DIABETIC VITRECTOMY

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Diabetic retinopathy refers to the damage to the retina as a result of diabetes. This results from long term problems with blood glucose control. When diabetic retinopathy is very advanced, a vitrectomy may be indicated in order to prevent visual loss or restore vision. There are usually two reasons why a vitrectomy is advised:

1. A non-clearing or recurrent bleed into the gel of the eye (**vitreous haemorrhage**)
2. Where scar tissue forms and pulls the retina away from the underlying tissue (**tractional retinal detachment**)

Either of these problems may result in profound (and sometimes permanent) **visual loss** if left untreated.

The operation is performed by making three holes in the white part of the eye (scleral ports) through which various instruments are inserted into the eye. The **vitreous is then removed and replaced by fluid**. Any **blood in the eye is removed** simultaneously. Bleeding points in the eye may be **cauterised** if necessary. Any **scar tissue** may then be removed using either the cutter (the main vitrectomy instrument), intraocular forceps or a tiny intraocular scissors or a combination of any or all these. If needed, **laser treatment** may then be applied. This is one of the main steps as this will help to reduce the risk of bleeding in the future.

The peripheral retina is then examined to check for **retinal tears** and if any are found, these may be treated either by applying laser or cryotherapy (freezing treatment). Occasionally, the fluid that was used to replace the the vitreous may then be replaced by **air or gas** – either of these substances will be naturally replaced by the body's fluid over days or weeks depending on which substance is used. Rarely, a substance called **silicone oil** will need to be injected to flatten the retina for a longer term. Unfortunately, the decision to use silicone oil can usually only be made during the operation and because the body is unable to reabsorb the oil, a

further operation will need to be performed to remove the oil. Either gas or oil will **interfere with the vision** while it is inside the eye.

The outcome of surgery is dependent on several factors, including whether the diabetes has affected the macula (central retina) either by reducing the blood supply or by causing leakage, your age, and whether complications develop. Some important complications of such surgery include:

- **Permamanent blindness** in the operated eye (very rare).
- Inflammation from the immune system attacking the eyes (**sympathetic ophthalmitis**) (very rare) – this condition usually requires steroids to treat or the patient goes blind. Steroids have many side-effects, but fortunately the condition is exceedingly rare.
- A major bleed within the wall of the eye (**suprachoroidal haemorrhage**) (rare).
- Infection (rare).
- **Retinal tears or retinal detachment** (very uncommon).
- **PVR** is a scarring reaction which can lead to retinal re-detachment.(uncommon)
- **Rebleeding** – usually occurs soon after the operation and clears spontaneously within days or weeks; only a minority require reoperation for this reason (common)
- **Pressure problems** – usually when gas or oil is used and mostly treatable with eye drops or tablets and seldom causing any permanent damage (common).
- **Discomfort** – usually from stitches or just from inflammation temporarily post surgery (common).
- **Cataract** (very common).