Retrosternal thyroid mass resulting in axillosubclavian vein thrombosis

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DESCRIPTION

An 89-year-old man with known thyroid goitre presented to the emergency department with right arm swelling for 5 days. There were no dilated head, neck or upper extremity vessels on examination but the right upper extremity was asymmetrically enlarged compared with the left. An elevated D-dimer prompted venous Doppler studies that confirmed acute thrombosis within the right subclavian vein. This was further evaluated with a modified CT angiogram protocol to assess the venous vasculature.

The scout image ([figure 1](#)) demonstrated tracheal deviation secondary to a partially calcified mass in the mediastinum, consistent with known diagnosis of goitre. There was an enlarged heterogeneous thyroid gland with areas of calcification, significant mass effect on the surrounding vasculature and a filling defect within the right axillosubclavian vein ([figure 2](#)). Numerous collaterals were noted along the right neck hemithorax ([figure 3](#)). He was started on anticoagulation that was eventually stopped due to upper gastrointestinal bleed. He refused biopsy and surgery of the thyroid mass.

There are two types of deep vein thrombosis (DVT) of the upper extremities: primary (venous thoracic outlet syndrome, effort-related and idiopathic) and secondary (catheter-associated, cancer-associated, trauma-related and oestrogen-related).¹ Mediastinal masses fall within the cancer-associated category of secondary DVT. These masses are usually malignant in nature although Santos and Ghalili² reported a case of upper extremity DVT produced by a large retrosternal goitre. The management is anticoagulation with or without thrombolysis, catheter

Figure 2 CT angiogram revealing a markedly enlarged, heterogeneous thyroid gland with calcification exerting significant mass effect on the superior aspect of the superior vena cava and right brachiocephalic vein. There is a filling defect within the right subclavian and right axillary veins consistent with thrombosis.

Figure 1 Scout image demonstrating tracheal deviation to the right of midline secondary to a large, partially calcified mass in the mediastinum.

Figure 3 CT angiogram demonstrating numerous collaterals along the right neck hemithorax.

To cite: Khan AM, Khan S. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2013-202450

intervention or surgical intervention depending on the presence or absence of severe symptoms and signs.¹

Learning points

- ▶ Upper extremity deep venous thrombosis can rarely result from retrosternal thyromegaly.
- ▶ The mainstay of treatment is anticoagulation to alleviate symptoms, prevent thrombus progression, pulmonary embolism and post-thrombotic syndrome.
- ▶ In the presence of severe symptoms and signs, thrombolysis, catheter intervention or surgical intervention may be indicated.

Contributors AMK contributed to the management of the patient and manuscript preparation. SK contributed to the manuscript preparation. Dr Bernardo Stein was attending on service. AMK is the guarantor.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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