Uvular Necrosis Following Esophagogastroduodenoscopy: A Case Report

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Patient: Male, 19-year-old
Final Diagnosis: Uvular necrosis post esophagogastroduodenoscopy
Symptoms: Throat pain
Medication: —
Clinical Procedure: Esophagogastroduodenoscopy
Specialty: Gastroenterology and Hepatology • General and Internal Medicine

Objective: Rare disease
Background: Uvular necrosis is an uncommon complication of esophagogastroduodenoscopy. It usually presents with sore throat, fever, foreign-body sensation, and odynophagia following esophagogastroduodenoscopy. It occurs due to impairment of local circulation, which is caused by impingement of the uvula between the endoscope and the hard palate. It may also arise from excessive suctioning of the area surrounding the uvula. We present a case of uvular necrosis following esophagogastroduodenoscopy and describe current strategies to prevent this rare complication.

Case Report: A 19-year-old man presented with a 4-day history of odynophagia, severe sore throat, and foreign-body sensation that started within 24 h after esophagogastroduodenoscopy. Uvular necrosis was observed on physical examination. The patient was treated conservatively with nonsteroidal anti-inflammatory drugs and antibiotics, and his symptoms resolved completely.

Conclusions: We believe that this is the sixth reported case of uvular necrosis following an uncomplicated diagnostic esophagogastroduodenoscopy in a young patient. Esophagogastroduodenoscopy is a routine procedure performed by gastroenterologists. Uvular necrosis can occur as a rare complication of esophagogastroduodenoscopy; therefore, it is important to monitor patients for odynophagia and abnormal foreign-body sensation following the procedure for at least 72 h. Uvular necrosis should be suspected if odynophagia persists after this period despite adequate treatment with conventional analgesics. Prompt diagnosis and management can relieve the patient’s symptoms, given that uvular necrosis is a self-limiting complication with a good prognosis.

Keywords: Endoscopes, Gastrointestinal • Necrosis • Pharyngitis • Uvula • Cleft Soft Palate • Mucous Membrane • Endoscopy, Digestive System

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Background

Uvular necrosis is a rare complication of esophagogastroduodenoscopy (EGD). It may occur due to impairment of local circulation from the impingement of the uvula between the endoscope and the hard palate. Moreover, this adverse event may also occur with continuous suctioning of the throat around the area of the uvula [1]. Uvular necrosis is recognized by the characteristic black discoloration of the uvula with yellow exudates, along with sloughing of the mucosa and erythema of the soft palate on clinical examination of the throat.

Case Report

A 19-year-old man with no comorbidities, prior surgery, or history of gastrointestinal (GI) illness was referred to the Gastroenterology Department for investigation of iron deficiency anemia. He was a non-smoker and had no history of alcohol use or family history of GI malignancy. He had not experienced symptoms of anemia before. A physical examination showed unremarkable findings. As a part of the work-up of iron deficiency, EGD and colonoscopy were performed under anesthesia using a combination of topical lidocaine, a benzodiazepine, and a short-acting opiate. Both procedures were performed without any immediate complications. EGD showed a normal GI tract up to the second part of the duodenum. Colonoscopy also revealed normal findings. No biopsies were obtained during either procedure. The patient was discharged after 1-h observation in the recovery unit. The following day, he presented to the local emergency department with severe pain and foreign-body sensation in his throat. He was unable to eat, drink, or swallow his saliva because of severe throat pain. Black discoloration of the uvula was observed during throat examination, along with erythema of the soft palate (Figure 1). The patient visited his family physician and the Gastroenterology Department after 3 days. Thereafter, he was treated with analgesics (nonsteroidal anti-inflammatory drugs) and antibiotics (amoxicillin/clavulanic acid). A diagnosis of uvular necrosis was made based on the patient’s medical history, physical examination findings, and recent endoscopy history. The patient was treated conservatively and was able to resume oral intake of food 4 days after symptom onset (Figure 2). Two weeks later, the patient was followed up at the gastroenterology clinic. His throat symptoms had resolved completely, although his uvula was observed to be shorter than before (Figure 3).

Discussion

As uvular necrosis is an extremely rare complication following EGD, and only a few cases have been reported in the literature to date [1-4]. To the best of our knowledge, our study reports the sixth case of uvular necrosis following an uncomplicated diagnostic esophagogastroduodenoscopy in a young patient.
Throat pain is a common post-EGD problem and resolves within 1-2 days after the procedure [2,3]. The etiology of uvular necrosis is related to one of the following causes: obstruction of the uvular blood supply due to compression between the hard palate and the shaft of the endoscope [1], suctioning trauma that can occur while withdrawing the endoscope, excessive suctioning with the Yankauer tip during the procedure [5], or iatrogenic trauma incurred during clearance of airways. Uvular necrosis has been reported to occur as an adverse event associated with other procedures and treatments [1], including endotracheal intubation [2], bronchoscopy, and endoscopic retrograde cholangiopancreatography (ERCP) [6-10]. The risk factors consistently reported in the literature are presence of an elongated uvula, longer duration of procedures, higher suction pressures, bacterial infection, allergic reaction, and trauma. Uvular necrosis can be conservatively treated by analgesics and/or antibiotics to relieve patient discomfort [4]. It is a self-limiting complication with a good prognosis.

Conclusions

Uvular necrosis is a rare complication of upper gastrointestinal endoscopy; therefore, our study findings can provide a reference for clinicians, especially gastroenterologists, to consider this complication when performing EGD in their daily clinical practice. Moreover, uvular necrosis should be considered in the differential diagnoses of persistent (> 72 h) sore throat or odynophagia following EGD. A pre-procedural throat examination should be performed for all patients undergoing upper gastrointestinal endoscopy to identify those at risk for uvular injury. It is also desirable to consider the procedural duration and avoid long procedures. The suctioning pressure during endoscopy can also be reduced to avoid uvular injury. During endoscopy, avoidance of blind suctioning and assurance of appropriate positioning of the endoscope can prevent uvula necrosis [4]. Furthermore, excessive suctioning should be avoided in the oropharyngeal area while withdrawing the endoscope [1]. Surgeons should also apply suction on either side of the mouth to avoid direct suction of the uvula, which is crucial for preventing this condition. While uvular necrosis resolves spontaneously within 14 days, it is important to recognize the risk factors and instruct patients about possible adverse events, so that they may benefit from conservative management and reassurance.

Department and Institution Where Work Was Done

This case was reported in the Division of Gastroenterology, Department of Medicine, Johns Hopkins Aramco Healthcare, Dhahran, Saudi Arabia.

Declaration of Figures’ Authenticity

All figures submitted are from the authors, who confirm that the images are original with no duplication and have not been previously published in whole or in part.

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Figure 3. A shortened uvula was observed on day 14 after EGD.