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Recurrent Mouth Ulcers, Diagnostics and Management Challenges: Case Report

Dr. Patrick Loti

lotimnb@gmail.com

Ndola College of Biomedical Sciences https://orcid.org/0000-0001-8942-8908

Case Report

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Abstract

Introduction

Recurrent mouth ulcers (RMU) are common oral lesions that can mimic various conditions such as candidiasis, herpes, or nutritional deficiencies, making diagnosis challenging. This case presents a unique scenario of a woman with severe, painful RMU that began in childhood, persisted monthly through adolescence and adulthood, and showed cyclical variation linked to hormonal fluctuations. The non-specific nature of the lesions led to multiple inconclusive medical and dental consultations.

Symptoms and Clinical Findings

The patient experienced intense oral pain affecting chewing, swallowing, and speech, with ulcers recurring every month and reducing in severity for only a few days. Clinical examination revealed typical mouth ulcers; extensive laboratory investigations (Anti-Nuclear Antibodies, Herpes Simplex Virus, HIV, CRP, RPR, FBC, and Erythrocyte Sedimentation Rate) ordered repeatedly failed to yield a definitive diagnosis. A retrospective analysis of her history noted spontaneous healing of ulcers during pregnancies.

Diagnosis

Based on the hormonal association suggested by pregnancy-related remission, the diagnosis of progesterone-induced recurrent mouth ulcers was hypothesized. Therapeutic intervention involved administering oral Dexamethasone and Tamoxifen to modulate progesterone effects. The treatment produced noticeable improvement within three days and complete ulcer healing within one week.

Conclusion

The case underscores that recurrent mouth ulcers may have a hormonal aetiology linked to progesterone fluctuations. Early recognition of hormonal patterns can prevent unnecessary extensive testing and guide targeted therapy, improving patient outcomes and reducing frustration. The experience highlights the importance of considering endocrine influences in atypical oral ulcer presentations.

Introduction

Mouth ulcers are small sores formed on the membrane lining of the mouth. These lesions are common and produce a variety of symptoms, ranging from intermittent discomfort to debilitating pain with effects on speech, chewing, and swallowing. Clinically, the diagnosis for mouth ulcers can be challenging, as a wide range of diagnoses can give rise to lesions of similar appearance [1]. Dryness of the mouth is one of the major features associated with oral mucosal ulceration. Xerostomia, or "dryness of mouth," is a

condition characterized by a decrease in salivary flow rate, which is a significant concern that can severely affect the quality of life for many individuals. Factors that contribute to the development of xerostomia include certain systemic pathologies, therapeutic radiation, specific medications, and age-related loss of salivary gland function [2]. While the majority of oral lesions are benign and require minimal clinical input, others may signify undiagnosed systemic disease or malignancy, warranting prompt investigation and targeted treatment [3]. The differentiation of alternative diagnoses is driven largely by a thorough clinical history and the identification of malignant features on physical examination. Persistent oral ulcers and erosions can be the final common manifestation sometimes clinically indistinguishable of a diverse spectrum of conditions ranging from traumatic lesions, infectious diseases, and systemic or local immune-mediated lesions, up to neoplasms. Consequently, making a correct diagnosis for persistent oral ulcers represents a major challenge to clinicians [4].

Changes in hormonal levels, such as those that occur during puberty, pregnancy, menstruation, and menopause, have varying effects on the oral cavity. A direct link has been proposed between changing hormonal status and oral health variations among females [5]. The numerous changes occurring during pregnancy affect every body system, resulting in localized physical alterations in almost all parts of the body, including the oral cavity [6]. As females go through certain stages in their reproductive life cycle, alterations arise in the level of sex steroid hormones circulating in their bloodstream. Specifically, variations in the circulating levels of progesterone and oestrogen in women may adversely affect the periodontal tissues and mucosal linings in the mouth [7]. Autoimmune progesterone dermatitis (APD) is a rare condition that affects women in their childbearing age. It is characterized by a periodic type I or type IV hypersensitivity reaction to endogenous or exogenous progesterone, resulting in a heterogeneous set of non-specific clinical manifestations ranging from urticaria to anaphylaxis [8].

Methods

A retrospective case report was constructed using the patient's comprehensive medical records. The case involved a detailed timeline analysis of recurrent oral infections and lesions experienced by the patient from childhood, through adolescence, and into her childbearing years. Data were evaluated based on clinical practice observations and sequential management adjustments of the affected individual, focusing on diagnostic procedures, trial treatment modalities, and longitudinal clinical follow-up.

Case History

The patient is a 36-year-old woman (as of 2024), a mother of four, with a 17-year history of severe recurrent mouth ulcers for which she never received a definitive diagnosis or targeted treatment. In her childhood, she suffered from recurring mouth sores that were managed empirically with antibiotics and topical gentian violet antiseptic dye.

In 2009, she presented at a district hospital with extremely painful mouth sores. Diagnostic investigations included HIV testing, oral swab microscopy, bacterial culture, and Rapid Plasma Reagin (RPR), all of which returned negative results for active infection. She was presumptively diagnosed with oral candidiasis and treated under syndromic case management protocols. The condition worsened, requiring clinical admission, where she was managed for severe oral candidiasis and secondary peptic ulcers related to the stress of chronic mouth lesions. Treatment included systemic antibiotics, antifungal agents, medicated mouthwash, analgesics, and antacids.

In 2010, she reported a recurrence of severe, painful mouth sores accompanied by a whitish vaginal discharge. Repeated laboratory investigations, including an HIV test, urine microscopy and culture, Erythrocyte Sedimentation Rate (ESR), Herpes Simplex Virus (HSV) serology, and RPR showed no objective signs of active infection. She was treated empirically with oral antibiotics, antifungals, and injectable antibiotics, and was advised to use alternative non-hormonal family planning methods.

In 2015, an Ear, Nose, and Throat (ENT) specialist determined that the patient had severe food allergies that were exacerbating her condition, and recommended an elimination diet to identify specific foods causing the severe clinical episodes.

From 2016 to 2018, the patient continued to experience cyclical mouth sores, with symptoms worsening significantly during one-half of the month and improving in the other half. Repeated hospital visits involved full blood counts (FBC), ESR, Anti-Nuclear Antibodies (ANA), double-stranded DNA (dsDNA) antibodies, RPR, HIV testing, and swab microscopy with culture and sensitivity. All tests yielded negative results for autoimmune profiles, and cultures showed no bacterial growth. Management remained strictly symptomatic, relying on standard pain relief, antifungals, and antibiotic therapy.

In 2020, the patient was admitted to a tertiary hospital, unable to talk due to painful mouth sores that had extended to affect the female genitalia. Laboratory investigations (FBC, ESR, ANA, HSV, dsDNA, HIV tests, RPR, and swab microscopy with culture and sensitivity) were performed again. She was managed with empirical triple therapy consisting of antifungal, antiviral, and antibacterial agents. The treatment showed temporary symptomatic improvement, but the mucosal sores failed to clear completely; pain subsided slightly, but complete mucosal healing was never achieved.

Out of frustration, the patient was advised to try alternative herbal medicines, which proved ineffective and severely worsened the condition, leading to acute oral inflammation and intense pain.

From 2023 onward, the patient continued on different empirical regimens until a detailed tracking of her obstetric history revealed that the ulcers resolved spontaneously and completely only during her four pregnancies, pointing toward a catamenial pattern linked to cyclic progesterone fluctuations.

Declarations

Participant Consent to Publish:
Written informed consent was obtained from the participant for publication of this case report and any accompanying images and laboratory results. The participant understands that every effort will be made to protect their identity, but that complete anonymity cannot be guaranteed. A copy of the signed consent form is available for review by the Editor-in-Chief on request.

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