Spontaneous supraglottic haemorrhage in a patient receiving warfarin sodium treatment

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Abstract

A case of spontaneous, isolated supraglottic haemorrhage in a patient recently started with warfarin sodium treatment is described. The symptoms of sore throat, dysphonia, stridor, dysphagia or a neck swelling in a patient taking anticoagulants should alert the clinician to the possibility of this rare but potentially fatal complication.

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Case report

A 55 year old man presented to the accident and emergency department complaining of a one day history of sore throat, dysphonia and progressive dyspnoea. He had been discharged from the hospital four days previously, after recovering from an acute antero-lateral myocardial infarction complicated by a left ventricular mural thrombus. His discharge medication consisted of ramipril, aspirin and warfarin.

On examination, there was no evidence of stridor but the patient was dyspnoeic at rest. His observations included; heart rate 70 beats/min, blood pressure 130/90, respiratory rate 20 breaths/min and oxygen saturation 98% on air. Oropharyngeal examination revealed a degree of trismus and a small 5 mm diameter haematoma of the left tonsil but no other abnormalities. Examination of the neck, revealed a diffuse tender swelling of the submental region extending to the right side of the neck, the rest of the clinical examination was unremarkable.

An urgent opinion from the otolaryngologist was sought with regard to the neck findings. Flexible nasendoscopy revealed a right sided purple-blue supraglottic haematoma extending across the midline posteriorly, both vocal cords were normal and the airway was deemed adequate.

The patient was admitted for close observation and given intravenous hydrocortisone, co-amoxycylav and humidified oxygen. Haematological investigations revealed an international normalised ratio (INR) of 4.4. Two units of fresh frozen plasma and 2 mg of vitamin K were given intravenously to reverse the effects of warfarin, the warfarin and aspirin were stopped.

The patient's condition remained stable overnight, subsequent blood test had shown the INR had decreased to 1.4. He continued to make an uneventful recovery over the next few days, in view of the continuing need for antico-

agulation the warfarin was restarted. Subsequent nasendoscopies showed gradual resolution of the haematoma, the patient was eventually discharged home six days after admission.

Discussion

Haemorrhage is the most common, and potentially most serious complication of anticoagulant treatment. Bleeding is most commonly seen in the genitourinary, gastrointestinal, cutaneous and intracranial sites.¹ Haemorrhage into the upper airway is rare, but has been reported.²⁻⁴

The usual site of haematomas of the upper airway are in the larynx, this may be the primary site of bleeding or may be compromised by dependent extravasation of blood from the tongue, submandibular, peritonsillar and retropharyngeal areas as the blood extends along the fascial planes of the neck. Airway obstruction can also result if haemorrhage occurs into the submandibular space, forcing the tongue backwards and upwards.² Gooder and Henry described a case of spontaneous haemorrhage into the floor of the mouth of a patient receiving synthron. Where blood had tracked down into the larynx, the resulting airway compromise necessitated an urgent tracheostomy and reversal of the anticoagulants.

Bleeding in the oral cavity or laryngopharynx may be caused by minimal trauma, sometimes only careful questioning may elicit the cause. Within the mouth, bleeding may occur from external trauma, dental procedures and even vigorous brushing of the teeth. Trauma to the larynx and pharynx is less easily elicited. There have been reports that haemorrhage may result from excessive voice use, for example, crying, shouting and coughing.³ Local infection with accompanying vasodilatation has also been suggested as initiating haemorrhage in patients with coagulopathies.² Frequently no obvious cause is found, in these cases the haemorrhage can be considered to be truly spontaneous.

It is important to entertain the diagnosis of an upper airway haemorrhage in patients taking anticoagulants, especially when the symptoms are out of proportion to the clinical findings. In this case the small tonsillar haematoma may have been mistakenly thought of as the primary cause of the symptoms, in fact it should serve as a warning sign of potential problems elsewhere in the upper aerodigestive tract. The trismus was probably secondary to irritation of the medial pterygoid muscle, a lateral relation of the palatine tonsil.

The mainstay of treatment is prevention of airway compromise and prompt control of the

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coagulopathy. Patients may present with varying degrees of airway obstruction, from none at all to impending respiratory arrest. Each case should be considered individually, the decision for the type of airway treatment depends upon the clinical status of the patient, the clinician's abilities and the level of support available. However, one must always be alert to the fact that airway obstruction may occur rapidly and dramatically.

If time permits an attempt should be made to reverse the coagulopathy with the use of fresh frozen plasma and vitamin K. Securing the airway is a difficult issue, some advocate endotracheal intubation before tracheostomy as a safer option. However, this could prove hazardous and impossible in the presence of a bleeding diathesis and the distorted anatomy brought about by a haematoma. Endotracheal intubation, tracheostomy and cricothyroidotomy are all hazardous in cases of coagulopathy, unfortunately there are few data available suggesting which method is the best in this setting. Although haemorrhagic complications are less common with cricothyroidotomy than with tracheostomy.

In this case, there was no evidence of airway compromise, the authors treated the case conservatively by reversing the coagulopathy and observing the patient closely. More aggressive airway support was reserved for in the event of symptomatic airway obstruction.

In conclusion, haemorrhage into the upper airway is rare, but should be included in the differential diagnosis of a patient receiving anticoagulants who presents with symptoms related to the upper aerodigestive tract. The crux of treatment lies in careful assessment of the airway and prompt reversal of the coagulopathy.

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