DOUBLE PRE-RETINAL VASCULAR LOOP*†

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A CLINICAL entity not infrequently seen on routine ophthalmoscopy is a persistent hyaloid artery. Similar in appearance, but far less common and distinct from this, is the anomaly of a pre-retinal loop, of which this report describes a rare variant.

Case Report

A 21-year-old male African Negro was admitted to hospital with pneumonia. Routine examination of the right fundus revealed a prominent vascular loop arising from the nasal aspect of the physiological cup at about 5 o'clock (Figure). It was superior to the inferior nasal vein and projected about 4 dioptres into the vitreous. One limb ran parallel to the visual axis and then curved superiorly; after twisting anticlockwise through 180°, it formed a second limb which passed inferiorly to the first and then returned to the disc running parallel to the first limb. The loop swayed with ocular movement and cast a shadow on the retina. The relatively dark colour and large calibre of the vessel indicated its probable venous nature.

FIGURE.—Diagram of double pre-retinal vascular loop.

A second less prominent loop was situated adjacent and posterior to the main loop. Its origin was difficult to see as it was partly obscured by the main loop, but it appeared to arise from the rim of the physiological cup at about 3 o'clock; it projected only slightly into the vitreous and, after spiralling, returned to the disc. It had the same colour and calibre as the larger loop. There was no disturbance of vision.

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Discussion

The first description of a vascular loop was that of Liebreich (1871). Sporadic reports have since appeared, the most recent being those of Bisland (1953). Liebreich mistakenly believed the loop to be a communication between a persistent hyaloid artery and a persistent hyaloid vein. This is clearly incorrect as there is no such vessel as a persistent hyaloid vein. Thus, although the hyaloid artery extends from the retina to supply the back of the lens, the venous drainage of this region runs into the veins of the iris. The true nature of this anomaly was defined by Goldstein and Wexler (1929), who demonstrated by serial sections that the loops originated from, and terminated in, a branch of a central retinal vessel.

Vision in these cases is usually unaffected unless the loop is large enough to fall within the visual axis. Associated anomalies are rare and include myopia, hypermetropia, and astigmatism. Vascular loops may be venous or arterial (Duke-Elder, 1964) and may occur in various forms, ranging from a single loop to a series of spirals. Both limbs may emanate from the region of the disc or the loop may arise from the region of the disc and terminate in a vessel on the retina. They are usually single, uniocular, and arterial. Three cases have been reported of an arterial loop associated with an ipsilateral venous loop (Fehr, 1902; Nomura, 1914; Tillé, 1933).

Bisland (1953) reviewed 58 cases from the literature, and added six of his own, which constitutes the largest single series (two bilateral pre-retinal arteries, two unilateral arterial loops, one venous loop, and one loop which did not project into the vitreous but remained confined to the plane of the papilla).

Summary

A case is reported of two pre-retinal venous loops in one eye.

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