



## تحديات علاج الأسنان لمرضى الزهايمر

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### Challenges in Dental Treatment of Alzheimer's Patients

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تاريخ الاستلام: 2023-11-21 تاريخ القبول: 2023-12-13 تاريخ النشر: 2023-12-22

#### الملخص:

مرضى الزهايمر من الحالات العصبية الشديدة التي ليست فقط تصيب الوظيفة الإدراكية و لكن أيضا له نتائج عميقة للصحة العامة متضمنا أيضا صحة الفم .

والتحديات في منح العناية السنية لمرضى الزهايمر تكون في أوجه متعددة و متخصصة لمنح التعويض و التركيز الادراكي و صعوبة الاتصال و سلوكيات هؤلاء المرضى ،وفي هذه الورقة نشرح هذه التحديات بالتفصيل و نوضح الاستراتيجيات و التدخلات للعناية السنية بهذه الفئة

**الكلمات الدالة:** مرض الزهايمر، الرعاية الصحية الشاملة، صحة الفم، علاج الأسنان، وصعوبات التواصل.

#### Abstract

Alzheimer's disease is a progressive neurodegenerative condition that not only affects cognitive function but also has profound implications for overall healthcare, including oral health. The challenges in providing dental treatment to Alzheimer's patients are multifaceted, demanding a specialized approach to overcome cognitive impairment, communication difficulties, behavioural issues, and ethical concerns. This paper explores these challenges in detail and discusses strategies and interventions for the dental care community to ensure that oral health is maintained and improved in this vulnerable population.

**Keywords:** Alzheimer's disease, Overall healthcare, Oral health, Dental treatment and, Communication difficulties.

#### Introduction

The burgeoning prevalence of Alzheimer's disease, a progressive neurodegenerative condition, presents a profound and multifaceted impact not only on cognitive function but also on broader aspects of healthcare, including oral health. <sup>(1)</sup> As the population affected by Alzheimer's continues to grow, so does the imperative to address the unique challenges associated with providing dental treatment to these individuals. This paper delves into the intricate landscape of

challenges encountered in dental care for Alzheimer's patients, necessitating a specialized and comprehensive approach. The multifaceted nature of these challenges includes cognitive impairment, communication difficulties, behavioural issues, and ethical considerations. Understanding and navigating these complexities are vital for dental professionals, caregivers, and family members to ensure the optimal oral health of this vulnerable population. <sup>(2)</sup> Through a detailed exploration of these challenges, accompanied by a discussion of pertinent strategies and interventions, this paper aims to contribute to the evolving knowledge base within the dental care community. By addressing these challenges head-on, the goal is to enhance the quality of dental treatment provided to individuals with Alzheimer's, ultimately improving their overall well-being and minimizing the potential adverse consequences associated with oral health neglect in this unique and sensitive patient demographic. <sup>(3)</sup>

## **1- Challenges in Dental Treatment of Alzheimer's Patients**

### **2.1 Cognitive Impairment**

The cognitive impairment intrinsic to Alzheimer's disease introduces a formidable barrier to effective oral care for afflicted individuals. As the disease progresses, it detrimentally impacts memory, reasoning abilities, and overall cognitive function. This cognitive decline poses a significant challenge in conveying the importance of maintaining oral health to patients. Forgetfulness becomes a pervasive issue, leading to missed dental appointments and complicating the establishment and adherence to routine oral hygiene practices. Individuals grappling with Alzheimer's find it increasingly challenging to understand, remember, and execute the necessary steps for maintaining their oral well-being. This cognitive barrier, therefore, demands an elevated level of attention, patience, and specialized approaches from dental professionals and caregivers alike to mitigate the associated oral health risks. <sup>(4)</sup>

### **2.2 Communication Difficulties**

Individuals with Alzheimer's disease often encounter significant communication difficulties, presenting a complex challenge for dental professionals in diagnosing and addressing dental issues effectively. The nature of the disease leads to difficulties in expressing dental discomfort or pain, leaving dental practitioners reliant on observational cues and indirect indicators. The patient's limited ability to articulate their feelings or pinpoint the source of discomfort can impede the timely identification of oral health problems. <sup>(4-5)</sup>

Moreover, the communication barriers extend to understanding and following dental instructions. Alzheimer's patients may struggle to comprehend the guidance provided by dental professionals

regarding oral care routines or treatment procedures. This lack of understanding can hinder treatment compliance, as individuals may find it challenging to cooperate with dental procedures or follow post-treatment care instructions. <sup>(5)</sup>

The communication challenges in Alzheimer's patients demand a nuanced and patient entered approach from dental practitioners. Dental professionals may need to employ alternative communication strategies, such as visual aids, simplified language, and non-verbal cues, to enhance understanding and facilitate effective communication. Additionally, involving caregivers in the communication process and family becomes crucial, as they can provide valuable insights into the patient's oral health history and act as supportive partners in the dental care journey. <sup>(6)</sup>

In navigating these communication difficulties, dental professionals must exercise patience, empathy, and adaptability. Tailoring communication methods to the individual needs and capabilities of Alzheimer's patients is essential for fostering a collaborative and supportive environment that promotes optimal oral health outcomes. <sup>(7)</sup>

### **2.3 Behavioural Issues**

Behavioural issues present significant challenges in providing dental treatment to individuals with Alzheimer's disease. The cognitive decline associated with Alzheimer's often manifests in behaviours such as agitation, aggression, and anxiety, creating a stressful environment for both the patient and the dental team. These behavioural challenges can complicate the dental treatment process, requiring specialized strategies to ensure effective care. <sup>(8)</sup>

Agitation and aggression may be triggered by the unfamiliarity of the dental setting, the presence of dental instruments, or the physical proximity of dental professionals. Anxiety, stemming from a lack of understanding or fear of the unknown, can further exacerbate the challenges of delivering dental care to Alzheimer's patients.

Resistance to care, including oral care, is a common issue encountered during dental appointments. Patients may exhibit reluctance or refusal to cooperate with dental procedures, hindering the ability to conduct thorough examinations and treatments. This resistance can lead to delays in addressing oral health issues and may result in inadequate treatment, posing risks to the overall well-being of the patient. <sup>(9)</sup>

To navigate these behavioural challenges, dental professionals must adopt a patient-centred and empathetic approach. Establishing a calm and reassuring atmosphere, explaining

procedures in simple language, and allowing ample time for the patient to acclimate to the dental environment can help alleviate anxiety and reduce agitation. Additionally, involving caregivers in the dental care process can provide valuable support in managing behavioural issues and ensuring the safety and comfort of both the patient and the dental team.

Dental professionals may also consider incorporating behavioural management techniques to minimize anxiety and enhance cooperation during dental treatments. This may include distraction techniques, positive reinforcement, and adjusting the pacing of procedures to align with the patient's comfort level.

Addressing behavioural issues in Alzheimer's patients requires a collaborative effort between dental professionals, caregivers, and the broader healthcare team. By understanding and proactively managing these challenges, dental practitioners can contribute to maintaining and improving the oral health of individuals with Alzheimer's disease. <sup>(10)</sup>

#### **2.4 Physical Limitations**

Individuals with Alzheimer's disease often experience physical limitations that significantly impact their ability to engage effectively in oral care practices. The progressive nature of Alzheimer's contributes to limited mobility and decreased dexterity, posing challenges for routine oral hygiene. The impairment in motor skills can make tasks like holding a toothbrush or manoeuvring dental floss difficult for individuals with Alzheimer's. As a result, they may struggle to perform basic oral care activities independently. This limitation extends to various aspects of oral hygiene, from brushing their teeth to flossing and other routine practices. <sup>(11)</sup>

Family members, caregivers, and dental professionals play a crucial role in assisting individuals with Alzheimer's in overcoming these physical limitations. They may need to provide hands-on support, ensuring that the oral care routine is thorough and effective. This assistance becomes particularly vital as the disease progresses, and the individual's motor skills continue to decline.

Adapting oral care strategies to accommodate these physical limitations is essential in maintaining optimal oral health for individuals with Alzheimer's. Specialized tools and techniques may be introduced to facilitate easier and more comfortable oral care, taking into consideration the unique challenges presented by the disease. Regular dental check-ups become even more critical to address emerging issues promptly and adjust the oral care plan accordingly. <sup>(12)</sup>

## **2.5 Medication Side Effects**

Alzheimer's disease medications can potentially impact dental health in various ways. Certain anticholinergic drugs commonly used in Alzheimer's treatment may contribute to dry mouth (xerostomia), resulting in reduced saliva production, posing an elevated risk of cavities, gum disease, and difficulties in swallowing. Additionally, specific anticonvulsant medications may induce gingival overgrowth, complicating proper oral hygiene and heightening the risk of inflammation.<sup>(13)</sup> Some Alzheimer's medications might lead to difficulty in swallowing, making it challenging to uphold adequate oral care and increasing susceptibility to plaque build-up and gum disease. Individuals undergoing Alzheimer's treatment should communicate their medication regimen to dentists before dental procedures, as certain medications may interact with anaesthesia or other drugs used during treatments. Cognitive decline associated with Alzheimer's could also impact an individual's ability to maintain optimal oral hygiene practices, necessitating heightened attention from caregivers and healthcare providers. These medications may further influence taste perception and appetite, affecting dietary habits that impact the overall health of teeth and gums. Given these potential side effects, regular dental check-ups are crucial for individuals with Alzheimer's disease to promptly monitor and address emerging oral health issues through preventive care.<sup>(14)</sup>

Dental signs and symptoms in Alzheimer's disease are integral components of the broader impact that this neurodegenerative condition has on overall health. As Alzheimer's progresses, cognitive decline becomes evident, affecting memory, thinking, and physical well-being, including oral health. Challenges arise from the cognitive and functional decline associated with the disease. Individuals with Alzheimer's may neglect oral hygiene due to forgetfulness, disorientation, and challenges in understanding oral care importance, increasing the risk of cavities, gum disease, and bad breath. Communicating dental discomfort becomes challenging for patients, hindering prompt identification and resolution of dental problems. Behavioural changes, including agitation and resistance to oral care, may lead to delayed or inadequate dental treatments, further exacerbating oral health issues. Physical limitations associated with Alzheimer's, such as limited mobility, make it challenging for effective oral care practices, requiring assistance for brushing, flossing, and routine activities. Medications used in Alzheimer's treatment can impact oral hygiene, contributing to gingival overgrowth. Alzheimer's may also influence nutritional habits, indirectly affecting oral health through changes in taste perception or appetite. Understanding these dental signs is crucial for caregivers, dental professionals, and healthcare providers. Tailoring oral care strategies to the unique needs of

individuals with Alzheimer's can help mitigate challenges and maintain better overall oral health. Regular dental check-ups and effective communication strategies play a vital role in addressing and preventing dental issues in individuals with Alzheimer's disease. <sup>(15)</sup>

## **2.6 Ethical Concerns**

In the realm of dental treatment for Alzheimer's patients, ethical concerns loom large, demanding careful consideration and navigation. One of the primary challenges is determining the extent of dental treatment for individuals who may lack the capacity to make decisions about their care due to the cognitive impairments associated with Alzheimer's. This raises significant questions about informed consent and the ethical responsibility of dental professionals and caregivers. Striking a delicate balance between the best interests of the patient and respecting their autonomy becomes a complex and nuanced task. Careful ethical guidelines and legal frameworks must be consulted to ensure that decisions made about dental treatments align with the overarching principles of patient well-being and autonomy. This ethical dimension adds an extra layer of complexity to the already intricate landscape of providing dental care for individuals with Alzheimer's, emphasizing the need for a thoughtful and principled approach in the face of unique challenges. <sup>(16)</sup>

## **3. Strategies and Interventions**

Addressing the challenges in dental treatment for Alzheimer's patients necessitates a multifaceted approach. Comprehensive education and training programs are imperative for dental professionals, caregivers, and family members involved in the care of individuals with Alzheimer's. These programs should focus on effective communication strategies tailored to the cognitive abilities of Alzheimer's patients. Developing simplified oral care routines that accommodate both cognitive and physical limitations is crucial, ensuring that the prescribed care is accessible and feasible for everyone. Encouraging and facilitating regular dental check-ups is essential to proactively identify and address dental issues in their early stages. The use of communication aids, such as visual tools and written instructions, helps bridge the cognitive gap, facilitating better understanding and compliance with oral care routines. Effective behavioural management techniques contribute to a positive and less stressful dental care experience for both patients and the dental team. Lastly, legal and ethical guidance plays a crucial role in decision-making, ensuring that the best interests of Alzheimer's patients are upheld while respecting their autonomy. This comprehensive strategy aims to improve the overall oral health outcomes for this vulnerable population. <sup>(17)</sup>

### **3.1 Education and Training**

The imperative for effective dental care for Alzheimer's patients necessitates a proactive approach through education and training. Dental professionals, caregivers, and family members are integral components of the support system required to address the unique challenges posed by Alzheimer's disease. Comprehensive training programs are crucial to equip these stakeholders with the knowledge and skills essential for providing appropriate dental care. Dental professionals need specialized training to navigate the intricacies of cognitive impairment, communication difficulties, and behavioural issues inherent in Alzheimer's patients. Simultaneously, caregivers and family members play a vital role in the daily support and maintenance of oral health practices for these individuals. Education and training initiatives should focus on fostering an understanding of the specific needs and challenges associated with Alzheimer's, emphasizing effective communication strategies and tailored oral care routines. By investing in education and training, a collaborative network can emerge, ensuring that Alzheimer's patients receive the high-quality dental care they deserve, ultimately contributing to their overall well-being. <sup>(18)</sup>

### **3.2 Simplified Oral Care Routines**

The implementation of simplified oral care routines stands as a pivotal strategy in addressing the multifaceted challenges associated with dental treatment for Alzheimer's patients. Recognizing the cognitive and physical limitations intrinsic to the condition, it becomes imperative to design oral care routines that are not only effective but also accessible to individuals grappling with Alzheimer's. These routines must be tailored to the unique needs of each patient, acknowledging the diverse spectrum of abilities and challenges presented by the disease. Simplicity becomes the guiding principle, as routine tasks may become increasingly challenging for individuals experiencing cognitive decline. By developing streamlined oral care routines, dental professionals, caregivers, and family members can enhance the feasibility and effectiveness of daily oral hygiene practices for Alzheimer's patients. This targeted approach fosters a sense of routine, comfort, and familiarity, contributing to the overall well-being of these individuals and mitigating potential oral health risks associated with the disease. <sup>(19)</sup>

### **3.3 Regular Dental Check-ups**

Regular dental check-ups play a pivotal role in safeguarding the oral health of individuals grappling with Alzheimer's disease. The progressive nature of Alzheimer's introduces a

heightened vulnerability to various dental issues, emphasizing the significance of routine dental examinations. Encouraging and facilitating regular dental check-ups for Alzheimer's patients becomes a proactive strategy to detect and address potential dental issues in their early stages. These check-ups serve as a preventive measure, allowing dental professionals to identify emerging problems before they escalate into more complex and challenging conditions. The cognitive and physical barriers associated with Alzheimer's necessitate a tailored approach during these check-ups, ensuring that communication strategies and patient comfort are prioritized. By emphasizing the importance of regular dental visits, dental care providers contribute to the overall well-being of Alzheimer's patients, addressing oral health concerns promptly and fostering a comprehensive and patient-centred approach to dental care. <sup>(20)</sup>

### **3.4 Communication Aids**

The implementation of communication aids is integral to overcoming the unique challenges faced by Alzheimer's patients in understanding and adhering to oral care routines. Visual aids, such as diagrams and charts, serve as valuable tools to supplement verbal instructions, compensating for the cognitive impairments prevalent in individuals with Alzheimer's disease. Written instructions, presented in a clear and straightforward manner, contribute to reinforcing verbal communication and providing a tangible reference for patients. Non-verbal communication techniques, including gestures and demonstrations, offer additional layers of comprehension for Alzheimer's patients who may struggle with traditional verbal communication. <sup>(21)</sup>

These communication aids aim to enhance the patient's understanding of oral care routines and foster compliance with these essential practices. Tailoring communication to the individual patient's preferences and cognitive abilities is crucial, recognizing the diverse ways in which individuals with Alzheimer's process information. By incorporating a variety of communication aids, dental professionals, caregivers, and family members create a supportive environment that empowers Alzheimer's patients to participate in their oral care while addressing the communication challenges inherent in the disease.

### **3.5 Behavioural Management**

Behavioural management is a crucial aspect of providing dental care to individuals with Alzheimer's disease, as it addresses the common challenges of anxiety and agitation that often accompany dental treatments for these patients. Dental professionals, caregivers, and the



dental team must collaborate to implement effective strategies that create a calm and comfortable environment for the patient.

One key approach in behavioural management involves establishing a trusting and familiar relationship between the patient and the dental team. Familiar faces, routine procedures, and a patient–centric approach contribute to reducing anxiety levels. Additionally, clear communication about each step of the dental procedure, using simple language and visual aids, helps alleviate uncertainties and fears.

Distraction techniques, such as playing soothing music or engaging in light conversation, can divert the patient's attention away from potential stressors associated with dental treatments. Creating a relaxing atmosphere within the dental setting, including comfortable seating and a visually calming environment, contributes to a positive overall experience.

In cases where more significant anxiety or behavioural challenges arise, dental professionals may collaborate with other healthcare providers to explore pharmacological interventions or alternative approaches tailored to the individual's needs. The goal of behavioural management is to ensure that dental treatments are conducted with empathy, understanding, and a focus on minimizing stress for individuals with Alzheimer's disease. <sup>(22)</sup>

### **3.6 Legal and Ethical Guidance**

Navigating the legal and ethical considerations in dental treatment for Alzheimer's patients is a complex but crucial aspect of providing comprehensive care. Dental professionals must adhere to established guidelines to ensure the well–being and rights of individuals with Alzheimer's disease.

One key ethical consideration revolves around obtaining informed consent. Due to the cognitive decline associated with Alzheimer's, patients may lack the capacity to make decisions about their care independently. Striking a balance between respecting the patient's autonomy and acting in their best interests becomes paramount. Dental professionals may engage with family members or legal representatives to obtain informed consent, ensuring that decisions align with the patient's preferences and overall well–being.

Legal considerations also come into play when determining the extent of dental treatment for Alzheimer's patients. Understanding the legal framework surrounding healthcare decisions, guardianship, and patient rights is essential. Dental professionals should stay informed about

relevant local and national laws, as these may impact the decision-making process and treatment options available.

Regular training and updates on ethical and legal standards in healthcare, specifically tailored to the challenges posed by Alzheimer's disease, are crucial for dental professionals. This ongoing education ensures that the dental care provided aligns with the highest ethical standards, safeguarding the rights and dignity of individuals with Alzheimer's. <sup>(23)</sup>

#### **4. Conclusion**

In conclusion, the imperative task of caring for the oral health of individuals with Alzheimer's disease requires a collaborative and multifaceted approach from dental professionals, caregivers, and family members. The challenges posed by cognitive impairment, communication difficulties, behavioural issues, physical limitations, and ethical considerations necessitate innovative and effective strategies. By recognizing the unique needs of Alzheimer's patients, oral care can be adapted to address specific challenges and ensure that their overall well-being is prioritized. The collaboration between dental professionals, who bring expertise in oral health, and caregivers and family members, who contribute invaluable insights into the individual's daily life and routines, is essential.

Implementing these strategies and interventions not only prevents the neglect of oral health but also contributes to an improved quality of life for individuals with Alzheimer's. Through careful consideration of the challenges presented by the disease, the dental care community can play a pivotal role in reducing the risk of related health issues, promoting oral health, and ultimately enhancing the overall well-being of those affected by Alzheimer's disease.

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