Superior Vena Cava Obstruction

Introduction
This is obstruction to the superior vena cava (SVC) blood flow by external compression, thrombosis or direct invasion of the SVC. It may present acutely or more insidiously as chronic dyspnoea.

Compression causes a reduction in blood flow from the head, neck and upper extremities to the heart. Low intravascular pressure in the SVC can also permit thrombus formation.

This condition may be the first presentation of malignancy or can occur in those with known malignancy. The most common cause will be carcinoma of the lung (65-80%), lymphoma (2-10%), and other cancers (3-13%). Benign causes are rare.

Assessment
Symptoms are those of venous hypertension:
- breathlessness
- visual changes
- dizziness
- headache – worse on stooping
- swelling of face, neck and arms.

Signs include:
- conjunctival and peri-orbital oedema
- papilloedema – late
- dilated neck veins – non-pulsatile
- dilated collateral veins – arms and anterior chest wall
- oedema of hands and arms
- stridor
- cyanosis
- increased respiratory rate.
Management

Treatment is dependent on the cause of the obstruction, the severity of the symptoms and the patient’s prognosis. While the diagnosis of superior vena cava obstruction (SVCO) is often made on clinical grounds in patients with a history of thoracic malignancy, a chest X-ray and CT scan may confirm the diagnosis and inform treatment.

- Ensure restricting clothing is loosened and upper arms are supported on pillows.
- Discuss with or refer urgently to oncologist, radiotherapist or respiratory physician, as appropriate
- Arrange Systemic Anti-cancer Therapy (SACT) and radiotherapy for Small Cell Lung Cancer (SCLC) if patient’s condition permits.
- Consider referral for endovascular stenting, thrombectomy, thrombolysis and anticoagulation if the patient’s condition permits.
- Steroids may be helpful despite the absence of evidence to support their use. Consider dexamethasone 16mg orally or parenterally immediately and the subsequent day dexamethasone 8mg twice daily orally (second dose before 2pm if possible). Discontinue promptly if no benefit and reduce gradually in responders.
- Please refer to your regional cancer centre for additional advice on dexamethasone therapy.
- Offer benzodiazepines, opioids, oxygen and supportive care to all patients in addition to the above measures.

References
