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Painful, swollen and ulcerated gingiva an indication of underline systemic pathology - A Case Report

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INTRODUCTION

Acute necrotising ulcerative gingivitis (ANUG) is a type of periodontal disease characterised by painful ulceration of gingival surfaces. It may result in the progressive destruction of the gingivae and, if left untreated, can eventually lead to cancrum oris, a severe form with gangrenous orofacial lesions.
Pain, swelling, pus discharge and ulceration of gingival tissue are the most common complaints encountered by oral physicians. Despite the commonality of this scenario, such cases should be thoroughly investigated.
We are presenting a typical case in which the patient presented with pain, gingival swelling and pus discharge. The symptoms were significantly severe, and there was an episode of high-grade fever, prompting us to further investigate the case

DESCRIPTION OF CLINICAL CASE

A 51-year-old female patient presented with a one-week history of fever and gingival pain affecting the upper and lower teeth regions. Intraoral examination revealed halitosis, and painful and swollen gingiva, particularly in the anterior region. Necrosis and ulceration of the interdental papilla, covered by a pseudomembrane, were noted, along with blunting of interdental tissues. Plaque and purulent discharge were also observed.
The patient reported with a 10-year history of diabetes and hypertension and was experiencing psychological stress. Cone-beam computed tomography (CBCT) revealed mild bone loss. Laboratory tests indicated underlying leukopenia and poorly controlled diabetes. The differential diagnosis considered included desquamative gingivitis and gingival ulcers of viral origin. Based on clinical findings and investigations, the diagnosis

WBC COUNT	**INITIAL -0750 cells/cumm AFTER 5 DAYS – 7950 cells/cumm ONE WEEK LATER -17600 cells/cumm**
BLOOD SUGAR LEVEL	**FASTING – 102 POST PRANDIAL – 200 HbA1C – 8.9**
HIV AND DENGUE TEST	**NEGATIVE**
IMMUNOFLUROSCENCE TEST	**WEAKLY ANA POSITIVE**

TREATMENT

On the first visit, hydrogen peroxide irrigation of the site was performed. The area was gently swabbed with a cotton pellet soaked in diluted hydrogen peroxide to remove non-attached surface debris. The patient was prescribed metronidazole 500mg for a 7-day course and advised to rinse with a mixture of hydrogen peroxide (3%) and warm water every two hours. Paracetamol 500mg were recommended as needed.
Upon the patient's review on the third day, there was an expression of relief from symptoms. Scaling and root planning were repeated when the patient returned on the 7th postoperative day. Plaque control instructions were reinforced.

DISCUSSION

The diagnosis of ANUG is primarily clinical, based on the presence or absence of three critical symptoms: interproximal necrosis often described as "punched out" ulcerated papillae, gingival bleeding and gingival pain. All these clinical signs were identified in the present case. There is a positive correlation between stress and the onset of ANUG, as stress can down-regulate the cellular immune response.
An affirmative correlation is observed in this case between leukopenia stemming from uncontrolled diabetes and the onset of Acute Necrotising Ulcerative Gingivitis (ANUG).
In cases where there is an unsatisfactory response to debridement or systemic effects such as fever and/or malaise, the use of systemic antimicrobials may be considered. Metronidazole (250 mg every 8 hours) may be an appropriate first-choice drug due to its activity against strict anaerobes. ANUG has the potential to cause tissue destruction involving supporting structures. If left untreated, the infection can enter the systemic circulation and spread to other parts of the body

CONCLUSION

This case highlights the significance of a comprehensive case history and proper investigations to identify underlying systemic diseases for diagnosing acute necrotizing gingivitis (ANUG). Furthermore, a favorable outcome in managing ANUG requires a multidisciplinary approach, involving collaboration among an Oral Medicine specialist, Periodontist, and General Physician.

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