Taut Posterior Hyaloid Face

What is this and why has my eye doctor mentioned it?

If you have diabetic retinopathy and have been told you have a "taut posterior hyaloid face", this page will help explain what this means. Unlike the vitreomacular adhesion that many people develop as part of normal ageing, a taut posterior hyaloid is typically seen in diabetes and may be contributing to macular oedema that is difficult to treat with injections alone.

Understanding the posterior hyaloid

The vitreous is the clear gel that fills the inside of the eye. The posterior hyaloid is the back surface of the vitreous – a thin membrane that lies against the retina. In most people, the vitreous gradually separates from the retina as we age without any problems.

In diabetes, this relationship can become abnormal. The posterior hyaloid may become thickened and remain at-

tached to the macula, creating a sheet-like membrane that pulls on the central retina.

How is this different from ordinary vitreo-macular traction?

Ordinary VMT occurs in healthy eyes as part of incomplete vitreous separation. The attachment is typically small and focal, and many cases resolve spontaneously.

Taut posterior hyaloid is associated with diabetic retinopathy. The attachment tends to be broader, the membrane itself becomes thickened, and it is much less likely to release on its own. It is characteristically associated with diabetic macular oedema that responds poorly to standard treatments.

Why does this cause problems?

Research shows that about 55 in every 100 eyes with an attached hyaloid have macular oedema, compared with only about 20 in every 100 eyes where the vitreous has already separated.

The thickened membrane pulls on the macula and may also act as a barrier that traps fluid and inflammatory substances. Diabetic macular oedema associated with a taut posterior hyaloid often responds poorly to laser and may show limited response to anti-VEGF injections alone.

How is it diagnosed?

OCT scanning has transformed our ability to detect this condition. OCT can show the attached membrane, any thickening, and associated macular oedema with distortion of the normal foveal shape.

Treatment options

Anti-VEGF injections remain the first-line treatment for diabetic macular oedema. Eyes with taut hyaloid can still respond to injections, and this is typically tried first. However, if the mechanical pulling is significant, the response may be incomplete.

Vitrectomy surgery (removal of the vitreous gel along with the hyaloid membrane) is the definitive treatment

when the traction is contributing significantly to the oedema. The largest published series reported that about 49 in every 100 eyes gained two or more lines of vision and about 82 in every 100 achieved complete resolution of the macular oedema.

Better outcomes are associated with better vision before surgery, absence of significant macular ischaemia, and earlier intervention before irreversible damage has occurred.

What about proliferative diabetic retinopathy?

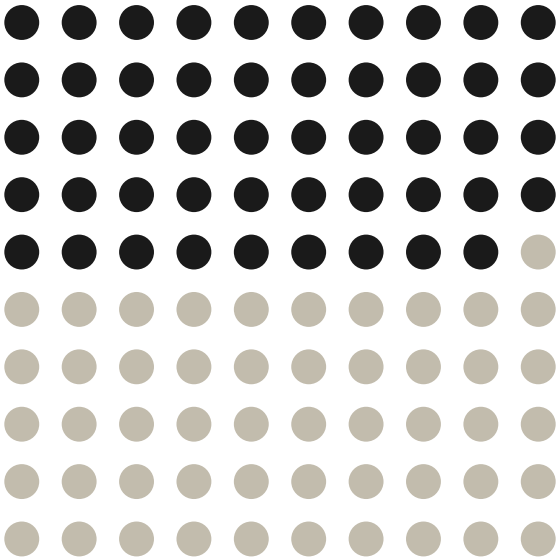
Taut posterior hyaloid can coexist with proliferative diabetic retinopathy where abnormal new blood vessels have grown. If these vessels have developed fibrous attachments, surgery becomes more complex – the surgeon may need to carefully dissect these membranes away (delamination) in addition to removing the posterior hyaloid. Please see the separate information on vitrectomy and delamination if this applies to you.

Risks of surgery

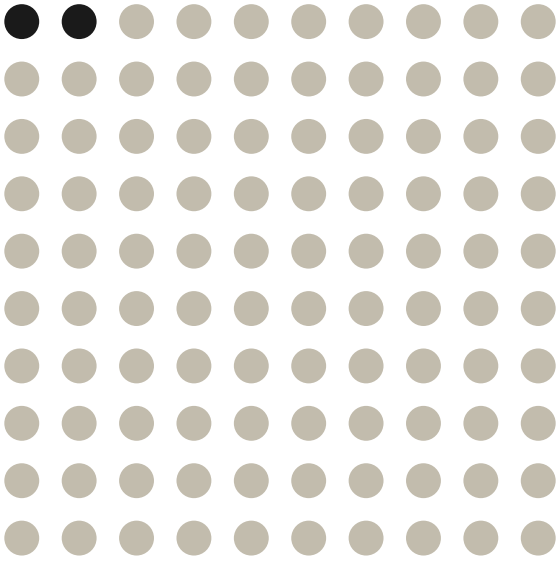
As with any vitrectomy, risks include cataract progression, retinal detachment (about 1 to 3 in every 100), vitreous haemorrhage, and infection (rare but serious). Please see the general information on vitrectomy surgery.

The main risks at a glance

Each grid below is 100 people who have the operation; the shaded dots are those affected.



About 49 in every 100 – gain two or more lines of vision.



About 1 to 3 in every 100 — a retinal detachment after surgery.

Summary

Taut posterior hyaloid face is a vitreoretinal interface disorder seen in patients with diabetic retinopathy. It differs from ordinary vitreomacular traction in that the membrane is thickened, more broadly adherent, and associated with diabetic macular oedema that may respond poorly to injections alone. In carefully selected patients, vitrectomy with removal of the posterior hyaloid can achieve meaningful improvement in both anatomy and vision.

Further reading

- Pendergast SD, Hassan TS, Williams GA, et al. Vitrectomy for diffuse diabetic macular edema associated with a taut premacular posterior hyaloid. Am J Ophthalmol. 2000;130(2):178-186. PubMed

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If you have had eye surgery and are concerned, see emergency contacts.

Emergency contacts: https://www.vitygas.com/information/emergency-contacts/

NHS patients call Limpsfield Ward or the East Surrey Hospital switchboard. Private patients use the mobile number provided.