

An unusual presentation of an unusual complication of infectious mononucleosis: haematemesis and melaena

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Abstract

Tonsillar haemorrhage is a rare complication of infectious mononucleosis. We present a case of life-threatening tonsillar haemorrhage secondary to infectious mononucleosis in a young man whose predominant symptoms at presentation were haematemesis and melaena. The origin of the haemorrhage was not obvious until the patient was examined under anaesthesia. The bleeding was controlled by emergency tonsillectomy.

Key words: Infectious mononucleosis; Tonsil; Haemorrhage; Haematemesis; Melaena

Introduction

Although infectious mononucleosis generally runs a benign and self-limiting course, life-threatening and fatal complications such as splenic rupture, liver failure, agranulocytosis, thrombocytopenia, haemolytic anaemia and a variety of peripheral and central neurological complications are well documented (Penman, 1970; McCurdy, 1974). Specific otolaryngological complications have also been described and these include upper airway obstruction, peritonsillar abscess, otitis media, maxillary sinusitis, epistaxis, and spontaneous oral mucosa and tonsillar haemorrhage. A recent survey showed a five per cent otolaryngological complication rate in patients with infectious mononucleosis who required hospitalization (Johnsen *et al.*, 1984).

Case report

A previously healthy 19-year-old man was admitted to the ENT ward with a five-day history of severe sore throat and a 24-hour history of recurrent haematemesis and melaena. His GP had initiated treatment with oral penicillin, prednisolone and aspirin three days prior to his admission without any improvement in his throat symptoms.

On examination, he looked unwell and had a degree of stertor. His blood pressure was 120/70 mmHg and his pulse was 100/minute. Palpation of the neck revealed multiple large cervical lymph nodes and throat examination showed grossly enlarged inflamed tonsils which were meeting in the midline. There was no evidence of blood in the oral cavity or the oropharynx. Due to the size of the tonsils, an attempt at passing a flexible nasendoscope in order to examine the hypopharynx for a potential source of bleeding proved to be impossible because of difficulty in the lower nasopharynx. Abdominal examination showed some tenderness in the epigastrium but no evidence of splenomegaly or hepatomegaly.

The results of haematological investigations on admission were as follows: haemoglobin 13.6 g/dl; white blood cell $18.2 \times 10^9/l$ (27.8 per cent neutrophil; 58.7 per cent

lymphocytes - mostly atypical; 8.7 per cent monocytes); platelet count $267 \times 10^9/l$; haematocrit 0.412. A monospot test for infectious mononucleosis was positive. Clotting screen, liver function tests and blood biochemistry were all within normal limits.

An opinion from a consultant general surgeon was sought with regard to his haematemesis and melaena. In view of the epigastric tenderness and recent ingestion of oral steroids and aspirin, it was felt that bleeding from the upper gastrointestinal tract was a distinct possibility. As the patient's condition was stable, it was advised that he ought to be closely observed and managed conservatively in the first instance with intravenous fluids, ranitidine, cefuroxime and metronidazole.

Over the subsequent 18 hours, his airway became increasingly obstructed. He had three further attacks of melaena and four further attacks of haematemesis, bringing up an estimated total of 1700 ml of altered blood. Repeated examination again failed to show any oropharyngeal source of the bleeding. His haemoglobin level dropped to 7.8 g/dl despite having been transfused with two units of blood. The patient was resuscitated with five further units of blood and two units of fresh frozen plasma and was prepared for general anaesthesia with a view to removing at least one of his tonsils to alleviate his airway obstruction and to facilitate a diagnostic upper gastrointestinal endoscopy. While being resuscitated, the patient had a further attack of haematemesis followed by a short episode of respiratory arrest which was thought to be the result of obstruction from blood clots in an already severely compromised upper airway.

During examination under anaesthesia, it became apparent that there was a bleeding point at the lower pole of the right tonsil where a necrotic patch had eroded through a surface vessel. A right-sided tonsillectomy was therefore performed in the first instance. The surface of the left tonsil was noted to be friable and bled easily to touch. The bleeding was diffuse and difficult to control by local measures. The left tonsil was therefore also removed. The tonsillar pillars on both sides were oversewn. Due to the inflammatory and hyperaemic state of the tonsils, the whole operation was rather tedious and haemorrhagic. The

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Accepted for publication: 18 October 1994.

total operative blood loss was estimated to be 1500 ml. After a preliminary gastric lavage, a full oesophagus-gastro-duodenoscopy was performed which showed normal mucosa and no evidence of any bleeding point in the upper gastrointestinal tract. Histological examination of the tonsils confirmed features consistent with infectious mononucleosis with multiple necrotic foci.

Post-operatively, the patient made an uneventful recovery and was discharged after four days. He had remained well when reviewed in the outpatient clinic three months later.

Discussion

It was estimated in a recent study that spontaneous tonsillar haemorrhage occurred in about 1.1 per cent of the patients who required hospitalization with acute tonsillitis (Griffies *et al.*, 1988). The true incidence is likely to be much lower as the great majority of patients with acute tonsillitis are treated in the community. Bacterial tonsillitis is by far the commonest cause of the complication but at least four well-documented cases due to infectious mononucleosis (Kelly and Sanders, 1974; Johnsen *et al.*, 1984; Griffies *et al.*, 1988) and one case due to measles (John *et al.*, 1988) have also been reported. Irrespective of the underlying cause, the haemorrhage has a tendency to settle spontaneously on conservative measures with antibiotics and local application of cautery or vasoconstrictors (Griffies *et al.*, 1988; Levy *et al.*, 1989). However, the bleeding may sometimes reach a life-threatening proportion requiring blood transfusion (McCormick and Hassett, 1987; Levy *et al.*, 1989; Kelly and Sanders, 1974). Emergency tonsillectomy may occasionally be required to arrest the haemorrhage (Skinner and Chui, 1987; Griffies *et al.*, 1988).

Although haemorrhagic phenomenon due to thrombocytopenia and liver failure is known to occur in infectious mononucleosis (Schumacher and Barcay, 1962), there was no evidence of such abnormalities in the patient presented here, nor in any of the previously described cases of infectious mononucleosis associated tonsillar haemorrhage. The haemorrhage is thus believed to be the result of local inflammatory process giving rise to secondary necrotic changes and erosion of the superficial tonsillar vessels.

Spontaneous tonsillar haemorrhage is usually clinically readily recognizable either by the presence of fresh blood in the oropharynx or by the identification of the actual bleeding points on the tonsils. In the case of the patient presented here whose predominant symptoms were haematemesis and melaena, although bleeding from the inflamed tonsils had been considered a possibility, repeated examination of the oropharynx failed to demonstrate the origin of the haemorrhage. Two factors are believed to have contributed to this. Firstly, the location of the bleeding vessels at the lower pole of the right tonsil might have resulted in the collection of blood in the hypopharynx which was prevented from overspilling into the oropharynx by the enlarged tonsils, thereby concealing any bleeding points. The blood was repeatedly swallowed by the patient to avoid aspiration. Secondly, the grossly hypertrophic tonsils had precluded any direct or indirect visualization of the hypopharynx which might have

demonstrated some pooling of fresh blood. The diagnosis was further clouded by the clinical findings of epigastric tenderness and the history of recent ingestion of oral steroids and aspirin which are well known risk factors in upper gastrointestinal haemorrhage. Although haematemesis due to gastritis had previously been described in association with infectious mononucleosis (Schumacher and Barcay, 1962), in this patient the upper gastrointestinal mucosa was entirely normal and the right tonsil was the only source of the bleeding.

The thresholds for the timing of surgical intervention are clearly different between gastrointestinal haemorrhage and tonsillar haemorrhage. In retrospect, surgical intervention would probably have been adopted much earlier in the course of the management of this patient if it was felt that the tonsil was the most likely source of the haemorrhage. In addition to arresting the haemorrhage, a tonsillectomy also has the benefit of alleviating any associated airway obstruction. On the other hand, tonsillectomy in the presence of acutely inflamed tonsils is a real surgical challenge due to increased vascularity and poorly defined surgical plane. It should therefore, in our opinion, be strictly reserved for those cases not responding to conservative treatment.

Acknowledgement

We would like to thank Mr R. C. D. Herdman for his kind permission to report on this patient and his advice on the writing of this paper.

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