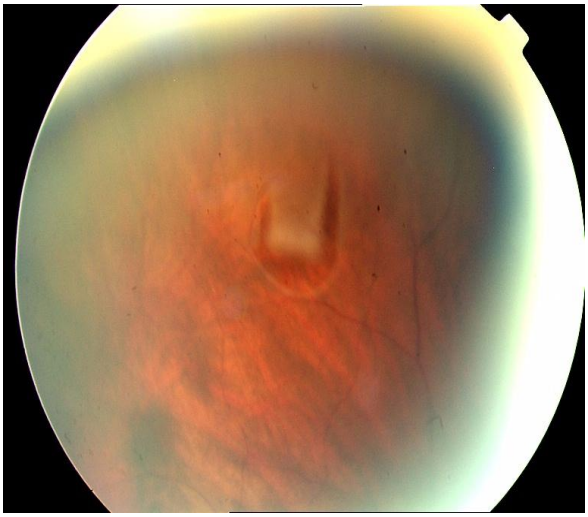
Rhegmatogenous Retinal Detachments. (RRD)

Learning objectives
To be aware of best practice guidelines of indications for the treatment of retinal breaks
To have an understanding of treatment options for retinal detachments
To be aware of the relationship between posterior vitreous detachment and pathogenesis of retinal breaks and retinal detachment.

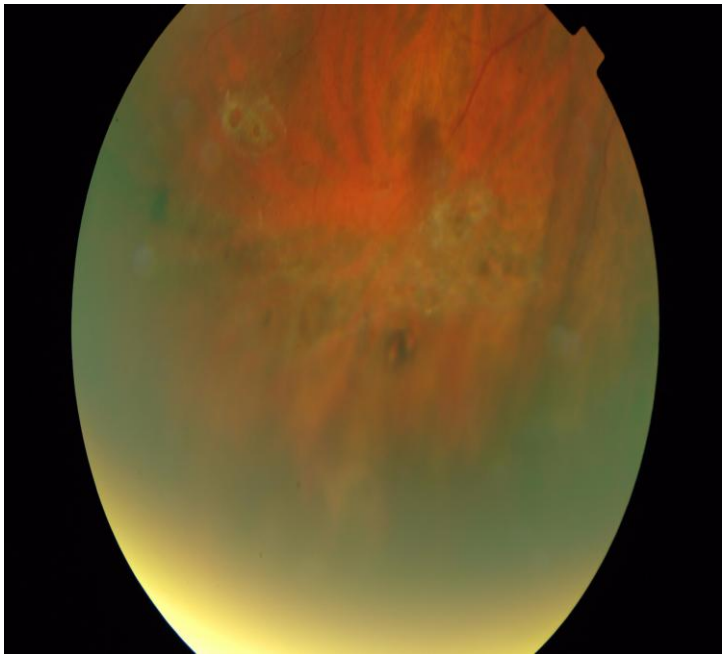
RRD are a relatively uncommon cause of visual morbidity accounting for 11 per 100,000 persons per year in Auckland. One third of the patients presenting with RRD are myopes (> 6.0D) with another third having undergone cataract surgery, most often in the preceding year. The remaining patients may give a history of severe ocular trauma, although a number have no obvious precipitant.
The majority of RRD are associated with retinal tears which in turn are induced by a vitreous detachment. It is estimated that 95% of retinal tears occur at the time of a vitreous detachment and so the diagnosis of a vitreous detachment is an important one. Other retinal breaks that can progress to a RRD include atrophic retinal holes, retinoschisis, cystic retinal tufts and rarely macular holes.
Posterior vitreous detachment (PVD) are normal age related events and in the majority of causes occur without any adverse sequelae. Those that are symptomatic, (associated with flashes and floaters) may be complicated by the induction of a retinal break and so lead to RRD. The diagnosis of a PVD can be established by the presence of a Weiss ring, optic nerve head haemorrhages, and or an optically clear space behind the posterior vitreous interface. The diagnosis might also be made in the presence of symptoms by the appearance of pigment granules or red blood cells in the vitreous cavity. These latter signs are more commonly associated with a complicated PVD indicating the presence of retinal break(s).
A patient presenting with a retinal break and symptoms associated with a PVD has a risk of progressing to a retinal detachment and prophylactic treatment is usually offered. Sometimes it is difficult to exclude the presence of a retinal break and/or a RRD. Symptoms while not always reliable, should recorded. Loss of vision, the presence of a shadow, floaters and flashes are often noted although some patients may be asymptomatic. A history of myopia and or cataract surgery is important as is a history of previous retinal pathology. The examination should be directed initially to the vitreous and the presence of a PVD, blood and or pigment in the vitreous cavity should be specifically noted.
The retinal examination should be conducted systematically with the superior temporal and nasal retina examined. Similarly the infero- nasal and temporal retina should be viewed. There is debate as to the best method of examination, but if the patient is seated at the slit lamp the retina can be viewed with a non contact lens before the binocular indirect examination. Some authorities advocate the binocular indirect examination should precede the slit lamp examination and certainly the overview provided by the indirect is very useful. However most non retinal specialists feel happier with the slit lamp examination and this will enable many breaks and or retinal detachments to be visualised. However the slit lamp examination will not in most cases provide a sufficient view to exclude peripheral pathology so the examination is not complete without a formal binocular indirect examination.

Suggested reading.
AAO Primer on Rhegmatogenous retinal Detachment.
Gregor Z and Kanski J Rhegmatogenous Retinal Detachment

Examples of:
1. Retinal break.



2. Retinal holes.



3. Lattice degeneration with round retinal hole.

4.