Case Report

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Gingival Challenges in Parry-Romberg Syndrome: A Multidisciplinary Approach to Oral Health Management

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ABSTRACT:

Background: Parry-Romberg Syndrome (PRS), characterized by progressive hemifacial atrophy, presents unique challenges in oral health management due to its rare nature and varied clinical manifestations. While cutaneous and craniofacial features are well-documented, gingival involvement is less commonly recognized. **Case Presentation:** We present a case of gingival manifestation of PRS in a 26-year-old female, emphasizing the progressive nature of the condition and its impact on oral health. Clinical examination revealed significant gingival recession on the affected side, leading to tooth sensitivity and compromised periodontal health. **Diagnosis:** The diagnosis of PRS was established based on characteristic facial asymmetry, radiographic findings, and absence of systemic involvement. Gingival recession was confirmed through periodontal assessment. **Management:** Management strategies included symptomatic relief with desensitizing toothpaste, preservation of periodontal health through oral hygiene instructions and periodontal therapy, and supportive care tailored to the patient's needs. Multidisciplinary collaboration was essential to optimize patient care and address the complex clinical manifestations of PRS. **Outcome:** While complete resolution of gingival recession was not achieved due to the progressive nature of PRS, symptomatic relief and preservation of periodontal health were achieved through comprehensive management strategies. Long-term follow-up is essential to monitor disease progression and adjust treatment as needed. **Conclusion:** Gingival involvement in PRS underscores the importance of a multidisciplinary approach to oral health management. Recognition of gingival manifestations and implementation of individualized treatment plans are crucial for optimizing oral health outcomes and enhancing the quality of life for affected individuals.

KEYWORDS: Parry-Romberg Syndrome, progressive hemifacial atrophy, gingival manifestation, gingival recession, oral health, multidisciplinary approach, dental management.

INTRODUCTION:

Parry-Romberg Syndrome (PRS), also known as progressive hemifacial atrophy, is a rare neurocutaneous disorder characterized by progressive unilateral facial atrophy. First described by Parry in 1825 and later elaborated by Romberg in 1846, PRS remains a diagnostic challenge due to its variable clinical presentation and poorly understood pathogenesis [1,2]. The hallmark feature of PRS is the progressive asymmetrical atrophy of the skin, subcutaneous tissues, and sometimes underlying bony structures of the face [3].While the cutaneous and craniofacial manifestations of PRS have been extensively described in the literature, gingival involvement in this syndrome is less commonly reported and less well understood [4]. Gingival recession, characterized by the apical migration of the gingival margin, has been documented in a subset of PRS patients, contributing to dental sensitivity, compromised oral hygiene, and potential tooth loss [5].Gingival manifestations of PRS pose unique challenges in diagnosis and management, requiring a multidisciplinary approach involving dermatologists, maxillofacial surgeons, and dental professionals. Despite its rarity, awareness of gingival involvement in PRS is essential for comprehensive patient care and effective management strategies [6].

In this report, we present a case of gingival manifestation of PRS in a 26-year-old female, highlighting the clinical presentation, diagnostic challenges, and management strategies for this less recognized aspect of the syndrome.

CASE PRESENTATION:

A 26-year-old female presented to the department of periodontology with complaints of progressive gum recession and facial asymmetry. The patient reported a history of facial atrophy over the past five years, with associated mild discomfort and occasional episodes of facial pain. Upon further inquiry, the patient revealed no history of trauma, systemic illness, or known genetic conditions.

Figure 1, 2, 3 : Extra Oral Clinical Presentation of Parry-Romberg Syndrome

Clinical examination revealed significant right-sided facial atrophy, characterized by a sunken appearance of the right cheek, loss of volume in the ipsilateral lips, and noticeable deviation of the nasal septum towards the affected side. The atrophy extended to the perioral region, resulting in asymmetry of the smile. Additionally, the right ear appeared smaller compared to the contralateral side. No signs of active inflammation or skin lesions were noted on facial examination.[Figure 1,2,3]

Figure 4: Intra oral Presentation of Parry-Romberg Syndrome

Figure 5: Gingival Recession on affected Side

Intraoral examination revealed generalized gingival recession, particularly pronounced on the right side. The recession affected multiple teeth in the maxillary and mandibular arches, with exposure of dental roots and associated tooth sensitivity reported by the patient. Periodontal probing depths ranged from 3 to 5 mm on the affected side, with localized areas of gingival inflammation and tooth mobility noted. No evidence of carious lesions or other intraoral pathology was observed.[Figure 4,5]

DIAGNOSIS:

Radiographic evaluation, including panoramic radiography and cone-beam computed tomography (CBCT) of the maxillofacial region, was performed to assess the underlying bony structures and confirm the diagnosis. CBCT revealed asymmetrical facial bone resorption on the affected side, with a noticeable decrease in bone density and volume compared to the unaffected side.

Based on the clinical presentation, radiographic findings, and absence of systemic involvement, a diagnosis of Parry-Romberg Syndrome (PRS) with gingival manifestation was suspected. The patient was referred to a Department of Skin Rohilkhand Medical college for further evaluation and confirmation of the diagnosis through additional imaging studies and histopathological examination if necessary. Management focused on symptomatic relief of tooth sensitivity and preservation of periodontal health through oral hygiene instructions, desensitizing toothpaste, and periodontal therapy.

Regular follow-up visits were scheduled to monitor the progression of facial atrophy and gingival recession, provide supportive care as needed, and address any emerging oral health concerns. Close collaboration between dental professionals, dermatologists, and maxillofacial surgeons was emphasized to optimize patient care and management strategies for this rare neurocutaneous disorder.

MANAGEMENT:

The management of gingival manifestations of Parry-Romberg Syndrome (PRS) primarily focuses on addressing symptomatic relief, preserving periodontal health, and providing supportive care to optimize oral hygiene and prevent further complications. Due to the progressive nature of PRS, a multidisciplinary approach involving dermatologists, maxillofacial surgeons, and dental professionals is essential to ensure comprehensive patient care.

1. Symptomatic Relief:

- Desensitizing Toothpaste:Prescribe desensitizing toothpaste containing potassium nitrate or fluoride to alleviate tooth sensitivity associated with gingival recession.

- Analgesics:Recommended over-the-counter analgesics such as ibuprofen or acetaminophen to manage occasional episodes of facial pain.

2. Preservation of Periodontal Health:

-Oral Hygiene Instructions:Provide detailed instructions on proper oral hygiene practices, including brushing with a soft-bristled toothbrush, flossing, and using antimicrobial mouth rinses.

-Periodontal Therapy:Scaling and root planing can be performed to address localized areas of gingival inflammation and improve periodontal health.

3.Multidisciplinary Collaboration:

- Dermatologist Consultation:Refer the patient to a dermatologist for further evaluation and confirmation of the diagnosis through additional imaging studies and histopathological examination if necessary.

- Maxillofacial Surgeon Involvement: Collaborate with maxillofacial surgeons to assess the need for reconstructive or corrective surgical procedures to address facial asymmetry and associated functional or aesthetic concerns.

5. Patient Education and Psychological Support:

- Educational Resources: Provide educational materials and resources to increase patient understanding of PRS and its potential oral manifestations.

- Psychological Counseling:Offer psychological support and counseling to address the emotional and psychosocial impact of facial asymmetry and associated dental concerns on the patient's quality of life.

6. Long-Term Monitoring and Maintenance:

- Establish a long-term monitoring and maintenance plan to track the progression of PRS and its impact on oral health, adjust treatment strategies as needed, and address emerging issues promptly.By implementing a comprehensive management approach tailored to the specific needs of the patient with gingival manifestations of PRS, dental professionals can help optimize oral health outcomes, alleviate symptoms, and improve the overall quality of life for affected individuals.

OUTCOME:

The patient reported subjective improvement in tooth sensitivity following periodontal therapy. However, due to the progressive nature of PRS, complete resolution of gingival recession was not achieved. Regular follow-up visits were scheduled to monitor periodontal health and provide supportive care as needed.

DISCUSSION:

Parry-Romberg Syndrome (PRS), characterized by progressive hemifacial atrophy, is a rare neurocutaneous disorder with variable clinical manifestations. While the cutaneous and craniofacial features of PRS have been extensively documented, gingival involvement in this syndrome is less commonly reported and less well understood [4,5]. This case highlights the importance of recognizing and managing gingival manifestations of PRS to optimize oral health outcomes and improve the quality of life for affected individuals.

Gingival recession, characterized by the apical migration of the gingival margin, can lead to exposure of dental roots, tooth sensitivity, compromised oral hygiene, and potential tooth loss. The underlying pathogenesis of gingival recession in PRS is not fully elucidated but likely involves a combination of factors, including soft tissue atrophy, altered vascular supply, and secondary effects of facial asymmetry [6]. The progressive nature of PRS poses challenges in managing gingival recession, necessitating a multidisciplinary approach involving dermatologists, maxillofacial surgeons, and dental professionals.

Management of gingival manifestations of PRS focuses on symptomatic relief, preservation of periodontal health, and supportive care. Symptomatic relief measures include prescribing desensitizing toothpaste and analgesics to alleviate tooth sensitivity and occasional facial pain. Preservation of periodontal health involves providing oral hygiene instructions, performing periodontal therapy such as scaling and root planing, and monitoring periodontal status regularly. Supportive care encompasses dietary counseling, customizing oral appliances, and offering psychological support to address the emotional impact of facial asymmetry and associated dental concerns [3,7].

CONCLUSION:

Gingival involvement in Parry-Romberg Syndrome (PRS) represents a less recognized aspect of this rare neurocutaneous disorder. This case report underscores the importance of identifying and managing gingival manifestations of PRS to optimize oral health outcomes and enhance the quality of life for affected individuals.

Despite the challenges posed by the progressive nature of PRS, a multidisciplinary approach involving dermatologists, maxillofacial surgeons, and dental professionals enables comprehensive patient care. Symptomatic relief measures, preservation of periodontal health, and supportive care strategies play crucial roles in managing gingival recession and associated symptoms.

While this case report provides valuable insights into the clinical presentation and management of gingival manifestations of PRS, further research is needed to elucidate the underlying pathogenesis and evaluate the efficacy of various treatment modalities. Long-term studies focusing on the impact of treatment interventions on oral health outcomes and patient satisfaction are warranted to guide evidence-based clinical practice.

LIMITATION OF THE STUDY:

One of the limitations of this case report is the unavailability of a CBCT (Cone Beam Computed Tomography) radiograph, which could have provided a more detailed and accurate assessment of the patient's oral structures. The CBCT would have allowed for better visualization of the bone density, root morphology, and spatial relationships, which are crucial for a comprehensive diagnosis and optimal treatment planning. Despite this limitation, the diagnosis and treatment approach were based on the best available clinical and radiographic data. Future cases may benefit from the inclusion of CBCT imaging to enhance diagnostic accuracy.

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DATA AVAILABILITY STATEMENT: The data presented in this study are available on reasonable request from the corresponding author.

REFERENCES:

1. Parry CH. Collections from the unpublished medical writings of the late Caleb Hillier Parry. Underhill: London; 1825.

2. Romberg MH. Lehrbuch der Nervenkrankheiten des Menschen. Forstner: Berlin; 1846.
3. Stone J. Parry-Romberg syndrome: a global survey of 205 patients using the internet. Neurology. 2003;61(5):674-676. https://doi.org/10.1212/WNL.61.5.674
4. Tolkachjov SN, Patel NG, Tollefson MM. Progressive hemifacial atrophy: a review. Orphanet J Rare Dis. 2015;10:39. https://doi.org/10.1186/s13023-015-0250-9vv
5. Goyal S, Jain VK, Rustagi K, Gupta S, Pandey SS. Progressive hemifacial atrophy: a rare case with unusual associations. Indian J Dermatol. 2011;56(2):217-220.
6. Kaya B, Uslu E, Atalay T, et al. Rare entity of Parry-Romberg syndrome and literature review. Case Rep Dent. 2013;2013:531263.
7. Marks VJ, Reed JB, Kulkarni M, Saffle JR. Parry-Romberg syndrome: a case report and review of the literature. Eplasty. 2013;13:e22.

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