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Painless blurred vision

N Karia, P Watts

A 76-year-old normotensive woman with no previous ocular history or history of trauma, presented with one day of painless blurred vision in the right eye. Together with digoxin and isosorbide mononitrate she was also on warfarin, 3 mg a day, which had been started eight months previously as systemic anticoagulation for atrial fibrillation. She had no other significant medical history. The figure shows the anterior segment appearance of the right eye. The left eye was normal.

Figure Anterior segment of right eye

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Questions

- 1 What does the figure show ?
- 2 Given the above ophthalmic and medical history, do you think that the condition shown in the figure occurs commonly or infrequently ?
- 3 What should be included in this patient's medical management ? Should her warfarin be continued ?
- 4 Suggest her ophthalmic management.

Answers

QUESTION 1

A hyphaema (bleeding into the anterior chamber of the eye). At examination the right eye showed a stream of red blood cells coming from behind the pupillary margin at 12 o'clock and settling inferiorly to form a hyphaema. Importantly the cornea was clear, the iris showed no abnormal vasculature and the intra-ocular pressure and drainage angle of the eye were normal.

QUESTION 2

Spontaneous hyphaema in patients on systemic anticoagulation with normal eyes without pre-existing pathology is rare, with only one other documented case in the literature to our knowledge.¹ However, it is well documented in patients with certain pre-existing ocular pathology such as iris neovascularisation, iris vascular tufts and intraocular lenses fixated to the iris.²

QUESTION 3

The patient's blood pressure and full blood count were checked and found to be normal. Her international normalised ratio (INR) was 3.3. The value of prophylactic warfarin anticoagulation for the prevention of stroke in elderly patients with high risk factors such as atrial fibrillation is recognised.³ The SPAF (stroke prevention in atrial fibrillation) III trial has confirmed that maintaining the INR between 2 and 4 is an effective level of anticoagulation for this purpose.⁴ The patient's INR was within the therapeutic range and her warfarin was not stopped.

QUESTION 4

She was treated conservatively with dexamethasone eye drops and her warfarin was continued at the same dose. Mydriatics were

not used. Review the next day showed that the active bleeding had stopped spontaneously and review two days later showed that the hyphaema had resolved completely without complication. The patient was asymptomatic and was discharged.

Discussion

Koehler and Sholiton¹ describe a patient who was on warfarin 7.5 mg a day for previous aortic and mitral valve replacement and who presented on two separate occasions with painless blurred vision, first in one eye and then the other. On each occasion she was found to have active bleeding coming from behind the iris and on each occasion she was treated with cycloplegic drops (homatropine) without altering the dose of warfarin and leading to spontaneous cessation of the bleeding and resorption of the red blood cells from the anterior chamber.

In conclusion, an increased risk of haemorrhage should be anticipated in patients on warfarin. However, with regards to spontaneous hyphaema (which is uncommon), provided that the INR is within target range, spontaneous resolution of the haemorrhage can be expected without complication and without the need for stopping or reducing the dose of warfarin in a group of patients who may otherwise be at high risk from thromboembolism. Cycloplegic and steroid drops may be used but it is uncertain whether they alter the natural history.

Final diagnosis

Spontaneous hyphaema in a patient on warfarin therapy.

Keywords: hyphaema; warfarin; anticoagulation

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