Retinoschisis – acquired degenerative

DESCRIPTION

Retinoschisis is a splitting within the sensory retina, and may occur in age-related degenerative and X-linked recessive forms (see next week: Retinoschisis – Juvenile X-Linked). Degenerative retinoschisis is an acquired condition involving a splitting of the sensory retina, usually within the plexiform layers, creating a large 'cyst'. Degenerative retinoschisis initially occurs in the far retinal periphery, beginning with an area of microcystoid degeneration, a degenerative change adjacent to the ora serrata that is common to all adult eyes. A secondary retinoschisis may present in other ocular diseases such as diabetic retinopathy and retinopathy of prematurity.

SYMPTOMS

Often the condition is asymptomatic. However, visual acuity may be abnormal if the retinoschisis or an associated retinal detachment involves the macula.

SIGNS

Degenerative retinoschisis is most commonly observed in the inferior temporal quadrant of the fundus. The schisis may assume a smooth, dome-shaped appearance (bullous) of transparent retina that has a discrete border and is immobile. The inner surface of the elevated zone may manifest a frosted or snowflake-like appearance, and blood vessels on the inner layer may be white and sheathed. Holes can develop in both inner and outer layers, creating a risk for secondary retinal detachment. Circumferential and, rarely, posterior progression can occur.

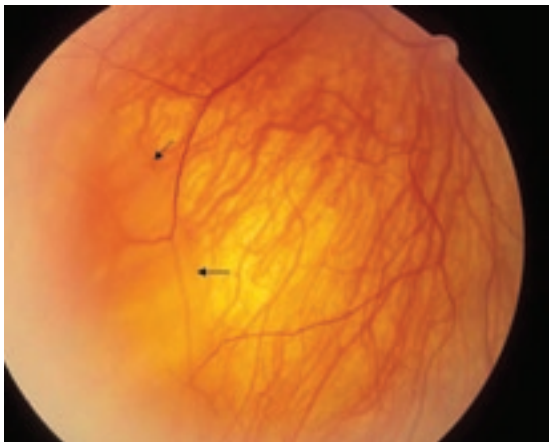
When bilateral, as it usually is, the presentation is typically symmetrical between the eyes. The condition may be slowly progressive in some cases.

PREVALENCE

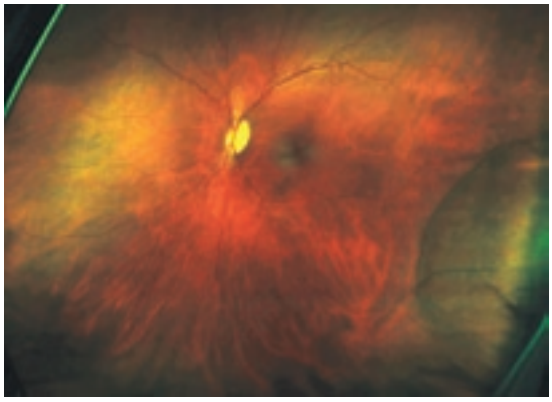
Degenerative retinoschisis is seen in about 5-7 per cent of the adult population and is usually associated with hypermetropia.

SIGNIFICANCE

Since the inner retinal layer becomes elevated, retinoschisis may mimic a retinal detachment. Rarely, degenerative retinoschisis can lead to retinal detachment. Retinoschisis has been reported in approximately 2.5 per cent of patients with retinal detachment.



Retinoschisis, with arrows at the edge of the bullous area. There is a generally thinned retinal pigment epithelium and evident choroidal vasculature



Retinoschisis in a 59-year-old asymptomatic hyperopic patient. The ultra-wide field (200°) image is via the Optos Optomap scanning laser system (courtesy J Pilbeam, Loughborough, UK)

DIFFERENTIAL DIAGNOSIS

X-linked juvenile retinoschisis; Retinal detachment – rhegmatogenous.

The following features of a degenerative retinoschisis may assist in differentiating it from a retinal detachment:

- Discrete border to the lesion, with a smooth surface
- Immobile during eye movements
- No associated pigment in the vitreous
- No changes in the retinal pigment epithelium
- Usually asymptomatic, with no floaters, photopsia, or 'curtain' effects
- Often bilateral
- Can be associated with a visual field defect.

MANAGEMENT

Additional investigations

The work-up for retinoschisis involves ruling out the presence of a retinal detachment, or an outer layer retinal hole using indirect ophthalmoscopy with scleral depression. If the retinoschisis extends posteriorly, beyond the equator, an absolute visual field defect may be found (60° visual field test).

Advice

Most cases of retinoschisis are innocuous and do not affect central vision or require treatment. They usually remain stable for years.

Laser surgery

Laser treatment should be considered if the retinoschisis is progressive and threatens the macula.

Incisional surgery

Surgery is indicated if there is a risk of retinal detachment or if a retinal detachment has occurred.

Review

Routine review is warranted at six to 24-month intervals, depending upon the lesion size, the proximity to the macula and the presence or absence of symptoms. The patient should be advised to return urgently if they experience retinal detachment symptoms, such as increased floaters or flashing lights or the presence of a curtain or shadow in their field of vision.

The full series of these articles is available in the book *Posterior Eye Disease and Glaucoma A-Z* by Bruce AS, O'Day J, McKay D and Swann P. £39.99. For further information click on the Bookstore at **opticianonline.net**

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