Subcutaneous inflammation mimicking metastatic malignancy induced by injection of mistletoe extract


Published in:
British Medical Journal

Document Version:
Publisher's PDF, also known as Version of record

Queen's University Belfast - Research Portal:
Link to publication record in Queen's University Belfast Research Portal

Publisher rights
Published under a Creative Commons Attribution Non Commercial (CC BY-NC 4.0) licence that allows reuse subject only to the use being non-commercial and to the article being fully attributed (http://creativecommons.org/licenses/by-nc/4.0).

General rights
Copyright for the publications made accessible via the Queen's University Belfast Research Portal is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The Research Portal is Queen's institutional repository that provides access to Queen's research output. Every effort has been made to ensure that content in the Research Portal does not infringe any person's rights, or applicable UK laws. If you discover content in the Research Portal that you believe breaches copyright or violates any law, please contact openaccess@qub.ac.uk.
Subcutaneous inflammation mimicking metastatic malignancy induced by injection of mistletoe extract

A I Finall, S A McIntosh, W D Thompson

We describe the histological features of subcutaneous inflammation induced by mistletoe, a popular Christmas decoration, when used as an anticancer complementary therapy. We also outline the use of extract of mistletoe in this context.

Case report

A 61 year old woman attending a follow-up appointment two months after excision of tubular carcinoma of the breast complained of an abdominal wall mass. The lesion was subcutaneous, mildly tender, and had a nodular consistency. The patient was worried that the soft tissue mass might be a recurrence and had a nodular consistency. The patient was diagnosed with metastatic breast carcinoma after receiving subcutaneous injections of mistletoe extract as complementary therapy aimed at treating her lymphoma. She used an aqueous, whole plant extract of mistletoe grown on ash trees, called “Abnoba vesculae”.

Ethical approval: Submitted to the institutional review board (IRB) but transferred for approval by the institutional beauty review (IBR), an ad hoc subcommittee of our institution.


doi 10.1136/bmj.39015.672373.80

Department of Histopathology, University Hospital of Wales, Cardiff and Vale NHS Trust, Cardiff CF14 4XW

A I Finall specialist registrar, histopathology

Unit of Breast Surgery, Aberdeen Royal Infirmary, Aberdeen AB25 2ZD

S A McIntosh consultant surgeon

W D Thompson consultant histopathologist

Correspondence to: A Finall Alison.Finall@CardiffandVale.wales.nhs.uk

*BMJ* 2006;333:1293-4
Local reactions have been documented previously, usually manifesting as erythema or pain. Two reports of histologically assessed inflammation induced by mistletoe exist in the medical literature. A 61 year old man with a T3NXMX pancreatic adenocarcinoma who was treated with once weekly intratumorous and peritumorous injections of mistletoe for five weeks underwent diagnostic needle core biopsy on day 28 after starting treatment. The biopsy showed adenocarcinoma admixed with neutrophils and eosinophils. A further study documents the histology of seven patients with subcutaneous inflammation induced by whole plant mistletoe extract. The microscopic pattern was of a dense perivascular lymphoid infiltrate and increased monocytes. An infiltrate of plasma cells or eosinophils was not seen. Both accounts support the notion that the microscopic features of panniculitis in our case are caused by subcutaneous mistletoe administration. Ours is the first documented account of a combined pattern of a heavy infiltrate of eosinophils, perivascular lymphoid aggregates, and mild vasculitis.

This case taught us the importance of good communication. We may never have known the underlying cause of the inflammation without an honest working relationship between the pathologists and surgeons, and between the surgeon and his patient. This story also shows that patients sometimes withhold information from us. In this case, the patient may have assumed that alternative therapies have no relevance in conventional medical consultations.

Many thanks to GT Williams, University Hospital of Wales, Cardiff, for help with the photographs. AIF wrote the manuscript and helped manage the case as a trainee pathologist supervised by WDT. SAMcI helped in the clinical care of the patient and contributed her clinical history. WDT is guarantor.

Funding: None.

Competing interests: None declared.

Discussion

Mistletoe (Viscum album) is a semiparasitic woody perennial that grows on several species of tree, including elm, apple, pine, and oak. It is used as a Christmas decoration in the United Kingdom with the tradition of kissing any person who lingers under it.

Mistletoe has been used to treat hypertension, headaches, menstrual symptoms, and arthritis. The first reference to its medical use is in the Bible as a cure for epilepsy. The young King David is said to have seen a woman collapse in a fit. An angel appeared to him as he prayed for a remedy, announcing “Whoever wears the oak mistletoe in a finger ring on the right hand, so that the mistletoe touches the hand, will never again be bothered by the falling sickness.”

Today, despite the lack of robust data supporting the use of mistletoe as an anticancer drug, it is widely used in middle Europe; around €90 million is spent on the preparation each year, usually manifesting as erythema or pain.

Rigorous randomised controlled trials are needed to provide conclusive data in humans. 10

Fig 2 High power view (×400) showing vasculitis—small blood vessel destruction and inflammation with a prominent eosinophilic component. Note the red blood cells within the vessel lumens.