An Unusual Differential for Preseptal Cellulitis

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Introduction

- Preseptal cellulitis is a fairly common presentation to eye casualty. While usually the diagnosis is straightforward, and the condition responds well to oral antibiotics, sometimes the underlying pathology can be misleading.

- The most important differential is orbital cellulitis which, if not treated promptly, can result in significant sight loss, and even death.

- However, other pathologies can also present as oedema or mass in the periocular region[1]. We present an interesting case of a rare diagnosis, which highlights the importance of detailed history taking and examination, as well rethinking the diagnosis in case of unusual features.

Case

- An 82 yo male was referred to eye casualty by his optometrist with suspected right preseptal cellulits. He reported a 3/52 hx of swelling over his brow and upper lid, with some initial tenderness which then resolved.
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- He had a background of chronic sinusitis and prostate cancer.

- O/E he was unable to spontaneously open his right eye due to lid oedema, but there was no erythema. There was a firm, minimally tender mass over his right brow, which seemed to extend into the upper orbit.

- On opening of the lids, the patient felt his VA was normal (45 letter RE, 50 letter LE) . There were no worrying features such as proptosis, limitation of eye movements, diplopia, or RAPD. Anterior segment was quiescent and conjunctiva white with no chemosis. IOP was normal. There was bilateral brunescent cataract, but dilated fundoscopy was normal. He was systemically well.

- Initial diagnosis was that of frontal mucocele invading the orbit. However, considering past medical history, inflammatory mass or malignancy could not be ruled out.

- Ophthalmology tried to refer the patient for same day urgent CT and ENT review, however it was felt that as the patient was systemically well, an outpatient scan and urgent rhinology review were sufficient. The patient was commenced on Co-amoxiclav 625 mg tds PO for 1 week, with worsening advice.

- Ophthalmologist had concerns regarding this case as no formal diagnosis had been made, and bloods indicated underlying infection (WBC 16.7, CRP 98, ESR 41). They contacted the patient by phone 2 days later to follow up.

- The patient was relieved as he had been unsuccessfully trying to contact his GP, and was reluctant to go to A&E due to fear of COVID. He reported feeling worse with loss of appetite, general malaise, and numbness down the right side of his face. He had worsening oedema and pain around his eye and brow. He was advised to attend A&E, and admission under ENT was arranged.

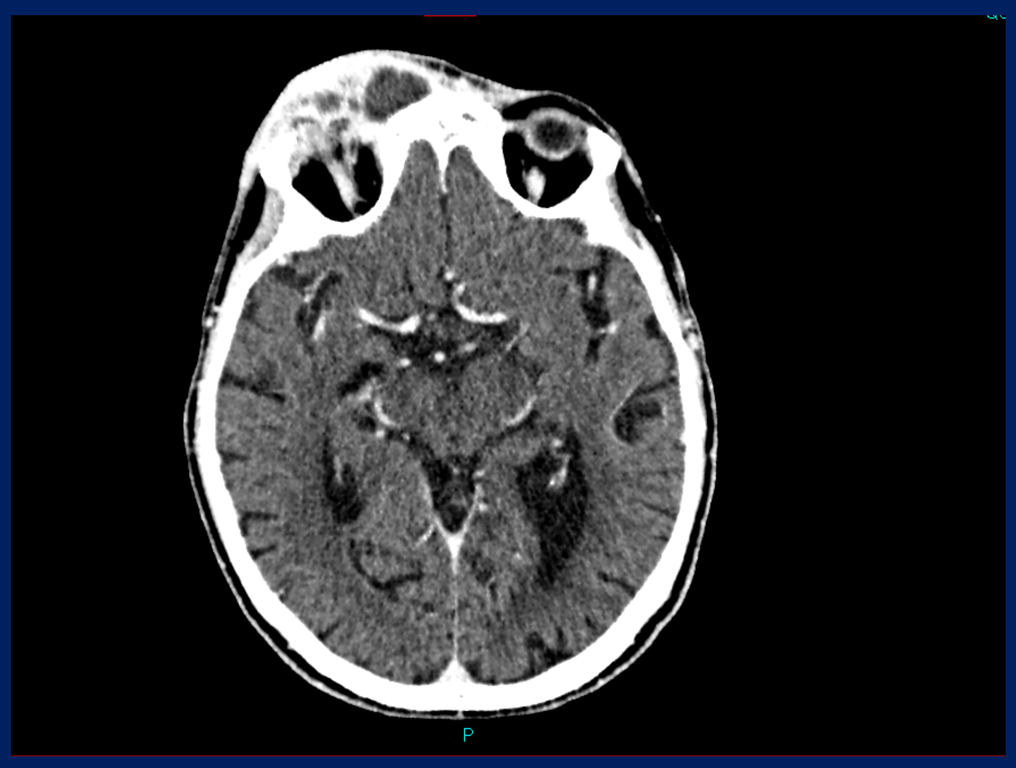

FIGURE 1: CT Head with contrast. 4.3 x 2.3 x 2.9cm multiloculated abscess overlying medial right orbit and frontal sinus with underlying destruction of the anterior wall of the right frontal sinus. Chronic inflammatory changes consistent with pansinusitis. Periorbital cellulitis and thickening of the right superior oblique muscle but no clear orbital abscess. Appearances are consistent with 'Pott puffy tumour'

- The patient was underwent same day external incision and drainage, anterior polypectomy, and functional endoscopic sinus surgery. Microbiology confirmed streptococcus intermedis and the patient required IV Cefotaxime and Flucloxacillin.

Discussion Points

- Pott puffy tumor is a non-neoplastic complication of acute sinusitis (usually frontal), characterised by subgaleal collection, subperiosteal abscess, and osteomyelitis[2]. More rarely, it can be caused by trauma[3], intranasal cocaine and methamphetamine abuse, and craniotomy.

- Symptoms include frontal scalp swelling, headache, fever, nasal drainage, photophobia, and frontal sinus tenderness[3].

- This case highlights the importance of giving patients clear worsening advice, particularly in the COVID era when patients might be reluctant to attend hospital.

- In cases where there is clinical doubt, keep in mind a wide differential, and consider surrounding structures- particularly sinuses[3]. In cases of a mass, have a low threshold for imaging[2] and subspecialty referral. If you are worried, or you are unable to arrange appropriate review, escalate to a senior.

References

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