



# Septic cavernous sinus thrombosis: potentially fatal conjunctival hyperemia

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A 54-year-old man was referred to our hospital with a several-week history of left ophthalmalgia. He was previously healthy apart from a 6-month history of gingivalgia. He presented with left-sided periorbital edema, injection, chemosis, proptosis, and decreased ocular movement

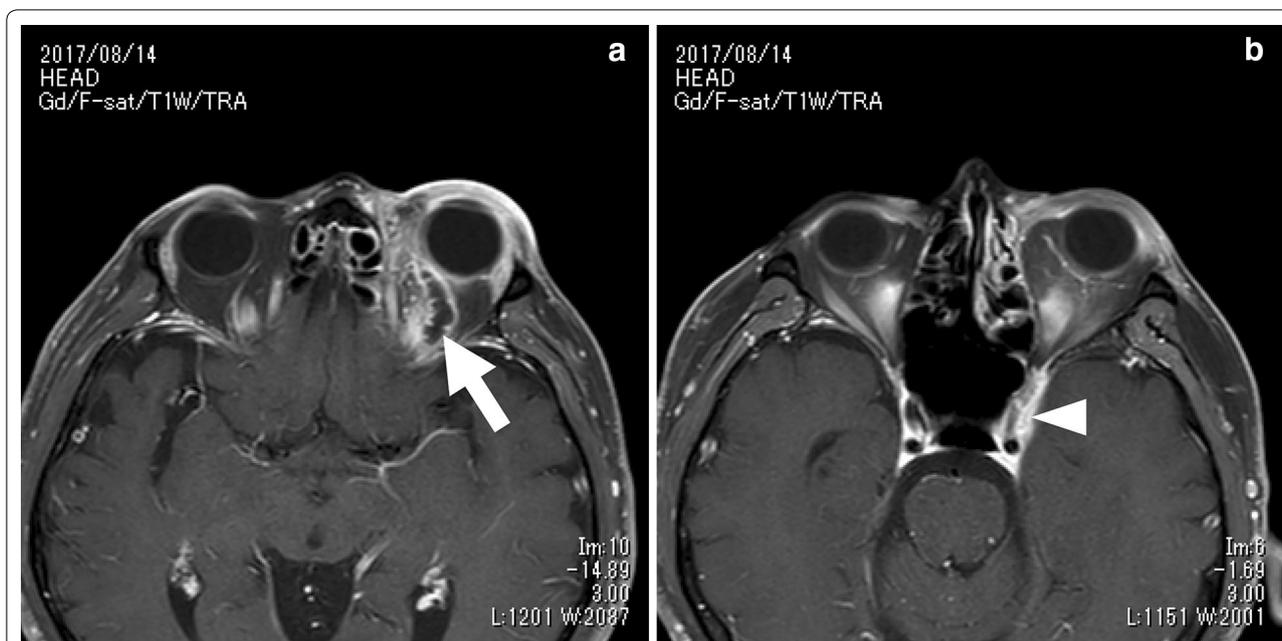
(Fig. 1) following high fever, chills, and impaired consciousness. Contrast-enhanced head computed tomography (CT) and magnetic resonance imaging (MRI) revealed poor enhancement in the dilated left superior ophthalmic vein (Fig. 2a, b). The patient was diagnosed



**Fig. 1** Photographs of the patient with septic cavernous sinus thrombosis. The patient presented with periorbital edema, injection, chemosis, proptosis, and decreased ocular movement in his left eye

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**Fig. 2** Contrast-enhanced magnetic resonance images showing **a** poor contrast enhancement in the dilated left superior ophthalmic vein (arrow) and **b** heterogeneous enhancement in the cavernous sinus (arrowhead)

with septic cavernous sinus thrombosis (CST), which we treated using broad-spectrum antibiotics and anti-coagulants. We attributed the CST to periodontitis considering the contaminated oral cavity. Clinical symptoms improved after treatment.

Septic CST is an uncommon, potentially lethal infection associated with bacteria such as *Staphylococcus aureus*. Symptoms of CST include fever, ptosis, proptosis, chemosis, cranial nerve palsy, headache, periorbital swelling, and papilledema most of which were observed in the current case.

Therapy generally comprises a combination of antibiotics, sometimes empirically, and anticoagulants. Surgical drainage may be required in selected cases. Prompt diagnosis and an antibiotic-based therapy are warranted to reduce morbidity and mortality.

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#### Author contribution

TF contributed to clinical management of the study and writing of the manuscript, with substantial contribution to the discussion section. YS contributed to clinical management of the study and developing the discussion section.

#### Compliance with ethical standards

#### Conflicts of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest. The patient gave his permission for the photographs of his face to be used.

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