

Dental behavior management for a 7-years-old patient with hearing impairment: A case report

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Abstract

Introduction: Hearing is one of the most important components in communication since hearing and speaking are the key for people in socializing. Patients with hearing impairment still need to visit dentist. Difficulties in communication will lead to difficulties in dental treatment.

Case History: Explaining about dental behaviour management in 7-years-old girl with hearing impairment. Class 2 filling on tooth #55 which begin with a whole mouth prevention of dental caries was done smoothly with a better cooperation level.

Discussion: A non-verbal communication using lip reading, show-feel-do, modelling, and picture exchange communication system (PECS) was selected as behaviour management to describe treatment procedures. During dental treatment using handpiece, hearing aid was removed to avoid disturbing sound. The child's cooperative level was recorded before and after treatment.

Conclusion: Lip reading, show-feel-do, modelling and PECS methods are proven to establish good communication in dental practice for patient with hearing impairment.

Keywords: Hearing impairment; Behaviour management; Dental treatment; Children; Inclusive health.

1. Introduction

Hearing impairment is a major handicap worldwide, and it is more common in developing nations [1]. Because of the lack of neonatal hearing screening, children with hearing impairment are more likely to be identified late [2]. Hearing impairment is an invisible handicap, and failure to diagnose or treat it leads to delayed speech, language, and communication development [3]. Hearing is frequently referred to as the social sense because it plays an important part in connecting and relating with others and the social environment. Individuals with hearing impairment seek flexible solutions to improve their hearing-related health and well-being [4].

Proper communication plays a significant role in gaining cooperation and providing effective treatment of children [5]. Hearing impairments in children create difficult communication with dentists. Anxiety and uncooperative behavior might make dental treatment more difficult. Modifications in behavior management tailored to the abilities of children with hearing impairment are needed when dental and oral care is to be performed. In this case, we reported dental behavior management for a 7-years-old patient with hearing impairment.

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2. Case History

An 7-year-old girl with hearing impairment was referred to the Faculty of Dental Medicine, Airlangga University, due to tooth decay in the posterior tooth. Extra oral examination is using hearing aids since 4 years. Intra oral examination is #55 class II media caries (GV. Black), anterior maxillary attrition, caries risk assesment (CAMBRA) is moderate, oral hygiene OHI-S (1.2) is good. An intraoral examination showed that #55 caries media and #16 #26 #36 #46 fully erupted (Figure 1). At the first meeting, behavior management was carried out using the show do technique, Picture exchange communication system (PECS), modeling technique (Figure 2).



Figure 1 Intraoral Examination



Figure 2 The show do technique, Picture exchange communication system (PECS), modeling technique

At the second visit, a GIC filling was performed on tooth #55, fissure sealant on teeth #16 #26 #36 #46, and topical fluoride application (Figure 3). When carrying out dental procedures, children use hearing aids and there are no problems. Treatment results are low caries risk and good oral hygiene (OHI-S=0.0).

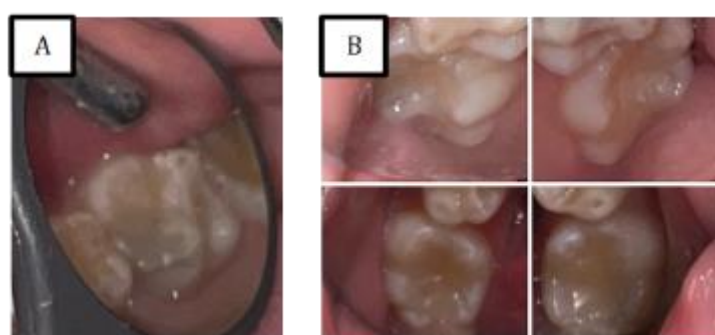


Figure 3 A. #55 restoration using GIC, B. Fissure sealant on #16 #26 #36 #46

3. Discussion

While there is extensive knowledge on dealing with hearing-impaired people in healthcare, there is limited information available for children. Dental clinics should treat hearing-impaired children as unique individuals. Individualized treatment requires a clinical history that includes the degree of impairment, when it occurred, the type of rehabilitation treatment, education and communication, family treatment, and any connected issues. Identifying the child's

communication style is critical. Obtain this information before the first appointment, preferably at a meeting with the parents to explain the clinic procedures [6].

Identifying the child's communication style is critical. Before the initial appointment, parents should be informed about what to expect in the clinic and how to prepare their child for the experience. Parents can learn positive behavioural control techniques and provide their child with pamphlets or photographs (PECS) to help them understand the clinic environment and procedures. When a child is in the dental chair, it's important for the dentist, assistant, and parent to maintain eye contact. During initial visits, parents may choose to be there to ensure the youngster feels safe. During initial visits, it's important to communicate with the children in their preferred way [6]. The child with hearing impairment may communicate effectively with hearing aids, lip-reading, or sign language [7]. The dental clinic team should communicate effectively through nonverbal cues such as body language and facial expression. Creating a positive impression can help children relax and build trust [8,9].

It is necessary to have full visibility in order to communicate with the child who has hearing loss and to enable the child to perceive their surroundings. When the child needs to be told something, take off the face mask and avoid doing anything that would be outside of their line of sight as this could irritate them [10, 11]. The child with hearing impairment requires a lot of explanations and examples since they are particularly fearful of the unknown. To help the child understand that everything is normal and to help them prepare, the instruments and equipment should be demonstrated, and anything that vibrates should be explained [6].

For these patients, the say-show-do approach can be modified to a show-do format [12, 9]; however, consideration must be given to the patient's age, level of impairment, communication abilities, and other factors. By using the modeling technique, a kid's sister or another child can be watched while in the dentist chair or through movies, which can be very helpful. Using images, drawings, and posters to illustrate dental treatments is another method [7]. It is best to use visual stimuli to enhance behavior and encourage learning. If the child wears a hearing aid. Reduce background noise, for instance, and switch off whirling devices if the child is being bothered by them. Children with hearing impairments do not tolerate lengthy dental operations well. Keep them as brief as you can [7, 6].

A child with hearing impairments would receive dental care in a manner comparable to a typical, but it's crucial to provide preventive care as these kids may not practice good hygiene due to a lack of motivation and instruction. In addition to the parents being active in dental health education, this calls for effective communication between the dentist and the kid. Dental treatment for children with hearing impairments requires special considerations to address the unique communication challenges and anxiety these patients may experience. Effective management strategies are essential to ensure successful dental visits and optimal oral health outcomes for these children. Behaviour management in this case uses the show do technique, Picture Exchange Communication System (PECS), and the modeling technique.

4. Conclusion

The combination of non-verbal communication, lip reading, the show-do technique, modeling, and PECS are appropriate communication methods for dental care of children with hearing impairment.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this document.

Statement of informed consent

Informed consent was obtained from patient included in the study.

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