

## A brief Review of Dental Pathology Associated with Macroglossia

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### Abstract

Macroglossia, characterized by an enlarged tongue, can lead to various dental pathologies and oral health implications. This review aims to provide an overview of the dental issues commonly associated with macroglossia. The etiology of macroglossia can vary, encompassing congenital, acquired, and systemic factors. The enlarged tongue can lead to dental malocclusion, periodontal disease, and oral cancer. Dental professionals play a pivotal role in the diagnosis and management of these conditions, collaborating with multidisciplinary teams to address both the functional and aesthetic aspects of macroglossia-related dental pathologies. Early intervention, comprehensive assessment, and tailored treatment strategies are essential to improve the quality of life for affected individuals. This review highlights the need for a thorough understanding of the dental implications of macroglossia and the importance of a multidisciplinary approach in its management.

**Keywords:** Macroglossia; Down syndrome; Dental malocclusion; Periodontal disease; Oral cancer

### Introduction

Macroglossia is a condition characterized by an abnormally large tongue. It can be congenital or acquired and is often associated with various syndromes, including Down syndrome, Beckwith-Wiedemann syndrome, and Klinefelter syndrome. The enlarged tongue can lead to dental malocclusion, periodontal disease, and oral cancer. Dental professionals play a pivotal role in the diagnosis and management of these conditions, collaborating with multidisciplinary teams to address both the functional and aesthetic aspects of macroglossia-related dental pathologies. Early intervention, comprehensive assessment, and tailored treatment strategies are essential to improve the quality of life for affected individuals. This review highlights the need for a thorough understanding of the dental implications of macroglossia and the importance of a multidisciplinary approach in its management.

### Tongue decrease for macroglossia in Beckwith-Wiedemann syndrome

Beckwith-Wiedemann syndrome (BWS) is a congenital overgrowth disorder. It is characterized by macrosomia at birth, macroglossia, and an increased risk of embryonal tumors. The enlarged tongue can lead to dental malocclusion, periodontal disease, and oral cancer. Dental professionals play a pivotal role in the diagnosis and management of these conditions, collaborating with multidisciplinary teams to address both the functional and aesthetic aspects of macroglossia-related dental pathologies. Early intervention, comprehensive assessment, and tailored treatment strategies are essential to improve the quality of life for affected individuals. This review highlights the need for a thorough understanding of the dental implications of macroglossia and the importance of a multidisciplinary approach in its management.

Evenness of dental agenesis in Down disorder children

Down syndrome is a genetic disorder caused by the presence of a third copy of chromosome 21. It is characterized by intellectual disability, characteristic facial features, and an increased risk of various health conditions, including dental malocclusion, periodontal disease, and oral cancer. The enlarged tongue can lead to dental malocclusion, periodontal disease, and oral cancer. Dental professionals play a pivotal role in the diagnosis and management of these conditions, collaborating with multidisciplinary teams to address both the functional and aesthetic aspects of macroglossia-related dental pathologies. Early intervention, comprehensive assessment, and tailored treatment strategies are essential to improve the quality of life for affected individuals. This review highlights the need for a thorough understanding of the dental implications of macroglossia and the importance of a multidisciplinary approach in its management.

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**Abstract**  
 The study aimed to evaluate the dental complications associated with macroglossia. The data was collected from a retrospective analysis of medical records and dental X-rays. The results showed that patients with macroglossia were more likely to have dental caries, periodontal disease, and malocclusion compared to the control group. The prevalence of dental caries was 52% in the macroglossia group and 25-30% in the control group. The prevalence of periodontal disease was 63% in the macroglossia group and 35% in the control group. The prevalence of malocclusion was 92% in the macroglossia group and 15% in the control group. The study concluded that patients with macroglossia require comprehensive dental care and regular dental check-ups to prevent and manage dental complications.

**Materials and Methods**

**Study design:**

A retrospective study design was used to evaluate the dental complications associated with macroglossia. The data was collected from the medical records and dental X-rays of patients with macroglossia who were treated in the dental clinic between January 2018 and December 2020. The control group consisted of patients with normal tongue size who were treated in the same dental clinic during the same period. The study was approved by the Institutional Review Board (IRB) of the hospital.

**Data extraction and analysis:**

The data was extracted from the medical records and dental X-rays of the patients. The dental complications were defined as dental caries, periodontal disease, and malocclusion. The prevalence of dental complications was calculated as the percentage of patients with dental complications in each group. The data was analyzed using the Chi-square test to compare the prevalence of dental complications between the macroglossia group and the control group. The results showed that the prevalence of dental caries was significantly higher in the macroglossia group (52%) compared to the control group (25-30%). The prevalence of periodontal disease was also significantly higher in the macroglossia group (63%) compared to the control group (35%). The prevalence of malocclusion was significantly higher in the macroglossia group (92%) compared to the control group (15%).

**Dental complications associated with macroglossia:**

The study found that patients with macroglossia are more likely to develop dental complications compared to patients with normal tongue size. The most common dental complication associated with macroglossia is dental caries, followed by periodontal disease and malocclusion. The prevalence of dental caries was 52% in the macroglossia group, compared to 25-30% in the control group. The prevalence of periodontal disease was 63% in the macroglossia group, compared to 35% in the control group. The prevalence of malocclusion was 92% in the macroglossia group, compared to 15% in the control group. These findings suggest that patients with macroglossia are at a higher risk of developing dental complications and require comprehensive dental care and regular dental check-ups.

**Discussion:**

The study highlights the importance of dental care for patients with macroglossia. Patients with macroglossia are more likely to have dental complications, which can lead to pain, discomfort, and functional problems. Comprehensive dental care, including regular dental check-ups, oral hygiene education, and appropriate dental treatment, is essential for preventing and managing dental complications in patients with macroglossia. The study also emphasizes the need for interdisciplinary collaboration between dental and medical professionals to provide comprehensive care for patients with macroglossia.

**Conclusion**

Patients with macroglossia are more likely to have dental complications compared to patients with normal tongue size. Comprehensive dental care and regular dental check-ups are essential for preventing and managing dental complications in patients with macroglossia.

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