

Progress of a Critical Patient with Granulomatosis with Polyangiitis (GPA) Following Dental Treatment

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Abstract

Purpose: To report the case of an adult woman admitted to the ICU of a referral university hospital with shortness of breath, otitis, sinusitis and severe pain in the oral region, without a definite diagnosis.

Case report: A 35-year-old woman was admitted to the clinical ICU of the Hospital das Clinicals in the city of Recife, northeastern Brazil, in January 2025. At the time, she presented with severe respiratory failure and intense pain in the oral region. The diagnostic hypothesis of granulomatosis with polyangiitis (GPA) was confirmed, with a request for dental evaluation by the multidisciplinary team.

Results: The intraoral examination showed the presence of oedema, hyperemia and tongue coating. The dental surgeon performed prophylaxis, tongue cleaning, supragingival scaling, and mouth rinsing. After the treatment, the pain was reduced, and the patient was referred to the infirmary and discharged after 48 hours of hospitalization in the ICU.

Conclusion: Although considered a rare condition, early diagnosis and intervention by dentistry, in conjunction with the physician and the multidisciplinary health team, contributed to a favorable outcome and had a positive impact on the quality of life of the patient in question.

Keywords: Granulomatosis with Polyangiitis; Respiratory insufficiency; Oral health; Intensive care units

Introduction

Granulomatosis with polyangiitis (GPA), formerly known as Wegener's Granulomatosis (WG), is rare but debilitating autoimmune disease. It is a potentially fatal autoimmune vasculitis that affects small blood vessels. Although it has a variable clinical presentation, there is a predominance of upper respiratory tract involvement, including sinonasal, otological, or tracheal symptoms. GPA can lead to severe morbidity and life-threatening organ involvement; therefore, early recognition and treatment are crucial [1,2]. The first manifestation of the disease can be seen in the oral cavity. It is important that dentists recognise the oral manifestation in order to improve the prognosis. Hyperplastic granular gingivitis or "strawberry gingivitis" is a rare manifestation of GPA/WG but it is nearly

pathognomonic for this multisystem autoimmune vasculitis. The dentist may be the first health care professional to see patients with symptoms and findings of this condition. Early diagnosis and treatment are the most important factor in the management of this potentially fatal disease [3,4]. Despite the importance of intraoral examination for the diagnosis and early treatment of this life-threatening condition, there are gaps in the literature regarding the benefits of dental care; the main objective of this study.

Case Report

A 35-year-old woman with leukoderma and grade 1 obesity (Body Mass Index 31) was admitted to the Hospital das Clínicas of the Federal University of Pernambuco (UFPE) with episodes of otitis, sinusitis, and severe pain in the oral region. In addition to a

Received date: 22 December 2025; **Accepted date:** 29 December 2025; **Published date:** 31 December 2025

Citation: Ribeiro do Nascimento Z, Goncalves de Godoy MM, Bezerra dos Santos LC, Marques KMG, Siqueira de Lima N, Luciana de Barros CF (2025) Progress of a Critical Patient with Granulomatosis with Polyangiitis (GPA) Following Dental Treatment. SunText Rev Virol 6(2): 173.

DOI: <https://doi.org/10.51737/2766-5003.2025.073>

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suspected diagnosis of GPA/Wegener's granulomatosis. The patient was taken to the operating room for a biopsy of the lesion in the nasal mucosa. During surgery, the patient presented severe hypotension; with the option of not extubating her and referring her to the ICU. With recurrent sinusitis and otitis and the presence of pulmonary granules, the rheumatology team investigated GPA. Within 24 hours of her admission, with saturation parameters of 95, respiratory rate of 12 breaths per minute, heart rate of 99 beats per minute, and blood pressure of 107/78, she was immediately extubated. There was also a record of hypernasal voice and mouth breathing, throat clearing, with signs of nasal penetration and leakage. The dental surgeon was called by the multidisciplinary team to assess the patient in question. On intraoral examination, she found: significant tongue coating, oedema, gingival hyperaemia and severe toothache. After dental care with prophylaxis, using hydrogen peroxide, saline solution (1:1 ratio, mouthwash with distilled water and mouthwash with 8.3% sodium bicarbonate), the patient reported improvement in oral pain symptoms. Following the oral environment adjustment procedure, supragingival scaling was performed, the tongue was cleaned with hydrogen peroxide and sodium bicarbonate, and the intervention was completed with a 0.12% chlorhexidine mouthwash. Immediately after periodontal treatment, the patient presented a reduction in pain and was discharged to the ward (Figure 1).



Figure 1: Images of the patient in this case report.

Conclusion

The multidisciplinary healthcare team should be familiar with the wide variety of oral and systemic components of GPA, as well as strategies to facilitate immediate recognition of the disease and provide ongoing oral healthcare to these patients with complex medical conditions.

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