

AESTHETIC REHABILITATION FOR ANTERIOR TEETH – A CASE REPORT

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ABSTRACT

Aesthetic rehabilitation in pediatric dentistry restores the natural appearance and function of children's primary teeth. Early intervention is crucial to prevent the emotional, social, and developmental issues caused by missing anterior teeth, which are important for speech and chewing. The absence of these teeth can lead to misalignment, chewing difficulties, and social withdrawal. Treatments such as space maintainers, composite resin bonding, stainless steel crowns, and removable partial dentures are used based on the child's specific needs. This article describes a case where a child with missing maxillary anterior teeth was treated with a space maintainer.

KEYWORDS: Aesthetic rehabilitation, pediatric dentistry, primary anterior teeth, space maintainers.

INTRODUCTION

A child's smile is a source of joy, and missing anterior teeth due to decay or trauma can be a significant concern for both the child and parents. Aesthetic rehabilitation in paediatric dentistry focuses on restoring the natural appearance and function of these primary teeth. Early intervention is vital to address the emotional and developmental consequences of missing anterior teeth.^[1] Missing anterior teeth in children can significantly impact their communication abilities, social and emotional development, and chewing abilities. Front teeth are crucial for forming specific sounds like fricatives and bilabials, which can lead to frustration and hinder social and emotional growth. The empty space left by missing teeth can invite adjacent teeth, causing overcrowding or misalignment when permanent teeth erupt, potentially necessitating orthodontic intervention.^[2,3]

Chewing difficulties can also arise due to the lack of strong anterior teeth, making processing tougher foods challenging and potentially affecting nutrition and digestion. A healthy smile can lead to feelings of self-consciousness and withdrawal, negatively impacting social interactions and emotional well-being. Early intervention by a paediatric dentist can help mitigate these issues and ensure a child's smile functions optimally throughout their developmental stages.^[4-6]

Paediatric dentists provide various treatment options for missing primary anterior teeth, including space maintainers, composite resin bonding, stainless steel crowns, and removable partial dentures. Space

maintainers prevent tooth movement, composite resin bonding applies a tooth-coloured resin material to the missing tooth, blending with surrounding teeth, stainless steel crowns are custom-fitted for extensive tooth loss or significant decay, and removable partial dentures are lightweight and flexible for minimal tooth loss and those with fractured or sustained trauma. These treatments are tailored to specific circumstances and are ideal for children.^[7-10]

Here we present a case of a child with missing maxillary anterior teeth who was treated with space maintainer.

CASE REPORT

Parents of a 3.5-year-old child reported to the Department of Pedodontics and Preventive Dentistry, with a desire to replace lost upper anterior teeth of their child.

The procedure began by ensuring a sterile environment to minimize the risk of infection. Any root pieces deemed beyond salvage in the anterior region were carefully extracted to facilitate the subsequent steps. Bilateral banding of the maxillary second primary molars was performed to provide stable anchorage for the appliance. Detailed impressions of the upper and lower arches were then taken, capturing the exact contours of the patient's dentition. These impressions were used to create casts that served as precise models for the fabrication process. A wire spur was meticulously crafted using 1mm stainless steel wire, tailored to fit the patient's specific oral anatomy. To enhance retention, an additional layer of 0.6mm stainless steel wire was

soldered onto the main wire spur over the alveolar ridge. This reinforced structure ensured the appliance remained securely in place. The wire spur was then meticulously soldered to the bands on the maxillary second primary molars, ensuring a snug and stable fit. Resin teeth were carefully acrylicized onto the wire spur, meticulously matching the patient's natural dentition for a seamless appearance.

Once the appliance was assembled, it underwent thorough finishing and polishing to optimize comfort and aesthetics. Finally, the completed appliance was cemented in the patient's mouth, and regular follow-up appointments were scheduled to monitor its effectiveness and address any concerns.



Figure 1: Pre-Treatment Clinical Photograph.

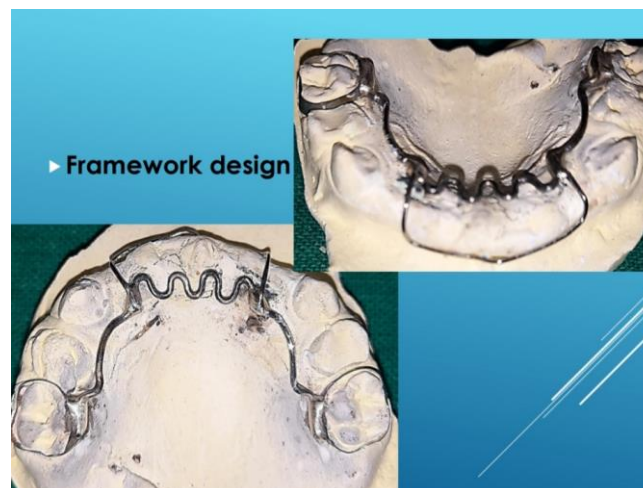


Figure 2: Framework Design.



Figure 3: Placement of the Appliance.



Figure 4: Clinical Photograph after Placement of the Appliance.



Figure 5: Clinical Photograph During Follow-up.

DISCUSSION

The choice of treatment for a child's tooth decay depends on several factors, including their age, cooperation level, and the number of missing teeth and tooth loss. The condition of the surrounding teeth and jawbone must also be assessed for long-term success. Additionally, the child's overall dental health and oral hygiene habits are crucial. A dentist will evaluate the child's existing dental health and oral hygiene habits when recommending a treatment option, such as bonding, to prevent future decay around the restoration.^[11-13]

Dentists prioritize materials that are biocompatible, age-appropriate, safe, non-toxic, and durable for children's developing mouths. Parental involvement and education are crucial for successful treatment outcomes. Parents help their children understand oral hygiene and maintain restorations, supervising brushing, and flossing routines. Long-term care, including regular dental checkups and cleanings, is essential for monitoring permanent teeth and ensuring long-term oral health. Early detection of issues with permanent teeth allows for prompt intervention and prevents future complications. Working collaboratively with dentists and parents ensures the best

possible outcome for a child's dental health and overall well-being.^[14,15]

CONCLUSION

The loss of anterior teeth during adolescence can profoundly impact a child's psychological well-being, potentially leading to lasting emotional distress. Beyond the immediate physical consequences, such as speech impediments and facial aesthetic changes, the early loss of these teeth can disrupt normal development, causing adjacent teeth to shift and resulting in the loss of valuable space. This can ultimately lead to malocclusion later in life. To address the functional and aesthetic challenges associated with early anterior tooth loss, the appliance described offers a solution that not only restores function but also provides an aesthetically pleasing outcome, supporting the child's emotional and social development.

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