Trotter's triad

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Accepted 13 August 2020

DESCRIPTION

A 38-year-old woman, non-smoker, farmer by occupation, presented to otorhinolaryngology outpatient clinic with a 6-month history of progressive left neck swelling, severe left cheek pain, decreased hearing in the left ear and left-sided blood-stained nasal discharge, and history of nasal regurgitation and trismus since 4 months. There was no associated dysphagia, hoarseness, excessive coughing or dyspnoea. On physical examination, she had multiple hard, fixed, non-tender, left level II, III and V cervical lymphadenopathy, left serous otitis media (*figure 1A*), trismus and left palatal asymmetry (*figure 1B*). Trans-nasal endoscopic nasopharyngoscopy revealed a large infiltrative nasopharyngeal growth in the left side (*figure 1C*). An MRI scan demonstrated intracranial extension of the growth via foramen ovale (*figure 1D*, arrow). Biopsy showed Epstein barr virus (EBV) negative keratinising squamous cell carcinoma. A diagnosis of Trotter's syndrome secondary to nasopharyngeal carcinoma was made. The patient is currently receiving concurrent chemoradiotherapy and has partial relief of her symptoms after completion of induction chemotherapy with gemcitabine and cisplatin at 3-month follow-up.

Trotter's triad or sinus of Morgagni syndrome is a unique symptom complex associated with infiltrative malignant tumours invading the lateral wall of nasopharynx or a lesion arising in the region of sinus of Morgagni.¹ Pathognomonic features

Patient's perspective

I went to the hospital after I noticed a small swelling in my left neck which was progressively increasing for the past 6 months. Sooner I also developed severe left cheek pain, decreased hearing in the left ear and had many episodes of small amount of blood-stained nasal discharge from left side. It was difficult to open my mouth and I had regurgitation of liquids when I take orally and i was soo much scared and worried. The doctors immediately advised me to undergo an endoscopy and MRI scan. They found a mass inside my nose and attributed the symptoms are due to the mass. They performed biopsy and confirmed that I had cancer of nasopharynx and suggested me to undergo chemo-radiotherapy. After receiving three cycles of preliminary chemotherapy I feel great improvement in pain and general well-being. I still need to complete my entire treatment course.

Learning points

- ▶ Trotter's triad is a unique symptom complex associated with malignant tumours invading the lateral wall of nasopharynx.
- ▶ Pathognomonic features in sequential order include ipsilateral conductive hearing loss, trigeminal nerve neuralgia affecting the mandibular division and palatal asymmetry.
- ▶ This classical triad is an ominous harbinger of an occult malignancy that could prove fatal.

Figure 1 Trotter's triad in nasopharyngeal carcinoma; otoscopic image of the left ear showing the effusion in the middle ear (A), clinical image depicting palatal asymmetry (B), endoscopic image of left-sided nasopharyngeal tumour (C), and extensions of tumour intracranially via foramen ovale (arrow) and invasion of pterygoid muscles on MRI scan (D).

in sequential order include ipsilateral conductive hearing loss due to eustachian tube block, trigeminal nerve neuralgia affecting the mandibular division initially and anaesthesia later, secondary to its invasion in foramen ovale, and palatal asymmetry owing to ipsilateral direct infiltration of levator palatini muscles. This triad is an ominous harbinger of an occult malignancy that could prove fatal.² Trismus occurs late due to further invasion of pterygoid muscles.^{2,3} Although concurrent platinum-based chemoradiotherapy remains the standard of care for patients with locoregionally advanced nasopharyngeal carcinoma, induction chemotherapy with cisplatin and gemcitabine added to chemoradiotherapy significantly improves disease-free survival and overall survival, as compared with chemoradiotherapy alone.⁴

Contributors PS, AM, MG and ASC were involved in the clinical care of the patient, literature review and manuscript preparation. AM and MG drafted the manuscript. PS and ASC revised the manuscript. All authors contributed equally, read and approved the final manuscript.

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To cite: Sakthivel P, Mohamed A, Guwariya M, et al. *BMJ Case Rep* 2020;**13**:e237392. doi:10.1136/bcr-2020-237392

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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