



Case notes from diabetes eye screening

A 69-year-old woman with type 2 diabetes, first diagnosed in 2006, has been screened annually by the City, Hackney, Redbridge, Barking & Dagenham Diabetes Eye Screening Programme. Very early background retinopathy (a few microaneurysms and blot haemorrhages) was first noted in 2009 in her right eye, with no evident retinopathy detected in her left eye (Figure 1).

The patient attended for her annual screening appointment in April 2013 and a markedly different retinal appearance was noted in both eyes (Figure 2).

An initial review of the images showed multiple large blot haemorrhages across both fundi (at a level that would meet the new grading criteria for pre-proliferative retinopathy – R2) and some associated cotton-wool spots. However, the rapid progression of the retinal changes was a major cause for concern and a careful study of the blots revealed that many of them had pale whitish ‘fluffy’ centres.

The textbooks were consulted and the lesions looked like Roth’s spots. The clinical lead concurred. We sent the images to a virtual clinic run by a friendly local ophthalmologist who confirmed that they were highly likely to be Roth’s spots. This significantly changed the grading and final management of the case from that associated with pre-proliferative retinopathy.

Roth’s spots

Roth’s spots are retinal haemorrhages with white or pale centres composed of coagulated fibrin. They are usually caused by an immune complex mediated vasculitis. They may be observed in bacterial endocarditis, leukaemia, anaemias and, rarely, in HIV retinopathy.

Our clinical lead, a diabetologist and general physician felt that, in view of the systemic implications of the retinal appearance, this patient’s condition should be discussed with her GP. He

Peter Mitchell gives details of an unusual case found by a diabetes screening service which resulted in a patient’s life being saved



Figure 1

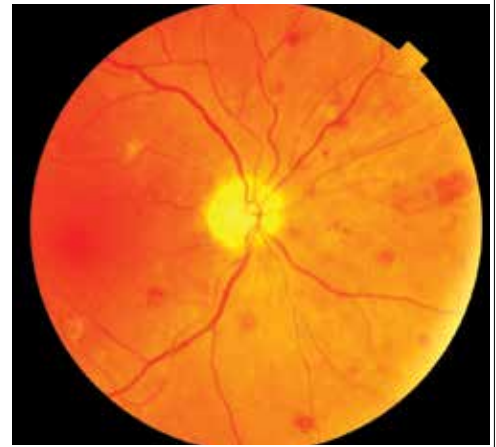


Figure 2

phoned the GP to discuss further investigation and the following letter was sent to the GP.

‘Dear Dr —, There were a few microaneurysms only seen in her retinae last year. This year the retinal images are completely different with extensive blot haemorrhages and Roth’s spots. These lesions raise the possibility of leukaemia, anaemia or bacterial endocarditis. This needs further investigation. Please consider a referral to the General Medical Clinic to look into this unexpected problem’

Outcome

The GP decided to take this forward and ordered some blood tests. The results showed a low haemoglobin level of 54g/litre (normal readings are 120-150g/litre) due to a moderate microcytic hypochromic anaemia. Her GP sent her to the gastroenterology department at the Homerton University Hospital in London to determine the cause of the anaemia. Upper gastrointestinal endoscopy was performed and a 4cm gastric ulcer was discovered that was actively bleeding. The patient required a blood

transfusion. The ulcer has since been treated and her anaemia has improved with iron supplementation.

She was recalled for a surveillance screening episode in September 2013 and the digital images showed that all the large blot haemorrhages and Roth’s spots had resolved, leaving bilateral early background retinopathy.

I was fortunate enough to be in the clinic when she returned for her screening and was able to discuss her case with her. She said she was told that had the ulcer gone undetected for a further four weeks she would have died. She was very grateful to the service for the prompt action taken and was very pleased to hear that the changes at the back of her eyes had returned to something resembling that of a year earlier. ●

● **Optician** will be publishing a major CET series on diabetes throughout next year.

● **Peter Mitchell** is clinical manager and senior optometrist for City, Hackney, Redbridge, Barking & Dagenham Diabetes Eye Screening Programme