Clinical



Name the condition





Bill Harvey discusses last week's condition (09.07.10)

he fundus images (Figure 1) do not immediately look out of the ordinary. Until, that is, one looks carefully and notices the presence of cilioretinal arteries in each eye. These are vessels that perfuse the retina but are distinct from the central retinal artery in that they arise from the posterior ciliary arterial system. The vessels are easily identified as they emerge from the disc close to its edge, usually with a characteristic 'hockey stick' turning back. The vessels run towards the macula and perfuse retinal tissue. They are, however, a congenital variation only found in around 20 to 30 per cent of humans.



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The blood supply of the retina is prone to atheromatous blockages. The route from aorta to common carotid to internal carotid to ophthalmic artery is direct and allows calcific material from the heart valve to lodge, typically, at bifurcations close to or within the eye. Any occlusion up to the ophthalmic artery will affect both the retinal and ciliary arteries. However, the posterior ciliary and retinal arteries are separate branches of the ophthalmic and therefore occlusion tends to affect one or the other but much more rarely both.

Figure 2 shows a patient who has suffered a sudden and dramatic loss of vision due to a central retinal artery occlusion (CRAO). The papillomacular area is still perfused as this patient has a cilioretinal artery which is not affected by the blockage. I was taught many years ago that in these patients the cilioretinal artery is able to maintain some macular function which would normally be lost in a complete CRAO. I have only ever seen two such cases and both patients reported no useful residual vision contrary to the theory. I would be interested to hear of any reader's experiences about cilioretinal artery spared vision.

Much rarer, but well worth remembering, is the converse of this where the cilioretinal artery itself is occluded while the central retinal artery remains intact. The appearance would almost be the negative of Figure 2, with a pale papillomacular region and well perfused retinal elsewhere. All arterial occlusions should be treated as emergencies, but the underlying cause needs to be found to allow best medical management. Ciliary vessels are of a reduced lumen diameter that makes them more prone to blockage by inflammatory cells as would be the case with a severe arteritis. Because the possibility of an inflammatory origin for any cilioretinal artery occlusion cannot be ruled out, this should always be treated as an emergency requiring immediate hospital referral.

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