Comment

Although muscular fasciuli have been noted passing from the lateral rectus muscle and inserting into the inferior tarsal plate, the lateral wall of the orbit, to the inferior rectus or even the medial rectus, variation in orbital connective tissue has received less attention. Only quite recently has the role of connective tissue in the orbital cavity begun to be more fully appreciated histologically such that it is now being considered as an important accessory mechanism involved in eye movement. Its arrangement has also been shown to vary between individuals and bilaterally. As Koornneef observed, orbital connective tissue 'plays an important, yet to be unravelled, role when normal eye movements are performed'. Connective tissue attachments between lateral rectus muscle and the lateral orbital wall have been described. Whitnall also described how 'by means of the connections of their fascial sheaths ... the lateral rectus draws the corresponding commissure slightly backwards and also, when describing the relation between both the medial and lateral recti and their respective check ligaments, commented that the 'recession of parts ... seen on strong movements of the eyeball' was a product of the muscle 'attachments to the commissure'. The fibrous slip described here appears to be related to that mechanism. Although a role in outer canthus retraction is evident, a movement stabilising role whereby the slip might tether the lateral rectus to its lateral relations could also be postulated.


Multiple vortex vein varices masquerading as choroidal secondaries

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A woman was investigated for suspected choroidal secondaries because of two smooth masses seen in her right fundus. It was subsequently noted that the size of the masses varied with changes in posture and position of gaze, and they were shown to be vortex vein varices. This case highlights the importance of considering vortex vein varices in the differential diagnosis of fundal masses.

Case report

A 71-year-old woman presented to the ophthalmic casualty department with sudden onset of floaters and photopsia in her right eye. She had no previous significant ocular history and was otherwise fit and well. On examination it was noted that she had a posterior vitreous detachment, accounting for her symptoms. She also had subretinal masses at 12 o'clock and 2 o'clock (Fig 1A and B). Each was about two disc diameters across and was dome shaped. There was no change in overlying retinal detail nor any associated retinal detachment or subretinal effusion. The vitreous was quiet and there was no anterior chamber activity. These masses had not been seen 1 month earlier when the fundus had been examined routinely after a left vitreous detachment.

Figure 1 Dissection of a left orbital cavity, viewed from the left anterior aspect, showing a fibrous strip (with marker beneath) arising from the belly of the left lateral rectus muscle and inserting behind the outer canthus.
Multiple vortex vein varices masquerading as choroidal secondaries

It was thought that the masses were choroidal secondaries and she was investigated for a primary lesion. A systemic examination was normal and breast examination revealed no masses. Blood count and film, electrolytes, and liver function tests were normal as was a chest x ray. In the time taken to complete the investigations there was no change in the size or appearance of the masses.

Further examination showed that the masses were variably present in different positions of gaze and posture. While sitting the masses were more difficult to demonstrate than on lying down and up gaze made them most prominent. Examination of the periphery with gaze in the primary position showed the masses flattened completely. The variability was confirmed by use of the Goldmann three mirror lens whereby the masses could be made to rise and flatten by gently varying the pressure exerted by the lens. B scan ultrasound demonstrated the masses when the patient was supine but not when she was upright (Fig 2A and B). The masses were located at the apices of vortex vein swirls and a diagnosis of multiple vortex vein varices was made.

Comment
Most authors have demonstrated the pressure dependent nature of varices by posture changes or the valsalva manoeuvre. This, however, makes examination difficult. We found that the use of the Goldmann three mirror lens gave a good view of the mid periphery where the varices were situated and allowed us to vary the ocular pressures simply. The pressure exerted on the lens was no greater than that during a normal three mirror examination and the manoeuvre does not increase the risk of possible tumour spread.

All previously reported cases of vortex vein varices have been solitary and there is one report of bilateral single varices. This is the first report of multiple varices. A vortex vein varix has been mistaken for a primary choroidal melanoma and this case indicates that they must also be considered in the differential diagnosis of choroidal secondaries. Unnecessary investigation of varices can be avoided by simple slit-lamp examination with the Goldmann three mirror lens.
