

ABSTRACT/INTRODUCTION:

The diagnosis of oral lesions in children can be challenging as it can be an unspecified symptom of several diseases. Differential diagnoses can range from infectious diseases of childhood, inflammations, nutritional deficiencies, and chronic diseases. Because of this, children with oral ulcers may be treated by different specialists such as pediatric dentists and pediatricians. The purpose of this poster is to report the case of a twenty-one-month-old female patient who presented to Children's Mercy Hospital Kansas City Emergency Department with chief concern for acute onset of intraoral oral ulcers, extraoral blisters near the lower lip, and fetid oral odor. Patient has a complex contributory medical history. This poster presents a review of the literature regarding various diseases associated with oral ulcers along with the potential development of acute necrotizing ulcerative gingivitis.

Differential Diagnoses of Oral Ulcerations: a Case Report *Nguyen R, Carlson K, Clark M, Burleson A, Bohaty B, Onikul R, Patel N, Sparks J. Children's Mercy Hospital and UMKC School of Dentistry, Kansas City Missouri.

CASE REPORT:

A 21-month-old female presented to the Children's Mercy Hospital (CMH) Emergency Department (ED) on August 14, 2024, due to gingival bleeding. Her medical history included developmental delay, premature birth at 27 weeks, patent ductus arteriosus that has been closed, subglottic stenosis with a tracheostomy tube present, and a gastrostomy tube. During an oral exam, the patient exhibited extraoral blisters below the lower lip, ulcers on labial mucosa of upper lip, generalized red and inflamed gingiva, and potential necrosing tissue on the papillary and palatal gingiva adjacent to Teeth #E/F. The mother of the patient reported a timeline of events which was recorded as follows: On August 9, 2024, the patient began to develop a fever, on August 11 the mom noticed distinct fetid odor from the patient's mouth, and on August 12 the patient began to develop extra oral blisters which prompted her mom to schedule an appointment with the patient's primary care physician. During this appointment, the patient was presumed to have Hand, Foot, and Mouth disease and was prescribed ciprofloxacin. Furthermore, the patient had a tracheal aspiration performed on this day which came back normal. On August 14, the patient presented to the CMH ED for continued gingival bleeding and was examined by a resident pediatric dentist and an ED physician. The ED physician believed it was not Hand, Foot, and Mouth disease, so an Oral and Maxillofacial Surgeon (OMFS) was consulted. The OMFS prescribed amoxicillin and Peridex and recommended no surgical interventions at that time. On August 21, the patient presented to the CMH dental clinic with no ulcerations, blisters, or inflamed gingiva. The patient returned on September 16, 2024, with no further problems since the previous visit and complete resolution of all previous signs and symptoms.



Figure 2: August 11, 2024



Figure 3: August 14, 2024



Figure 4: August 14, 2024



Figure 5 August 21, 2024





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DISCUSSION/CONCLUSION:

It's been reported that 9% of all children are affected by oral ulcers.² And due to the wide array of potential causes of these ulcers, it can be challenging to definitively diagnose. It's imperative to obtain a comprehensive medical history of the patient to rule out any underlying disease, infection, trauma, or acute event. Patients who have a complex medical history can have one or more causative factors, making it even more challenging to understand the etiology of their oral ulcers. Most of the time, a culture of the ulcers can be useful in acute treatment and understanding where the lesions came from. For example, the anaerobic organisms typically found in acute necrotizing ulcerative gingivitis (ANUG) are F. necrophorum, P. intermedia, F. nucleatum, and P. gingivalis.¹ In Hand, Foot, and Mouth Disease or herpangina, coxsackie virus would be found. This case is intriguing because the patient's cultures from her tracheostomy tube came back within normal limits. Although, a true limitation to this case is that no culture of the ulcers was obtained. The normal findings compelled us to look further into her history to find other potential causes of infection, or immunocompromising factors. In this search, we found that earlier in the year, the patient had a positive trach culture for *S. maltophilia*. There is currently only one case of ANUG reported in the literature associated with this bacteria, and it was in a severely immunocompromised 8-year-old female. That case report by Miyairi et. al emphasized that this is a new finding that changes what we know about the ANUG disease process.⁴ S. maltophilia is not typically viewed as highly pathogenic, nor is it typically a colonizer in the oral cavity. However, this organism was found in our patient's tracheostomy tube several months prior to the oral ulcerations, it does suggest the possibility of continued immunosuppression to cause an infection like ANUG. There are many variables to this patient's presentation that conflict with a typical diagnosis of either ANUG or Hand, Foot, and Mouth Disease. And although we did not come to a definitive diagnosis, this case highlights the need for further research into the epidemiology of oral ulcers and their wide array of possible origins.

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