

Management of spontaneous tonsillar bleeding: review

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Abstract

Objective: To formulate a management plan for spontaneous tonsillar bleeding.

Method: A Medline search was performed and all literature reviewed.

Results: Seventeen publications were identified worldwide, describing 55 cases of spontaneous tonsillar bleeding.

Conclusion: Although spontaneous tonsillar bleeding is a rare presentation, it is documented in the literature. Reported cases indicate an increased incidence in young patients, associated with a higher mortality rate. We propose a management plan for this potentially fatal condition.

Key words: Tonsils; Haemorrhage; Tonsillectomy

Introduction

Spontaneous tonsillar bleeding is now a rare event. However, prior to the introduction of antibiotics, vessel erosion and bleeding were recognised complications of acute tonsillitis and peritonsillar abscess.¹ Pathogenesis theories describe the erosion of superficial capsular vessels on the tonsil itself,² or of neighbouring vessels such as the facial and internal carotid arteries. The presence of aberrant vessels and the increased blood flow to inflamed tissues³ as a consequence of inflammatory mediators would support these hypotheses.

The current literature suggests that the majority of spontaneous tonsillar bleeding cases occur in children or young adults, and one mortality has been reported.⁴ For this reason, a clear management protocol needs to be established.

Methods

We conducted a search of the Medline database from 1974 to the present, with no language barriers, together with a search of relevant publications' bibliographies. The following keywords were used: 'bleeding', 'blood', 'palatine', 'tonsil' and 'spontaneous'. Seventeen publications were identified and reviewed.^{4–20}

Discussion

The majority of the literature on spontaneous tonsillar haemorrhage is in the form of case reports. We identified a total of 30 case descriptions. Acute and chronic tonsillitis were implicated in 24 patients.^{5–8} Other causes included: coagulopathies such as Von

Willebrand disease,⁷ factor IX deficiency⁹ and idiopathic thrombocytopenic purpura;¹⁰ hypertension;¹¹ and tonsillar cancer.^{12,18} This list highlights an important differential diagnosis not to be overlooked in older patients with spontaneous tonsillar haemorrhage. Infectious mononucleosis has been acknowledged as a predisposing factor.^{13,17,19} An association with measles was reported in one case.¹⁴ Syphilis infection can present with painless ulceration of the tonsil, with a risk of tonsillar bleeding.^{21,22} Tonsillitis in children with spontaneous tonsillar haemorrhage is largely due to streptococcal or haemophilus infection.¹⁵

Reported presentations of spontaneous tonsillar haemorrhage range from tonsillar bleeding to haematemesis, haemoptysis, melaena and epistaxis,^{7,16} which can make diagnosis challenging. The pathogenesis involves vessel erosion secondary to infection. There are two recognised patterns of bleeding: diffuse parenchymal bleeding and localised bleeding from dilated surface vessels⁹ (these can be major vessels or smaller peripheral vessels). The majority of cases involve venous bleeding.

Proposed management strategies include arteriography for severe bleeding and local intervention for peripheral bleeding.¹³ Cases of tonsillitis should be treated with intravenous antibiotics, and several papers advocate early tonsillectomy as definitive management.^{6–8} Local pressure, silver nitrate cauterisation⁷ and nebulised adrenaline²³ have been used in previously reported cases.

One study reviewed a series of 860 patients deemed susceptible to spontaneous tonsillar haemorrhage due to predisposing factors including chronic tonsillitis, infectious mononucleosis and neoplasm.

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Accepted for publication: 21 October 2009. First published online 19 January 2010.

TABLE I
REPORTED CASES OF SPONTANEOUS TONSILLAR HAEMORRHAGE

Title	Year	Author(s)	Pt age (y)	Pathology	Management
Tonsillitis and sudden childhood death	2008	Byard ⁴	12	Acute tonsillitis & fistula formation	
Spontaneous tonsillar haemorrhage	2007	Rocha <i>et al.</i> ⁵	13	Acute tonsillitis	IV & oral antibiotics
Bleeding as an initial symptom of tonsillar carcinoma	2007	Jurkiewicz-Lobodzinska <i>et al.</i> ¹²	Adult	Squamous cell carcinoma	Tonsillectomy & follow up
Spontaneous tonsillar hemorrhage	2003	Seuno <i>et al.</i> ¹⁰	4–63*	Acute tonsillitis; 2 with thrombocytopenic purpura; 1 with diffuse parenchymal bleeding of unknown aetiology	Antibiotics; one case of local application of oxidised cellulose
Spontaneous tonsillar hemorrhage	2001	Kumra <i>et al.</i> ⁷	5, 11 & 13	Acute tonsillitis; one with Von Willebrand II disease	Antibiotics; local measures & elective tonsillectomy; 'hot' tonsillectomy
Spontaneous tonsillar hemorrhage: an underdiagnosed condition	1998	Dawlatly <i>et al.</i> ⁸	2 children & 2 adults	Acute tonsillitis	Antibiotics & hot tonsillectomy
An unusual presentation of an unusual complication of infectious mononucleosis: haematemesis and melaena	1995	Koay & Norval ¹⁷	19	Infectious mononucleosis	Tonsillectomy
Spontaneous tonsillar haemorrhage in acute tonsillitis	1994	Jawad & Blayney ¹⁶	18 mths & 6, 10 & 17 yrs	Acute tonsillitis; 1 β -haemolytic streptococcus	IV antibiotics; 2 cases local AgNO ₃ ; 1 needed blood transfusion; all had elective tonsillectomy
Spontaneous tonsillar bleeding; secondary to acute tonsillitis in children	1993	Shatz ¹⁵	3 children	Acute tonsillitis; 2 streptococcal & 1 haemophilus	Antibiotics
Idiopathic spontaneous tonsillar haemorrhage	1993	Vaughan & Parker ²⁰	20	Idiopathic	Hydrogen peroxide gargle
Bleeding tonsils	1991	Murty <i>et al.</i> ¹¹	20	Hypertension	Sodium nitroprusside
Hemorrhagic tonsillitis	1989	Levy <i>et al.</i> ⁹	11 adults	One factor IX deficiency; 6 group A β -haemolytic streptococci	5 stopped spontaneously; 5 AgNO ₃ , 1 electrocautery under GA; 2 needed blood transfusion
Spontaneous tonsillar hemorrhage	1988	Griffies <i>et al.</i> ¹³	10 adults	80% bacterial acute tonsillitis; 1 infectious mononucleosis; 1 neoplasm	Local intervention & tonsillectomy
Tonsillar haemorrhage and measles	1988	John <i>et al.</i> ¹⁴	7	Measles	Tonsillectomy
Spontaneous haemorrhage from the tonsil (a case report)	1987	McCormick & Hassett ⁶	2	Acute tonsillitis	Early tonsillectomy
Bleeding as an initial sign of carcinoma of a tonsil	1974	Suh <i>et al.</i> ¹⁸	Adult	Squamous cell carcinoma	Tonsillectomy
Tonsillar hemorrhage. Unusual complication of infectious mononucleosis	1974	Kelly & Sanders ¹⁹	Adult	Infectious mononucleosis	

*11 patients. Year = year of publication; pt = patient; y = years; IV = intravenous; mths = months; GA = general anaesthetic

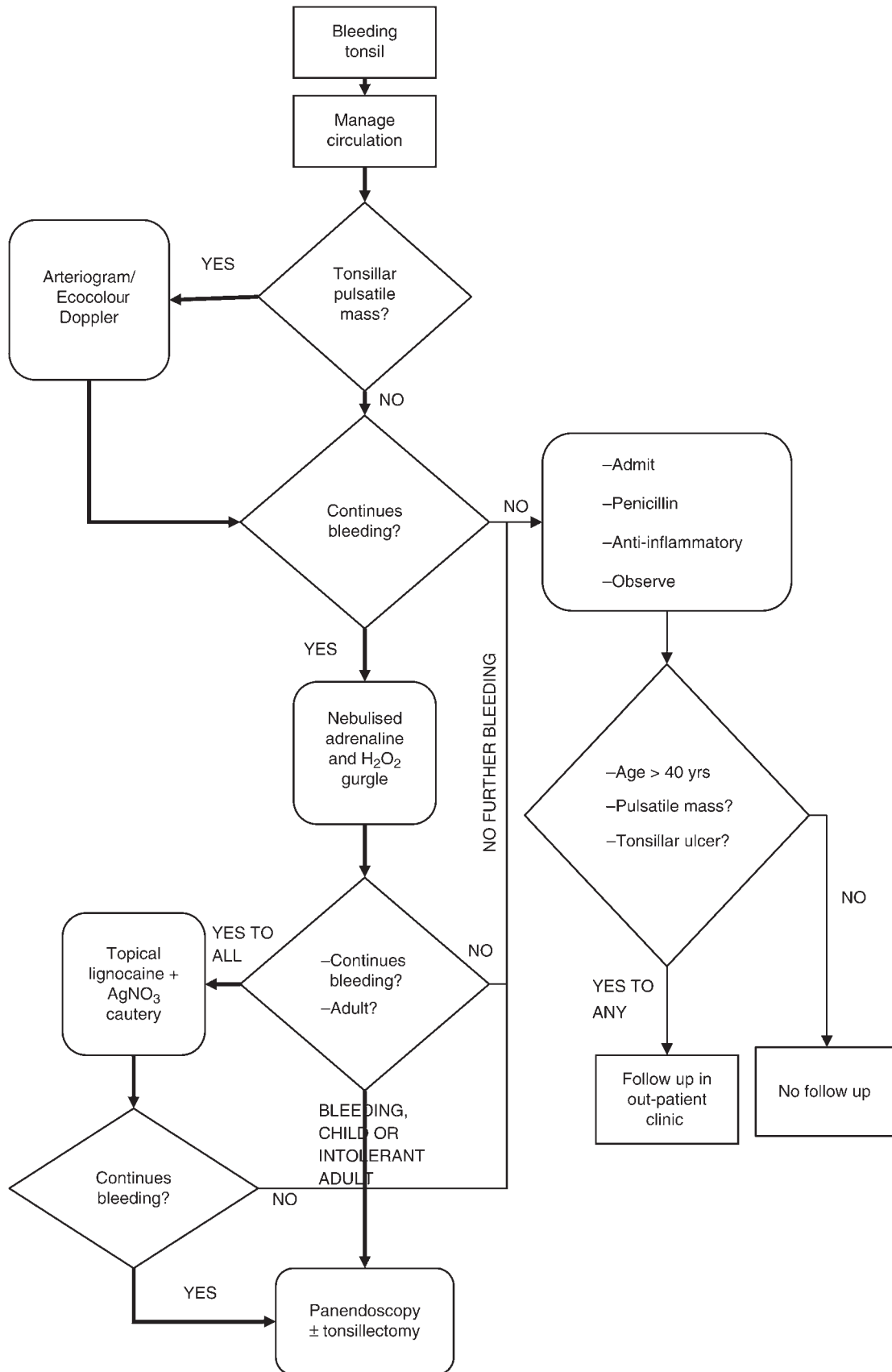


FIG. 1 Management plan for spontaneous tonsillar bleeding.

Ten cases of spontaneous tonsillar haemorrhage were identified, eight of which were due to tonsillitis, giving a 1.1 per cent incidence of spontaneous tonsillar haemorrhage with tonsillitis.¹³

Another study assessed 11 patients with spontaneous tonsillar haemorrhage, and found a slight male predominance (male:female ratio of 6:5), a mean age of 29.6 years and an age range of four to 63 years.¹⁰

Conclusion

Spontaneous tonsillar haemorrhage is a rare but recognised entity. The literature indicates that most cases occur in young people and are secondary to acute or chronic tonsillitis; however, other causes must be considered. Management involves the use of antibiotics, and early tonsillectomy is recommended (see Table I).

This review has demonstrated that there are currently few reported cases of spontaneous tonsillar haemorrhage. We have devised a treatment protocol based on the available evidence, in order to improve the diagnosis and management of this condition (see Figure 1).

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Mr A Salem takes responsibility for the integrity of the content of the paper.

Competing interests: None declared