Isolated superior ophthalmic vein thrombosis in a patient with prostate cancer

Aqeel Alameer,[1] Avinash Kumar Kanodia,[1] Chary Duraikannu,[1] Priya Nair[2]

[1]Radiology, Ninewells Hospital and Medical School, Dundee, UK
[2]Medicine, Ninewells Hospital and Medical School, Dundee, UK

Correspondence to
Dr Avinash Kumar Kanodia; avinash.kanodia@nhs.scot

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DESCRIPTION

A male patient in mid-80s presented to the emergency department with a 2-week history of headache and visual blurring. He had a medical history of chronic obstructive pulmonary disease, osteoporotic vertebral fractures and node positive metastatic prostate cancer. Medications included luteinising hormone-releasing hormone (LHRH) analogue injections. Clinical examination was unremarkable with no focal neurological signs or visual fields abnormalities. Abnormal laboratory investigations included low haemoglobin 118 g/L (130–180 g/L), slightly elevated prothrombin time 14.6 s (9.5–14 s), elevated plasma viscosity 2.09 mPa.s. (1.5–1.72 mPa.s.) and slightly low sodium 130 mmol/L (133–146 mmol/L). Non-contrast CT head (figure 1) showed a dilated hyperdense left superior ophthalmic vein and CT venogram confirmed left superior ophthalmic vein thrombosis (SOVT). No radiologically discernible cause was found and the rest of the venous sinuses were patent. Patient was referred to ophthalmology services which found no abnormality on further ophthalmological examination and were not able to ascribe a cause for the patient's condition. Follow-up CT scan showed resolution of SOVT and return of the vein to normal appearances (figure 2).

SOVT is extremely rare and is usually caused by orbital infection/inflammation, facial trauma, caroticocavernous fistula and hypercoagulable states.[1 2] SOVT clinically presents as painful proptosis, conjunctival congestion, ophthalmoplegia and visual disturbance which can progress to visual loss. Previous reports have shown an association of this condition with cancer due to hypercoagulable state but it has not been reported in patients with prostate cancer.[3] Another potential explanation is an adverse effect of LHRH analogue injections which have been shown to be associated with venous thromboembolism.[4] Our case shows an isolated left SOVT in a patient with metastatic prostate cancer; differential included a thrombosed varix of the superior ophthalmic vein. However, review of previous imaging and return to normal pointed more towards SOVT rather than thrombosed varix.

Isolated involvement of superior ophthalmic vein can often be overlooked although it is important to detect it, as it would point towards an underlying hypercoagulable state that may have clinical manifestations elsewhere in the body, that may need specific treatment. This case is an important reminder of this condition.

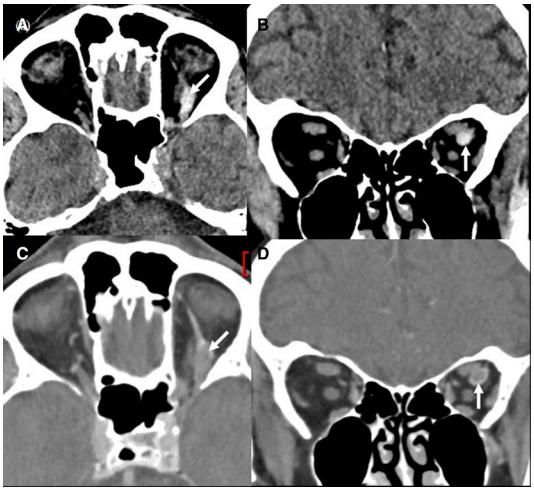

Figure 1 Non-contrast CT head (A, B) and CT angiogram (C, D), show dilated and dense superior ophthalmic vein (arrows) on left side in (A, B) and as a prominent filling defect (C, D).

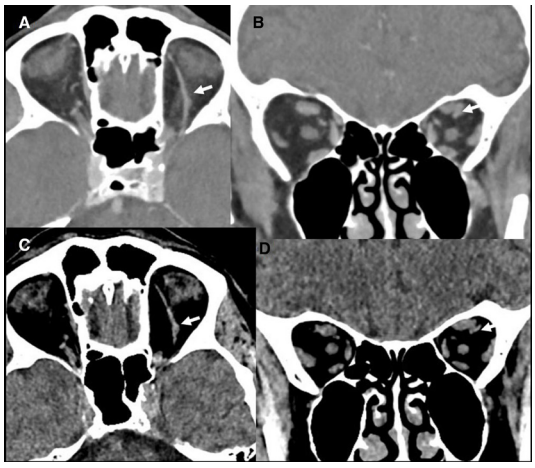

Figure 2 Follow-up scan. Non-contrast CT head (A, B) and CT angiogram (C, D), show a normal superior ophthalmic vein (arrows) on left side in (A, B) and (C, D).

Learning points

- Superior ophthalmic vein thrombosis is a rare but important cause of visual disturbance which should be kept in mind while reviewing scans.
- Malignancy predisposes to venous thrombosis due to the hypercoagulable state. In such cases, it is important to consider other sites of possible thrombosis other than the pelvis and lower limbs.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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