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Clinical Record

Nasal insertion of St John's wort: an unusual cause of epistaxis

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Abstract

We report a case of severe unilateral epistaxis requiring surgical arrest of bleeding, via endoscopic sphenopalatine artery ligation and anterior ethmoidal artery ligation. This followed recreational nasal insertion of St John's wort (*Hypericum perforatum*). Interactions between this substance and prescribed drugs have been described following oral ingestion. However, this unusual case highlights a further, worrying potential rhinological side effect of this substance.

Key words: Rhinology; Nose; Epistaxis; St John's Wort

Case report

A 30-year-old man presented as an emergency to our ENT department with a 12-hour history of brisk, left-sided epistaxis. The patient had no past medical history of note, no history of facial trauma, and did not take any regular prescribed or over the counter medication.

On questioning, the patient admitted to 'snorting' a St John's wort tablet (*Hypericum perforatum*) up his left nostril prior to onset of epistaxis. The reasons for this drug use and the mode of administration were not clear. Soon after this event, the patient reported a burning sensation in his left nostril, shortly followed by the onset of brisk bleeding.

At presentation, the patient had been bleeding from the left nostril intermittently for 12 hours. On admission, he was haemodynamically stable. Blood pressure was within normal limits. His haemoglobin was 140 g/l and his coagulation screen was within normal limits for our reference laboratory.

Initial conservative management, by means of bilateral packing with 10 cm nasal tampons, failed to control the epistaxis. Anterior rhinoscopy showed brisk bleeding apparently from high on the left nasal septum; however, the exact site was impossible to determine. With continued bleeding through the packs, the patient became haemodynamically unstable, with a repeat haemoglobin of 100 g/l.

The patient was taken to theatre for emergency nasal examination under anaesthesia and surgical arrest of epistaxis. Endoscopic exploration under general anaesthesia revealed active, severe bleeding from the roof of the left nasal cavity, the spheno-ethmoidal recess and the medial surface of the left middle turbinate.

Despite the use of adrenaline-soaked neurosurgical patties and local bipolar diathermy to identified mucosal bleeding points, complete arrest of bleeding was not achieved. Due to the multiplicity of bleeding points, endoscopic sphenopalatine artery ligation was performed.[1] This procedure did not fully control the bleeding because of the high position of some of the bleeding points. Thus, it was decided to proceed to anterior ethmoidal artery ligation. This was carried out externally via a medial canthal incision. By the end of the procedure, haemostasis had been achieved.

The patient did not receive a blood transfusion. He made a good post-operative recovery and was discharged home the following day. He was followed up at the otolaryngology clinic, with no sequelae.

Discussion

St John's wort (*H perforatum)* is a yellow-flowered plant[2] thought to be named after St John the Baptist, as it blooms around St John's Day (24 June). It grows in various regions of the world, being classified as a noxious weed in some.[3]

St John's wort may have been used by Native Americans[4] to treat fevers, coughs, intestinal problems, nosebleeds and snakebites. Its use in herbal medicine over the years has gained recent prominence with the proposition that it may be beneficial in the treatment of depression. Preparations available include teas, tinctures and tablets. It is available without prescription in the United Kingdom. At present, St John's wort and other herbal remedies are exempt from the legal requirement for a licence under Section 12(2) of the Medicines Act 1968.[5]

There have been several reviews assessing the efficacy of St John's wort in the treatment of depression,[6] some even comparing it favourably with traditionally prescribed antidepressants such as paroxetine.[7]

The active ingredient is thought to be hypericin ($C_{30}H_{16}O_8$), a naturally occurring hydrocarbon compound. St John's wort also contains bioflavonoids and hyperforin, which may be responsible for its bioaction, together with phenols and other compounds.[8]

It is not clear which of the components of St John's wort was responsible for our patient's epistaxis. However,

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FIG. 1
Hypericum perforatum (St John's Wort).

it seems probable that at least one ingredient must be capable of producing such severe and clearly localised bleeding in a young man with no significant comorbidity or history of trauma.

Despite the perceived benefits of this plant extract, there are documented side effects, and its interaction with prescribed medication has been previously reported. Cattle grazing on *H perforatum* are subject to photosensitivity reactions, as are humans. There are reports of increased menstrual bleeding in patients also taking the oral contraceptive pill.[9] Concerns have been raised in anaesthesiology journals about patients' increasing self-medication with this and other herbal preparations, and about these preparations' known and potential unknown effects on human physiology, particularly under anaesthesia.[10] The activation of cytochrome P450 isoenzymes impacts on the metabolism of various drugs, such as theophylline, human immunodeficiency virus protease inhibitors, diltiazem, warfarin and selective serotonin reuptake inhibitors, amongst others.

- **This paper describes a severe epistaxis following recreational nasal insertion of St John's wort**
- **The patient required surgical arrest of haemorrhage to control bleeding from mucosa that had been in direct contact with the compound**
- **Otorhinolaryngologists should, therefore, be aware of this apparent new addition to the already long list of aetiological factors in secondary epistaxis**

This patient presented with a significant, unilateral epistaxis, the onset of which was contemporaneous with nasal insertion of St John's wort. The patient required surgical arrest of haemorrhage to control bleeding from mucosa that had been in direct contact with the compound. Clot removal, diathermy and topical adrenaline on surgical patties proved insufficient to effect haemostasis. Only after endoscopic sphenopalatine artery ligation and external ligation of the ipsilateral anterior ethmoidal artery was bleeding seen to stop. The requirement for anterior ethmoidal artery ligation is uncommon in young healthy adults in the absence of a traumatic or iatrogenic cause for epistaxis.

Otorhinolaryngologists should, therefore, be aware of this apparent new addition to the already long list of aetiological factors in secondary epistaxis. A careful drug history[11] should always be taken in any patient with epistaxis to exclude a secondary cause; such a history should enquire about both prescribed and non-prescribed products.

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