

## Who is prone to retinal detachment (Rd)?

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Retinal Detachment (RD) is a serious eye problem that may occur at any age. Retina is a thin transparent tissue of light sensitive nerve fibers and cells. It covers the inside wall of the eye like wall paper. In RD there is separation of the retina from its underlying attachments. It is of three types:-

**1.RHEGMATOGENOUS RD**— In this condition, the RD occurs due the presence of a retinal break/tear which allows the fluid to pass between the retina & its underlying attachment.

**2.TRACTIONAL RD** – in this condition, the retina is pulled away from its underlying attachment by contracting vitreous humor (*Vitreous humor* is a jelly like material lying in front of the retina & it is firmly attached to the retina). This is seen in Proliferative diabetic retinopathy, Retinopathy of prematurity, penetrating trauma (injury) to the eye.

**3.EXUDATIVE RD**--This occurs secondary to any other eye disease. In this condition, fluid accumulates between the retina & its underlying attachment due to pre existing eye disease like: Tumours (eg-Retinoblastoma –a tumor of the eye seen in young children), Vogt-Koyanagi—Harada(VKH) syndrome (an inflammatory eye disease) .

Of the above 3 types, Rhegmatogenous RD is the most common. It affects approximately one in every 10,000 population each year and eventually affects both eyes in 10% of cases. Some factors if present, predispose a patient to develop a RD—

- a) *Males* are more commonly affected than females.
- b) Certain diseases- make a person more prone to develop a RD—

**Myopia:** More than 40%of all retinal detachments occur in myopic eyes.

A person having high Myopia (I.e., power of glasses more than – 6 Diopters) are at a higher risk of developing a RD& so these patients should undergo a regular retina examination with their local ophthalmologist.

**Lattice degeneration of the retina**—Lattice is an area of retinal thinning & so prone to tear/break. Lattice is usually present in both eyes & is seen in 8% of general population. These are more commonly seen in myopia, Marfan syndrome, etc. It is the most frequent form of peripheral retinal degeneration directly related to a RD.

- c) Certain Congenital Malformations of the eye are also associated with the development of a RD like coloboma of the eye, Goldman-Favre syndrome, etc
- d) History of *previous eye surgery* like cataract surgery with or without lens implantation
- e) History of *previous ocular trauma* (injury to the eye).
- f) History of retinal detachment in the fellow eye.
- g) *Family history* of retinal detachment.

### **Symptoms—**

The classic premonitory symptoms reported by 60% of patients of RD are sudden development of

- *Flashes of light* - a patient complains that he/she sees flashes of light or streaks of light bursting in their field of vision.
- *Floaters* - a patient complains he/she sees black spots of variable size floating in front of their eye which move to & fro as he/she moves the eye.

After a variable period of time, the patient notices a shadow encroaching onto his/her field of vision, which ultimately leads to total blindness.

The remaining 40 % do not experience any warning signs and the first symptom in these cases is a black shadow.

### **Prophylaxis**

Patient seeing a warning sign like floaters &/or flashes of light must immediately undergo a retina evaluation with an ophthalmologist because at this stage the lesion in form of a retinal break, tear, lattice is easily treatable by Laser treatment or Cryotherapy. If on retina evaluation, the retina is normal the patient should see the ophthalmologist at regular intervals.

#### ***The following patients should undergo regular retina examination***

- Myopic patients,
- History of RD in the other eye,
- History of eye surgery like cataract surgery with or without artificial lens implantation,
- History of injury to eye,
- Family history of RD,
- Systemic diseases like Diabetes Mellitus, Hypertension, Marfans Syndrome ,etc

Laser treatment & Cryotherapy are both OPD procedures which if done in time, avoid an unnecessary surgery for RD. They both seal the retinal break and prevent it from progressing to a RD. *Laser* burns a barrage around the lesion a (like retinal tear/break, lattice) while *Cryotherapy* freezes the lesion. This leads to a fibrotic reaction which firmly seals the lesion layers, thereby preventing a RD.

### **Treatment**

If a RD develops; it is *an emergency* and should be treated as soon as possible. Successful reattachment of the retina consists of sealing the retinal tear and preventing the retina from pulling away from the back of the eye again. The only treatment available is in the form of surgery:

**Scleral buckling**— can be done in fresh case of RD or if the RD is localized or the breaks are small,

**Vitreo-retinal surgery**—has to be done if RD is old, there is traction on the retina is present, or the breaks are large.

### **Prognosis**

Visual recovery depends on extent and duration of RD and the overall condition of the retina. Visual recovery is good if it is operated at the earliest.

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