



Clinical Communications: Adult

NOT JUST A SORE THROAT: A CASE OF SPONTANEOUS TONSILLAR HEMORRHAGE IN ACUTE MONONUCLEOSIS INFECTION

Caitlin Sandman, DO and Christopher Mitchell, MD

Darnall Army Medical Center, Fort Hood, Texas

Reprint Address: Caitlin Sandman, DO, Darnall Army Medical Center, 30065 Santa Fe Avenue, Fort Hood, TX 76544

INTRODUCTION

Spontaneous tonsillar hemorrhage (STH) is a rare but known complication of acute and chronic tonsillitis. It occurs in both bacterial and viral tonsillitis, and can also be associated with coagulopathy and malignancy (1). The incidence of STH is estimated to occur in 1.1% of infectious tonsillitis cases (2). STH can be dangerous if measures are not taken to control the bleeding, protect the airway, and investigate fatal sequelae, including carotid artery erosion and deep neck infections (3). We describe a case of a 22-year-old male with STH during acute mononucleosis infection that presented with active bleeding from the right tonsil. Bleeding was controlled with local interventions, and the patient remained stable throughout evaluation. Head and Neck Surgery was consulted, and the patient was discharged home from the emergency department (ED). The patient later underwent tonsillectomy for chronic tonsillitis. STH is a rare complication that clinicians must be familiar with in order to diagnosis, treat, and determine appropriate disposition.

CASE REPORT

A 22-year-old male presented to the ED for “sore throat.” He presented to triage with active bleeding from the oropharynx. He reported that he had a sore throat for

2 weeks, and had been diagnosed with mononucleosis by his primary care physician 4 days earlier. He reported that he woke up that night with bleeding that had progressed over the previous 5 h. He stated he had been taking ibuprofen and acetaminophen for pain.

On examination, vitals were the following: temperature 98.0°F, blood pressure 141/92 mm Hg, heart rate 122 beats/min, respiratory rate 22 breaths/min, and SpO₂ 98% on room air. The patient was alert and oriented, speaking in clear, full sentences, and spitting out blood from the oropharynx. Examination of the oropharynx revealed slow, dark red bleeding consistent with venous blood from the right tonsil, with absence of the medial half of the tonsil. The left tonsil was erythematous and enlarged, but was intact (Figure 1). The uvula was intact without edema. Dentition was intact. Trachea was midline and anterior cervical lymphadenopathy was present on the right. Cardiac, pulmonary, and abdominal examinations were unremarkable.

The patient was placed on telemetry and i.v. access was established with a large-bore i.v. catheter. A normal saline bolus and ondansetron were administered i.v., and the patient was given ice water to gargle. Within 20 min, the bleeding had slowed and the patient was more comfortable. Review of records confirmed a positive heterophile antibody test and negative rapid strep screen 4 days before presentation. Laboratory evaluation revealed a white blood cell count of $11.56 \times 10^9/L$,



Figure 1. Oropharynx with edematous tonsils bilaterally with fresh clot overlying missing tissue on the right tonsil. Patient consented for use of this image.

aspartate aminotransferase 80 U/L, and alanine aminotransferase 154 U/L. A coagulation panel was within normal limits.

After 2 h in the ED, the patient began experiencing minor oozing of venous blood from the medial right tonsil (Figure 2). Oxymetazoline spray was administered directly to the tonsil and the bleeding ceased. The patient was treated with i.v. clindamycin and dexamethasone. A computed tomography soft tissue neck revealed enlarged tonsils bilaterally with no peritonsillar abscess, retropharyngeal abscess, or deep vessel erosion. Head and Neck Surgery was consulted, and stated that emergent tonsillectomy was not indicated unless the bleeding was uncontrolled or consisted of arterial bleeding. Head and Neck Surgery recommended typical post-tonsillectomy bleeding treatment with 24-h follow-up in clinic. The patient was prescribed clindamycin and oxymetazoline spray to continue at home. The patient was discharged home to follow-up in the Head and Neck Surgery clinic.

DISCUSSION

STH is defined as continuous tonsillar bleeding for 1 h, or 250 mL of blood loss during tonsillar bleeding (2). STH occurs after inflammation of the tonsil results in increased tonsillar blood flow that leads to necrosis and friability of the tonsils and surrounding vessels. Extravasation of red blood cells from the engorged vasculature may lead to



Figure 2. Venous bleeding from right tonsil. Patient consented for use of this image.

parenchymal bleeding, and trauma to the engorged blood vessels may lead to venous bleeding. The most dangerous complication is major vessel erosion to the carotid artery, and will often present with recurrent sentinel bleeding or delayed hemorrhage from a pseudo-aneurysm. Although rare, major vessel erosion is often associated with deep neck abscess, and can lead to fatal bleeding and infection (3). However, Griffies et al. described no cases of major vessel erosion or deep neck abscess in the largest case series described in the literature of 10 patients during a 10-year period (2).

STH is a rare complication of acute and chronic tonsillitis, occurring in approximately 1.1% of infectious tonsillitis cases (2,4). STH is described in the literature through case series and case reports due to its low incidence. Dawlatly et al. described STH in 4 cases between February 1992 and January 1997 from Head and Neck Surgery records in a tertiary care center serving an estimated 3 million people (3). Griffies et al. analyzed medical records from 860 patients in three hospitals during a 10-year period, yielding only 10 cases of STH (2). Approximate incidence of STH is difficult to determine due to most cases being treated in the community, but these case series demonstrate the extremely low incidence of STH.

STH occurs with bacterial and viral tonsillitis infection, including β -hemolytic streptococcus, *Haemophilus influenzae*, and Epstein-Barr virus, and is sometimes associated with malignancy or coagulopathies, including von Willebrand disease, factor IX deficiency, and idiopathic thrombocytopenia purpura. Rarely, cases have also been reported with syphilis infections (3). Dawlatly et al. postulated that in the post-antibiotic era, STH is actually more common with viral infections, such as infectious

mononucleosis; however, only a few well-described cases can be found in the literature (5–7).

STH is treated similarly to post-tonsillectomy bleeding with local interventions, including ice chips, oxymetazoline spray, nebulized epinephrine, topical tranexamic acid, and silver nitrate cautery (3,8). Emergent tonsillectomy may be indicated with arterial bleeding or inability to control venous bleeding, and this decision should be made in consultation with Head and Neck Surgery (9). Airway intervention should be considered if the airway becomes compromised due to bleeding. Tonsillectomy may be performed after resolution of infection and bleeding for recurrent tonsillitis. Antibiotics such as penicillin or clindamycin should be administered to prevent an abscess from occurring (10). Steroids can be used to minimize tonsillar edema and discomfort for patients (11). Patients can be safely discharged home for outpatient Head and Neck Surgery follow-up if their airway remains patent, bleeding is controlled, and there is no concern for abscess or large vessel bleeding.

CONCLUSIONS

Sore throat is a common complaint in EDs across the United States, with an estimated 2.1% of ambulatory visits per year; however, STH is a less common presentation (11). STH is frightening to patients, but can usually be managed appropriately in the ED. Treatment of STH follows the same guidelines as post-tonsillectomy

bleeding, and Head and Neck Surgery intervention is only required in cases of airway compromise, arterial bleeding, continuous venous bleeding, and deep space neck infections. Emergency physicians should be familiar with STH presentation and management in the event a “sore throat” in the ED is more than just a simple case of pharyngitis or tonsillitis.

REFERENCES

1. Siedek S, Reichel O, Harreus U. Spontaneous intratonsillar haemorrhage with acute dysphagia. *Eur Arch Otorhinolaryngol* 2008;265:721–3.
2. Griffies S, Wotowic P, Wildes T. Spontaneous tonsillar hemorrhage. *Laryngoscope* 1988;98:365–8.
3. Salem A, Healy S, Pau H. Management of spontaneous tonsillar bleeding: review. *J Laryngol Otol* 2010;124:470–3.
4. Kim Y, Hong S, Choi J, Lee S, Kwon S, Choi J. Spontaneous tonsillar hemorrhage and post-tonsillectomy hemorrhage. *Clin Exp Otorhinolaryngol* 2010;3:56–8.
5. Dawlatly EE, Satti MB, Bohliga LA. Spontaneous tonsillar hemorrhage: an underdiagnosed condition. *J Otolaryngol* 1998;27:270–4.
6. Levy S, Brodsky L, Stanievich J. Hemorrhagic tonsillitis. *Laryngoscope* 1989;99:15–8.
7. Koay CB, Norval MB. An unusual presentation of an unusual complication of infectious mononucleosis: haematemesis and melena. *J Laryngol Otol* 1995;109:335–6.
8. Poddar S. Review of literature for stepwise management of post tonsillectomy hemorrhage. *J Otolaryngol ENT Res* 2016;5:00142.
9. Randel A. AAO-HNS guidelines for tonsillectomy in children and adolescents. *Otolaryngol Head Neck Surg* 2011;84:566–73.
10. Smieja M. Current indications for the use of clindamycin: a critical review. *Can J Infect Dis* 1998;9:22–8.
11. Bergeson K, Roger N, Prasad S. Corticosteroids for a sore throat? *J Fam Pract* 2013;62:372–4.