CASE REPORT

Lateral rectus palsy following coronary angiography and percutaneous coronary intervention

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SUMMARY

We present a rare case of unilateral lateral rectus palsy following an elective coronary angiography and percutaneous coronary intervention in a 78-year-old woman. Ophthalmoplegia following coronary angiography is extremely rare and this is the first case of a unilateral lateral rectus palsy following the procedure.

BACKGROUND

We believe this is the first reported case of a unilateral lateral rectus palsy following coronary angiography and percutaneous coronary intervention. We would like to share this case with other healthcare professionals, especially professionals who perform these procedures, as awareness of such a complication is essential in the consent as well as further management.

CASE PRESENTATION

A 78-year-old woman was referred to the ophthalmology service with diplopia which manifested immediately following an elective coronary angiogram and percutaneous coronary intervention under general anaesthesia. She did not report diplopia prior to the procedure and her only ocular symptom was a subconjunctival haemorrhage in the left eye. She is an ex-smoker and takes aspirin, clopidogrel, atorvastatin, losartan and prednisolone with amlodipine added following the event. Her echocardiography previously showed good function.

Preprocedure blood pressure was 167/99 mm Hg. In total, 260 mL of Niopam 340 was used and intravenous heparin was given twice during the procedure, 2500 iu before and 2000 iu at the end. During the procedure, her blood pressure was found to be raised at 173/76 mm Hg. When she recovered from anaesthesia, she was confused with a blood pressure of 206/112 mm Hg.

INVESTIGATIONS

An urgent CT scan of the head was performed and was reported to be normal.

DIFFERENTIAL DIAGNOSIS

Differential diagnoses were a cerebrovascular accident, a transient ischaemic event or a contrast-induced neurotoxicity.

TREATMENT

The patient was given intravenous fluids and oral intake was encouraged. Amlodipine 5 mg was added to her treatment, and the following day she was orientated in time, place and person with a blood pressure of 121/60 mm Hg.

However, she reported horizontal diplopia and was thus referred to ophthalmology. Ocular examination revealed left lateral rectus palsy (figure 1). Visual acuity of 6/9 Snellen in both eyes, no ptosis, equal pupils with no afferent defect, no other ophthalmoplegia, normal funduscopy and no other cranial nerve palsies were observed.

OUTCOME AND FOLLOW-UP

On review 2 weeks later, the left lateral rectus palsy persisted with no signs of variability. She required prisms as she experienced diplopia in the primary position as well. Given the timing of events and normal radiological findings, it was concluded that her left lateral rectus palsy was likely to be associated with coronary angiography and percutaneous coronary intervention.

DISCUSSION

Strokes have been reported following coronary angiography and percutaneous coronary intervention to an incidence of 0.38%.¹ Therefore, it is very plausible that our patient suffered an ischaemic event to the left lateral rectus. However, a literature search confirmed that this is the first reported case of a unilateral lateral rectus palsy following coronary angiography and percutaneous coronary intervention. Contrast-induced neurotoxicity is a rare but reported complication following coronary angiography. This complication, if it were to occur, would present with confusion and rarely ophthalmoplegia.² Although our patient did experience confusion, it resolved with hydration as would most cases of contrast-induced neurotoxicity.^{2 3} The

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Figure 1 Patient in primary position (centre) with slight left esotropia, and in right and left gaze showing limitation in abduction of the left eye.

ophthalmoplegia, on the other hand, persisted with no resolution on review 2 weeks later. Until now, the only other neuro-ophthalmic case that has been reported includes Parinaud syndrome, oculomotor nerve palsy⁴ and a case of bilateral ophthalmoplegia.³ We wish to report this rare complication following coronary angiography and percutaneous coronary intervention as diplopia is a very debilitating condition to experience, especially when not expected following an elective procedure. We recommend that clinicians comment on this rare complication during the consent of this procedure as the implications are significant to patients although rare.

Learning points

- ▶ Unilateral lateral rectus palsy can occur following a coronary angiography and percutaneous coronary intervention.
- ▶ Other causes such as a cerebrovascular accident and contrast-induced neurotoxicity need to be investigated and treated as these may cause similar findings.
- ▶ Patients should be aware of possible ophthalmoplegia following this procedure as diplopia is very distressing and has a significant impact on daily activities such as driving especially.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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