CASE REPORT

Intermittent facial swelling

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SUMMARY

Intermittent facial swelling is an unusual presentation in the emergency department. The differential diagnosis may range from a variety of causes. Most common differential diagnosis is angio-oedema. However, more serious presentations such as superior venacaval obstruction must not be ignored. This case report presents a patient who was investigated in the hospital for 2 weeks (2 admissions) with intermittent facial swelling. He presented to the emergency department (3rd admission) and was diagnosed to have superior venacaval obstruction secondary to metastatic bronchogenic carcinoma. He underwent emergency endovascular stenting; however, he died within a few weeks.

BACKGROUND

An 84-year-old man was admitted to the emergency department with intermittent facial swelling and a diagnosis of angio-oedema was made. However, on further assessment and review by an experienced clinician, there were engorged veins on the upper chest with upper limb swelling. This raised a suspicion of superior venacaval obstruction that was confirmed on further imaging and the patient required emergency endovascular stenting of the superior vena cava. The diagnosis of superior vena cava obstruction could be easily missed and this case report emphasises the necessity of thorough clinical examination in patients presenting to the emergency department with unusual symptoms.

CASE PRESENTATION

An 84-year-old man was brought into the emergency department by ambulance with intermittent face and right arm swelling for 8 weeks. There was no history of trauma. He also reported shortness of breath and an exquisitely painful right wrist. Concerns regarding potential angio-oedema were raised and he was seen as a priority. The swelling to his face and arm was worse in the morning and improved as the day went on. His medical history included coronary bypass grafts, atrial fibrillation (on warfarin), chronic bronchitis and dementia. He was a nursing home resident, an ex-smoker (60 pack years) and had worked as a haulier and miner.

He had two recent admissions to a small district general hospital and was investigated for the same problem. On the first occasion he was diagnosed with gout of the first metacarpophalangeal joint and was found to be anaemic. He received anti-inflammatories, a blood transfusion and outpatient colonoscopy was arranged.

On his second admission the pain in his wrist was worsening and X-rays demonstrated marked

osteoarthritis at several joints. There was also destruction of the trapezium, which was reported as likely due to gout or osteoarthritis. An ultrasound of his wrist revealed a 2.3 cm mass which was biopsied (the histology was later confirmed as squamous cell carcinoma). A chest X-ray (figure 1) at this time demonstrated a raised right hemidiaphragm.

On his final admission he had a grossly oedematous right arm and face, with his eyes being forced closed. There was no airway compromise. Veins on his neck, arms and chest were distended. His wrist was painful with decreased range of movement and was very tender on palpation. Further history revealed significant weight loss in the preceding 8 weeks. He was comfortable at rest and had decreased air entry at the right base. Abdominal examination revealed a palpable liver edge and spleen.

INVESTIGATIONS

Chest X-ray: raised right hemidiaphragm.

Full blood count: microcytic anaemia.

CT of the chest (figures 2 and 3): 5 cm right-sided mediastinal mass compressing the superior vena cava, no significant pleural effusion, elevated right diaphragm suggestive of phrenic nerve paralysis on the right secondary to tumour.

Biopsy of wrist lesion: squamous cell carcinoma.

DIFFERENTIAL DIAGNOSIS

- ▶ Angio-oedema
- ▶ Allergic reaction
- ▶ Superior venacaval obstruction

TREATMENT

Intravenous dexamethasone.

Later that day the patient underwent endovascular (superior venacaval) stent insertion.

Figure 1 Chest X-ray showing a raised right hemidiaphragm.

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Figure 2 CT of the thorax (coronal view) displaying squamous cell carcinoma compressing the superior vena cava.

Figure 3 CT of the thorax (axial view) showing compression of the superior vena cava.

OUTCOME AND FOLLOW-UP

The patient died within a few weeks.

DISCUSSION

Bronchogenic cancer in the right upper lobe is the most common cause of superior vena cava obstruction. Other major reasons include thymoma, mediastinal lymphadenopathy, fibrosing mediastinitis and postradiation fibrosis. Lung cancer and lymphoma cause more than 85% of presentations.¹ More rarely it can be caused by isolated superior vena cava thrombosis or iatrogenically secondary to long-term central venous catheters.¹

This patient's tissue diagnosis was relatively straightforward given the location of a metastatic deposit in his wrist, but it is often less so. Radiologists can be understandably reluctant to intervene when the mass is invading the superior vena cava. Mediastinoscopy is a safe and effective means for establishing histological diagnosis after less invasive techniques have failed,² such as scalene node biopsy and bronchoscopy.³

The mainstay of symptom control is steroids, diuretics and endovascular stenting. In total occlusion secondary to thrombosis, thrombolysis can be considered.⁴ Treatment options include chemoradiation therapy in malignancy, whereas open surgical reconstruction is often used in non-malignant causes. Medical management (eg, hormonal treatment in breast cancer) is also a possibility.³

For symptomatic relief stenting is effective in 95% of cases (with relapse in 11% often due to stent thrombosis or migration). Chemotherapy relieves symptoms in 84% (with 17% relapse) and radiotherapy in 78% (with 19% relapse).^{1 5}

The prognosis of superior vena cava obstruction is related to the underlying cause. In malignancy treated with radiation, only 10% of these patients survive for 30 months after presentation. However, patients with superior vena cava syndrome due to a malignant cause survive only 30 days without radiation.⁴

Learning points

- ▶ Intermittent facial swelling is not always due to angio-oedema. This could be a presentation of more serious conditions such as superior vena cava obstruction.
- ▶ Patients presenting with cerebral oedema or respiratory compromise (secondary to airway or laryngeal oedema) will require urgent radiation therapy along with endovascular stenting.
- ▶ Prognosis is related to the underlying cause of SVC obstruction, however when caused by malignancy the outcome is usually poor.

Contributors CP and SKGP have both seen this case in the emergency department. CP has done the literature search, wrote the case report and obtained consent from the patient. SKGP has critically appraised the article and contributed to make necessary changes in the article.

Competing interests None.

Patient consent Obtained.

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