Case Report: Hall Technique as Minimal Intervention in Patient with ADHD.

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INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is one of the most common neurobehavioral problems in pediatric patients, which is characterized by difficulty paying attention, hyperactivity and impulsivity . Globally, the prevalence of this condition is estimated at 5.3% of the population .

Tooth decay is the most common oral disease worldwide. The World Health Organization currently promotes the restoration and treatment of this dental disease with atraumatic or minimally invasive techniques, such as the Hall Technique .

In patients with ADHD, complications may arise when performing invasive treatments, such as the presence of anxiety, inability to control their behavior, and impulsive movements . Therefore, one of the main aims when carrying out treatments is the control of behavioral management with minimal dental intervention .

Taking into account the patient's general condition, his behavior and oral circumstances, dental procedures with minimal intervention treatment are recommended using the Hall Technique for placing stainless steel crowns in the posterior area (Figure 1).

Fig 1. Recomendations for a good experience and dental visit for the patient with ADHD

CASE PRESENTATION

7-year-old male patient with the diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) reported by his mother.

In the clinical examination of the oral cavity, different caries lesions with ICDAS code 5 are found in upper and lower posterior teeth and the patient is rated 2 in the Frankl behavioral scale.

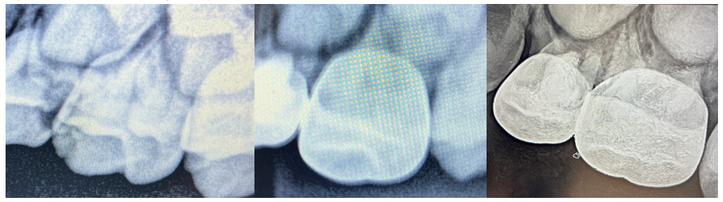

Fig 2. a) Pre-treatment X-ray. **b)** Two week follow-up X ray. **c)** Six months follow-up X-ray.

TREATMENT

The first appointment, after dental evaluation, begins with the placement of orthodontic separators that are placed in the mesial and distal space of the second upper left molar, which will generate adequate interproximal space to place a stainless steel crown (Figure 3a).

A week later, both orthodontics separators are removed, finding enough interproximal space. (Figure 3b).

It was decided to place the No. 6 stainless steel crown since it adapted better to the remaining tooth surface (Figure 3c). The stainless steel crown is cemented with type 1 glass ionomer cement (Fuji I Gold Label).

Upon completion, an appointment is recommended in a week to review the adaptation, adjustment and resolution of the modified occlusal height (Figure 4).

At the two week follow-up appointment, a good adaptation of the crown and a correct occlusion between the opposing teeth was found, as well as good behavior of the patient and improvement in anxiety control (Figure 5).

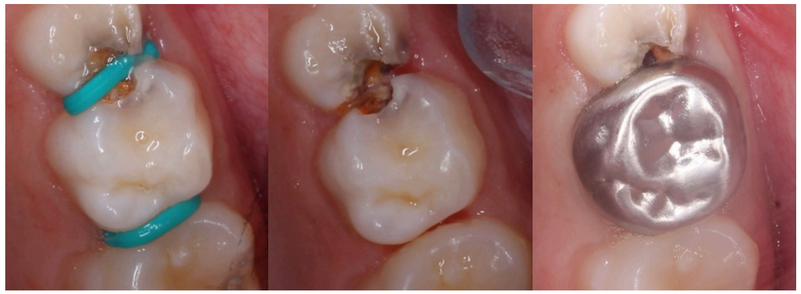

Fig 3. a) Orthodontics separators in place. **b).** Adecuate interproximal space after a week. **c).** Cemented stainless steel crown.

DISCUSSION.

Minimally invasive dental procedures have been of great help in recent years. Case reports, systematic studies and literature reviews have been carried out that support the clinical success of this type of management for dental cavities.

In pediatric dentistry, the Hall Technique has been a treatment with a high level of tolerance by pediatric patients as well as notable clinical success. However, research or case reports revealing the effectiveness and advantages of this technique used in patients with special needs have not yet been widely addressed.

Arrow et al (2021) recommends dental procedures with minimal intervention in patients who have been recommended for treatment under general anesthesia as it provides good clinical success and increases quality of life in relation to oral health.

Amdan Alamri (2022) agree that most of the time in the dental appointment with a patient with special needs, medical challenges are involved, which is why it is widely recommended to modify dental techniques and treatments to ensure appropriate care adapted to the patient's needs.

Fig 4. Inmediate adjustment and adaptation after cementing.

Fig 5. 6 months follow-up appointment.

CONCLUSION.

The pediatric dentist's knowledge and skills in managing and controlling the behavior of patients with ADHD is essential for successful treatment in these cases. Previous research by various authors recommends us, in addition to neurobehavioral control of the patient, to promote minimally invasive dentistry to achieve a successful dental visit.

The Hall Technique can become an outstanding technique in the management of tooth decay in these patients, meeting the objectives and an acceptable success rate, taking the case described above as an example (Figure 6).

However, studies with greater details, control and tests are recommended to amplify the information regarding the control of anxiety and the management of the behavior of these patients with regard to other dental techniques performed.

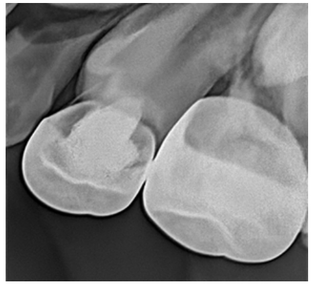

Fig 6. 1 year follow-up appointment.

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