i>Author and country</i>	<i>Age</i>	<i>Sex (F/M)</i>	<i>Affected maxillary quadrant (D/E)</i>	<i>Affected denture (Primary/Permanent)</i>	<i>Implemented Treatment</i>
<i>Abdel-Kader, et al., 2019 (Egypt)</i>	22 years	F	E	Permanent	Extraction of affected teeth; manufacture of removable transitional prosthesis; bone grafting; installation of prostheses on implants.
<i>Cunha, et al., 2019 (Brazil)</i>	10 years	F	D	Both	Extraction of affected teeth; follow-up for future rehabilitation with prostheses on implants
<i>Jeffery, et al., 2019 (England)</i>	7 years	M	D	Permanent	Orthodontic tooth alignment, extraction of affected teeth, bone grafting; installation of prostheses on implants.
<i>Tankittiwat, et al., 2021 (Thailand)</i>	11 years	F	Both	Permanent	Surgical replacement of affected teeth through autotransplantation of unaffected premolar teeth; orthodontic traction; upper lip frenectomy; gingivoplasty.
<i>Banu, et al., 2022 (India)</i>	7 years	M	Both	Both	Removable prosthesis associated with Essix aligners.
<i>Mabrouk, et al., 2022 (Tunisia)</i>	6 years	M	Both	Permanent	Creation of functional space maintainer (removable prosthesis) and maintenance.
<i>Elmezwghi, et al., 2023 (Libya)</i>	20 years	F	D	Both	Rehabilitation with prosthetics on implants
<i>Gosvami, 2023 (India)</i>	8 years	F	E	Both	Preservation of affected teeth and long-term follow-up
<i>Gozzi, et al., 2023 (Italy)</i>	4 years	M	D	Both	Preventive treatment with sealant; Extraction of affected teeth; Installation of an orthodontic device to prevent extrusion of opposing teeth.
<i>Lopes-Delphino, 2023 (Brazil)</i>	22 years	F	Both	Both	Temporary rehabilitation, follow-up, orthodontic treatment, surgical treatment and rehabilitation with prosthesis on implants.

Source: Prepared by the authors, 2023

## Discussion

In the case reported in this document, the clinical characteristics corroborate the literature consulted regarding the incidence of maxillary teeth and the non-eruption of affected dental structures, with the only difference being the fact that the patient had affected teeth beyond the midline crossing. However, the absence of teeth in one or more quadrants is not the only clinical evidence of OR. The literature consulted brings together numerous cases that report changes to the surface of crowns, with signs of hypomineralization and hypocalcification of enamel and dentin.

Based on the exposed criteria, 9 cases were compared to the case in the present study. From this small sample of OR cases in the maxillary arch region, we found a proportion of 5:9 in females, compared to 4:9 affecting males, corroborating the tiny difference between the different sexes, as mentioned in the most recent systematic reviews, such as that of Njakowski, Wós and Surdacka (2022).

Furthermore, our results present affected patients with ages ranging from 4 to 22 years. The literature consulted infers that, regarding diagnosis, the average age is 3-4 years old – referring to the time when deciduous dentures should be complete – however, it is not uncommon that, in some cases, treatment is completed at more advanced ages, shortly after complete pubertal development (HESS *et al.*, 2020; TERRERO-PÉREZ *et al.*, 2020).

Regarding the affected region, the literature consulted shows that, for the most part, only one quadrant is affected, with the maxillary arch being the main one affected (NJAKOWSKI; WÓS; SURDACKA, 2022; ZIEGLER; NEUKAM, 2012;). The data in Table 2 shows agreement, as 6/9 have teeth affected in the left or right quadrant, while the slight minority, 3/9, have both upper quadrants affected by OR.

OR can affect both deciduous and permanent dentures, knowing that when it affects the deciduous denture, most likely, the permanent teeth will also be affected (NEVILLE *et al.*, 2012). Bearing in mind that the opposite is not true, 5/9 cases in the sample had both dentures affected, while the other 4/9 cases explained that only the permanent denture was affected (HESS *et al.*, 2020).

As a choice of form of treatment, the creation of removable prostheses, whether transitional or not, was present in 3/9 cases, also appearing in the case reported here. The removable prosthesis, instituted before or after surgical treatment, can be a viable option that offers both aesthetic and psychological benefits, based on the participation of patients in different social spheres (CUNHA *et al.*, 2019). Koruyucu *et al.* (2019), explain that the

removable prosthesis can indeed be a great alternative for cases of less complexity (involving fewer teeth), but that, in cases of greater complexity, it should be used as a transitional alternative until the patient can be subjected to the installation of implants.

Prosthetics on implants appeared as a therapeutic choice in 4/9 cases in the sample. The literature consulted shows us its good results, however, its installation is only indicated after complete facial bone development. Some cases of implants installed in pediatric patients have been documented and justified with the psychological damage that the use of a removable prosthesis by young patients can cause. Despite this, it is known that due to the osseointegration of implants, these structures do not move and do not follow craniofacial growth and development (HESS *et al.*, 2020).

Appearing in only one case of the nine in the sample, autotransplants, in turn, are capable of stimulating alveolar bone growth and accompanying this development based on the possibility of tooth movement in the intra-osseous environment. Therefore, when teeth are available, autotransplants can be an alternative to avoid damage to bone growth, in addition to avoiding prosthetic rehabilitation (AL-KHANATI; ALBASSAL; BEIT, 2022; HESS *et al.*, 2020; ZIEGLER; NEUKAM, 2012).

Although many cases present great challenges, such as those of patients in the pubertal growth phase and those with impacted teeth in low-density bone pockets, surgical treatment for the extraction of affected teeth, which was the most recurrent form of treatment in samples from Table 2, appearing in 5/9 cases, is still a justifiable management given the poor quality of the affected teeth (CARREIRA *et al.*, 2011; REGEZI; SCIUBBA; JORDAN, 2017).

In cases of extensive bone resorption, there is the alternative of slow orthodontic extrusion, since tooth movement is a biomechanical process that triggers changes in the supporting tissues of the teeth, which can offer gains in bone and gingival tissue and is one of the least invasive and more effective for implant dentistry preparation (MAEDA; SASAKI, 2015; OGIHARA; WANG, 2010).

The treatment shown in Table 2, described by Lopes-Delphino (2023), presents the treatment plan of choice for the patient in the case reported here. And, in accordance with what can be justified in the literature consulted, the treatment plan of choice was the use of a removable partial denture in a transitional manner, followed by orthodontic extrusion of the teeth in the left maxillary quadrant, so that it is possible to finalize the plan therapeutic intervention with surgical extraction and installation of implants for subsequent prosthetic rehabilitation.

By viewing similar cases already published in the literature consulted and comparing them with the case reported here, it is possible to base the best choice of treatment for the patient in this case, taking into account her variations in characteristics within the OR condition itself and also her personal desires. Therefore, it is clear that in addition to therapeutic planning gaining more weight, based on the dental literature consulted, the chances of treatment success increase.

Although the case continues to have a favorable prognosis in relation to the return of the patient's functional and aesthetic harmony, the case still presents limitations regarding the treatment, since, being multidisciplinary, a satisfactory result depends on the success of several therapeutic steps.

Regarding the present study, we found limitations in finding treatment protocols for regional odontodysplasia, even though we know that there is no single pattern of manifestation of the condition in patients. Still, as future research questions, we emphasize that the systematization of a treatment algorithm for this odontogenic disorder would be of immense contribution.

### Final remarks

The etiopathogenesis of regional odontodysplasia is still unknown, but suggestions remain to be proven. Early differential diagnosis is essential to avoid unfavorable outcomes for affected individuals and it is the role of the dentist to carry it out, so that they can find appropriate therapeutic options in a timely manner. Furthermore, therapeutic planning and a multidisciplinary approach are essential to carry out the best approach for each patient, in order to optimize treatment results, respecting individuality and minimizing aesthetic, functional and psychological damage to the person treated.

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