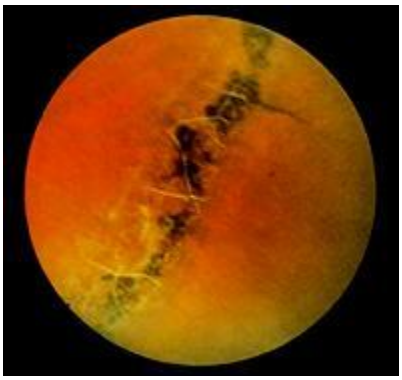
VISION SERVICES

DR. SAMUEL B. NISBETT, MD, MB, BS, FACS, FRCSC
COMPREHENSIVE OPHTHALMOLOGIST

Unit B4 -The Sands Complex: PO Box 2434, Basseterre, St Kitts, W.I
Office: (869)465-0152; Cell: (869)762-1954; Fax: (869)465-0153
E-MAIL: drnisbett@sknvision.com; WEB: http://www.sknvision.com

LATTICE DEGENERATION



When our far peripheral retina, which is responsible for our extreme side vision, becomes weak and thin, its most common form is called “lattice degeneration.” This condition occurs in 8 to 11 percent of the normal population. It affects both eyes in 30-50% of patients who have the condition.

The fibrosed vessels within the atrophied retina form a “lattice” pattern, hence its name. Sometimes it is accompanied by retinal pigment epithelium (RPE) hyperplasia (an increase in cells), which gives the lesions a pigmented appearance. Some 18 to 42 percent of the population also have holes present in the affected area. Sometimes they are large enough to encompass the entire lattice lesion.

Lattice degeneration is characterized by oval or linear patches of withered retina.

In rare cases, the lattice degeneration is also accompanied by tractional tears at the ends or posterior margins of lesions.

Lattice degeneration is more prevalent when a person is over twenty years of age.

Diagnosis

Many people are not aware that they have lattice degeneration. Unless they also have retinal tears, detachments, or traction, photopsias (noticing flashing lights), floaters, or visual disturbances, they often do not notice it. Sometimes they notice blurriness in their distant vision.

Diagnosis is generally based on client history and a clinical examination, including a slit lamp and a dilated direct and indirect ophthalmic examination with sclera depression.

Causes

The cause is unknown but it is more prevalent in people who are near-sighted (myopic). It tends to run in families, so it may have a hereditary component.

There are some theories as to its cause. For example, it may be that the affected area was not receiving sufficient nutrient-carrying blood and that caused the degeneration, or that there weren't enough capillaries in the area to transport the blood to the cells. When blood capillaries stiffen, and fill with accumulations of tissue, they give the lattice degeneration its marked fibrous appearance.

Prognosis

The prognosis for lattice degeneration in itself is fairly positive. Most patients will have lesions that are completely stable or that only slowly progress further. Only patients that develop retinal tears, detachments, and subsequent vitreoretinal traction will require treatment.

The main concern with lattice degeneration is that in some cases it can progress to rhegmatogenous retinal detachment. This happens in 2% of patients. This can lead to permanent vision loss and blindness.

Retinal detachment occurs when subretinal fluid accumulates in the space between the neurosensory retina and the underlying retinal pigment epithelium (RPE). The term "rhegmatogenous" means a discontinuity or a break. So, a rhegmatogenous retinal detachment (RRD) occurs when a tear in the retina leads to fluid accumulation. This is the most common type of retinal detachment.

Treatment

There is no conventional way to prevent this condition from occurring. Generally, it is best to leave uncomplicated lattice degeneration untreated if it does not interfere with visual function and does not constitute a high risk for future development of retinal detachment.

However, because retinal detachment is painless, the patient should be educated as to the warning signs of retinal detachment before it occurs or has advanced. Symptoms can include:

- The sudden appearance of lots of floaters — small bits of debris that float before your eyes and look like spots, hairs or strings
- Sudden flashes of light within the eye (particularly accompanied by new floaters and/or any change in vision)
- The casting of a shadow or curtain over a portion of the visual field

If any of these signs appear, the patient needs to seek urgent medical attention because retinal detachment can lead to a permanent loss of vision.

Lattice degeneration should only be treated in the following specific circumstances:

When there are also tractional tears, as this increases the risk for future retinal detachment. In these cases, laser retinopexy should be conducted as soon as possible. If the lattice and atrophic holes appear to be increasing subretinal fluid, there should also be surgical intervention.

If there has been a sustained retinal detachment in one eye and there is the presence of lattice lesions in the other eye, then treatment should also generally be given; however, there are some exceptions. Because laser scars may increase vitreoretinal adhesion and increase the risk of future retinal tears, there is some controversy as to whether treatment is the best option.

Although laser treatment may not convincingly prevent retinal detachment, some authors believe that laser demarcation may limit the extent of future detachments and help preserve the macula.

Treatment of lattice lesions in eyes with myopia greater than 6.00 D provides no benefit. These lesions need only routine yearly monitoring.

Laser treatment is the primary treatment method, but cryoretinopexy (cryotherapy) is sometimes employed in cases in which significant hemorrhage prevents laser administration.

The conservative scleral buckle approach may be a more effective treatment for subclinical retinal detachment (>1-disc diameter of subretinal fluid but < 2 disc diameters posterior to the equator) than a laser barrier.

This method can also be used to treat frank rhegmatogenous retinal detachment or pars plana vitrectomy, and gas administration can be used. All lattice degeneration areas and retinal breaks should be barricaded with laser or cryotherapy.