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PROSTHODONTIC MANAGEMENT OF XEROSTOMIA: A NOVEL TECHNIQUE FOR SALIVARY RESERVOIR FABRICATION WITH A REMOVABLE LID

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Abstract: Xerostomia, or dry mouth, is a common condition that can significantly impact a patient's oral health and quality of life. Prosthodontic management plays a crucial role in alleviating the symptoms of xerostomia and improving oral function. This case report presents a novel technique for salivary reservoir fabrication with a removable lid to manage xerostomia in a patient with severe salivary gland dysfunction. The technique involves creating a customized reservoir using biocompatible materials to store artificial saliva and provide moisture to the oral tissues. The removable lid allows the patient to conveniently refill and clean the reservoir, enhancing patient compliance. The case report details the step-by-step process of the fabrication technique and the positive outcomes in terms of improved oral comfort and function for the patient with xerostomia.

Keywords: Xerostomia, dry mouth, prosthodontic management, salivary reservoir, artificial saliva, removable lid, oral health, oral comfort, case report.

INTRODUCTION

Xerostomia, commonly known as dry mouth, is a prevalent condition characterized by reduced salivary flow, leading to discomfort, difficulty in speaking, swallowing, and an increased risk of dental caries and oral infections. The management of xerostomia poses significant challenges for both patients and dental professionals. Prosthodontic interventions play a vital role in alleviating the symptoms of xerostomia, improving oral function, and enhancing the overall quality of life for affected individuals.

Traditional methods of managing xerostomia include the use of salivary substitutes and artificial saliva, which can provide temporary relief but may not effectively mimic the natural properties of saliva. To address this limitation, a novel prosthodontic technique has been developed for salivary reservoir fabrication with a removable lid. This technique aims to create a customized reservoir that stores artificial saliva, providing a continuous source of moisture to the oral tissues.

METHOD

Patient Evaluation:

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A patient presenting with severe xerostomia due to salivary gland dysfunction was evaluated. The patient's medical history, salivary flow rate, and oral health status were assessed to determine the extent of xerostomia and the suitability for the prosthodontic intervention.

Treatment Planning:

Based on the patient's evaluation, treatment planning discussions were conducted to explore prosthodontic management options for xerostomia. The novel technique of salivary reservoir fabrication with a removable lid was proposed as a viable solution to improve oral comfort and function.

Reservoir Design and Fabrication:

Impressions of the patient's oral cavity were taken using biocompatible materials. The reservoir was custom-designed to fit comfortably within the oral cavity, strategically positioned to provide optimal moisture to affected areas. A removable lid was designed to allow easy refilling and cleaning of the reservoir.

Material Selection:

Biocompatible materials were chosen to construct the reservoir to ensure patient safety and reduce the risk of adverse reactions.

Reservoir Insertion:

The custom-fabricated salivary reservoir was inserted into the patient's oral cavity, and necessary adjustments were made to ensure a precise fit and optimal function.

Patient Education:

The patient was educated on proper maintenance, refilling, and cleaning of the salivary reservoir to ensure its longevity and efficacy.

Follow-Up:

The patient was scheduled for follow-up appointments to monitor the effectiveness of the prosthodontic intervention, assess patient comfort, and address any concerns or modifications needed.

The novel technique of salivary reservoir fabrication with a removable lid aims to provide a continuous source of moisture to the oral tissues, mitigating the discomfort and complications associated with xerostomia. This prosthodontic management approach offers a patient-centered solution that empowers the patient to actively participate in managing their xerostomia and improve their overall oral health and quality of life. By introducing this technique, dental professionals can explore innovative ways to address xerostomia and provide enhanced care for patients suffering from dry mouth.

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RESULTS

The prosthodontic management of xerostomia using the novel technique of salivary reservoir fabrication with a removable lid resulted in significant improvements in the patient's oral comfort and function. The customized reservoir provided a continuous source of moisture to the oral tissues, effectively alleviating the discomfort associated with dry mouth. The removable lid allowed the patient to conveniently refill and clean the reservoir, enhancing patient compliance with the treatment.

DISCUSSION

Xerostomia poses considerable challenges for affected individuals, leading to difficulties in speaking, swallowing, and an increased risk of dental caries and oral infections. Traditional methods of managing xerostomia with salivary substitutes and artificial saliva may offer temporary relief but may not fully replicate the natural properties of saliva. The novel technique of salivary reservoir fabrication with a removable lid addresses this limitation, providing a patient-specific solution that mimics the natural salivary function more effectively.

The custom-fabricated salivary reservoir allows for continuous moisture supply, promoting oral health by reducing the risk of dental caries, oral infections, and soft tissue irritation. The removable lid feature facilitates ease of use, empowering the patient to actively participate in the management of their xerostomia. Patients reported enhanced oral comfort and improved swallowing and speaking functions, leading to an improved quality of life.

CONCLUSION

The prosthodontic management of xerostomia using the novel technique of salivary reservoir fabrication with a removable lid offers an innovative and patient-centered approach. The customized reservoir provides a continuous source of moisture, effectively alleviating the discomfort and challenges associated with dry mouth. The removable lid feature enhances patient compliance, allowing for convenient refilling and cleaning of the reservoir.

By introducing this novel technique, dental professionals can expand their treatment options for managing xerostomia and improving the oral health and overall well-being of affected patients. The successful outcomes observed in this case report underscore the potential benefits of this technique in addressing xerostomia and encouraging patient participation in their oral health management.

As with any novel technique, further research and clinical studies are warranted to validate the efficacy and long-term outcomes of salivary reservoir fabrication with a removable lid in managing xerostomia. However, the initial results demonstrate the promising potential of this approach and its significance in enhancing prosthodontic care for patients suffering from dry mouth.

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