

CASES IN WHICH YAG LASER HYALOIDOTOMY CAN REPLACE SURGERY

BY

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- ▣ Yag laser hyaloidotomy is puncturing of the posterior hyaloid using Yag laser to treat premacular subhyaloid hemorrhage, draining blood to the vitreous to facilitate absorption of blood cells.

Pneumatic displacement using rtPA and gas injection and PPV are other treatment modalities for premacular subhyaloid hemorrhage.

Yag laser hyaloidotomy can be performed in cases of persistent premacular subhyaloid hemorrhage:

- ▣ Valsalva retinopathy.
- ▣ Proliferative diabetic retinopathy
- ▣ Rupture retinal artery macroaneurysm.
- ▣ Purtscher retinopathy.
- ▣ Eales disease.
- ▣ Terson syndrome.
- ▣ Retinal vein occlusion.
- ▣ Leukemic and high altitude retinopathy.
- ▣ Choroidal neovascular membrane.

Why it is necessary to treat premacular hemorrhage rapidly?

Persistent non resolving premacular subhyaloid hemorrhage can lead to macular pigmentary changes , macular epiretinal membrane and toxic damage to the macula due to prolonged contact with hemoglobin and iron.

Technique

- ▣ Topical mydriasis using tropicamide 1% eye drops followed by topical anesthesia using Benoxinate HCL 0.4%.
- ▣ Using slit lamp delivery system (zero offset) and Goldman 3 mirror contact lens, single burst of Yag laser is delivered.
- ▣ Start with 5 mj and increase the power gradually till sufficient opening in the inferior part of the posterior hyaloid is seen .

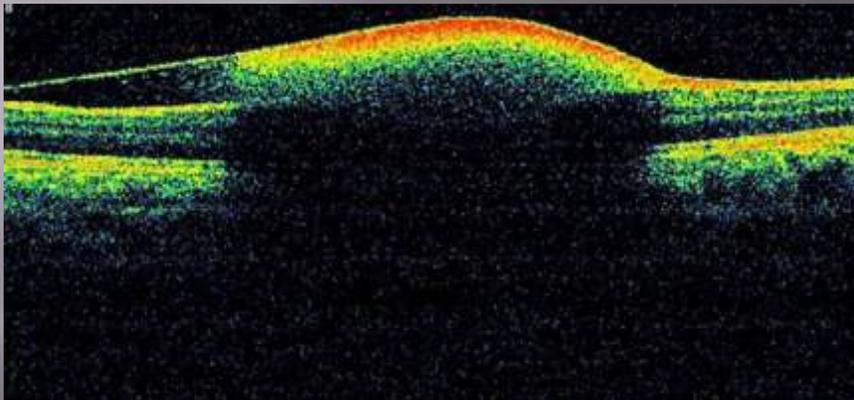
- ▣ Be away of the fovea and retinal blood vessels.
- ▣ Better within the first week of presentation with subhyaloid hemorrhage.
- ▣ Maximum 4 shots are allowed before the procedure is abandoned.



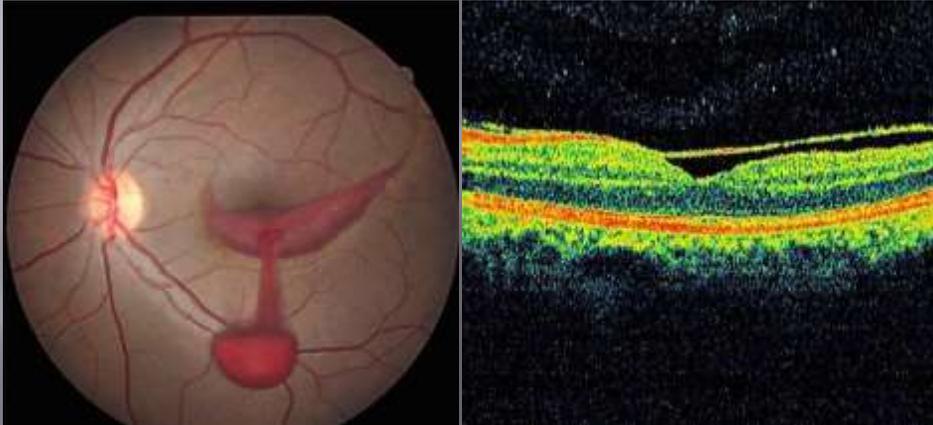
Valsalva retinopathy



Valsalva retinopathy in pregnant



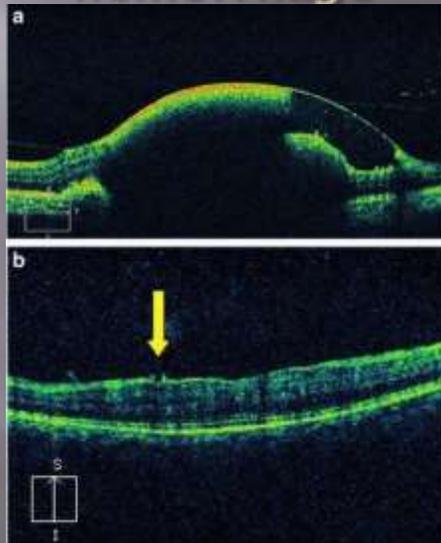
1 hour following laser



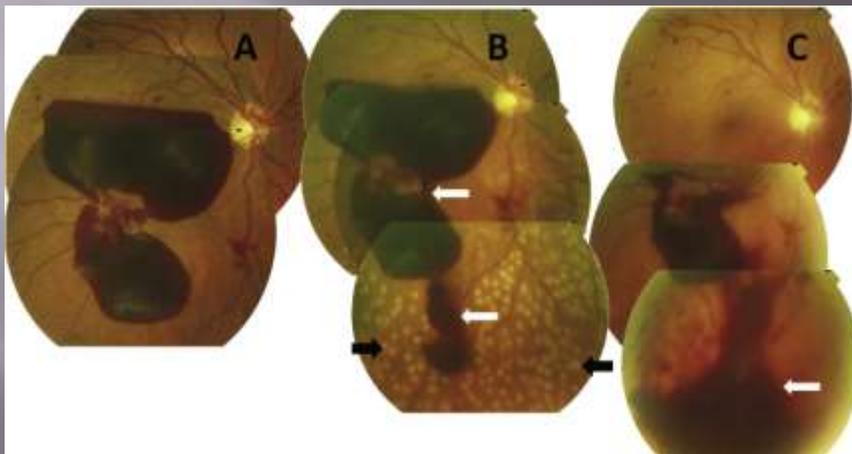
Valsalva after sever attack of vomiting



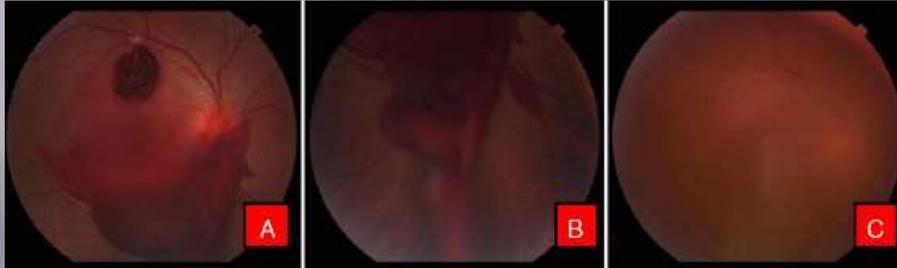
Valsalva with sub ILM hemorrhage



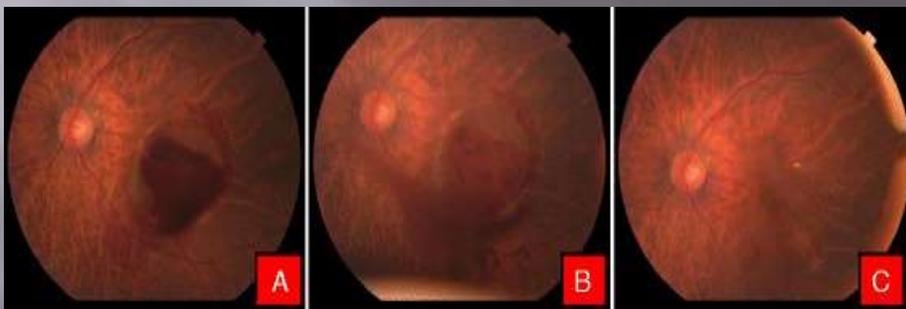
In PDR



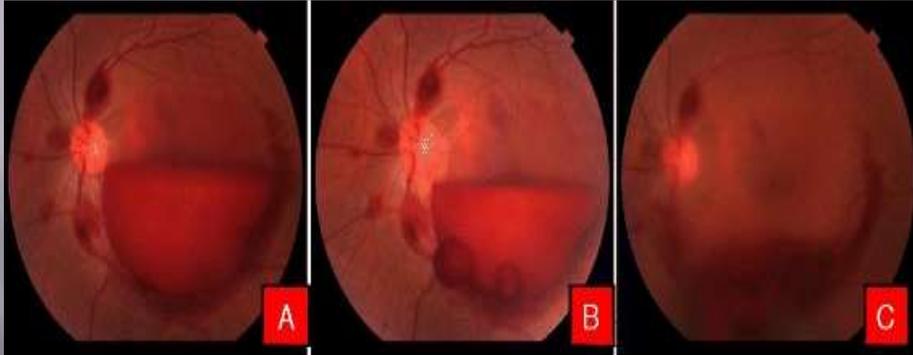
Rupture retinal artery macroaneurysm



Choroidal neovascular membrane

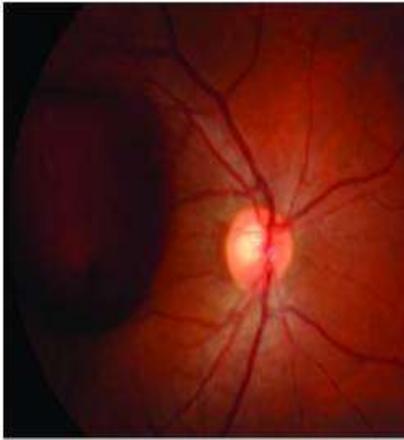


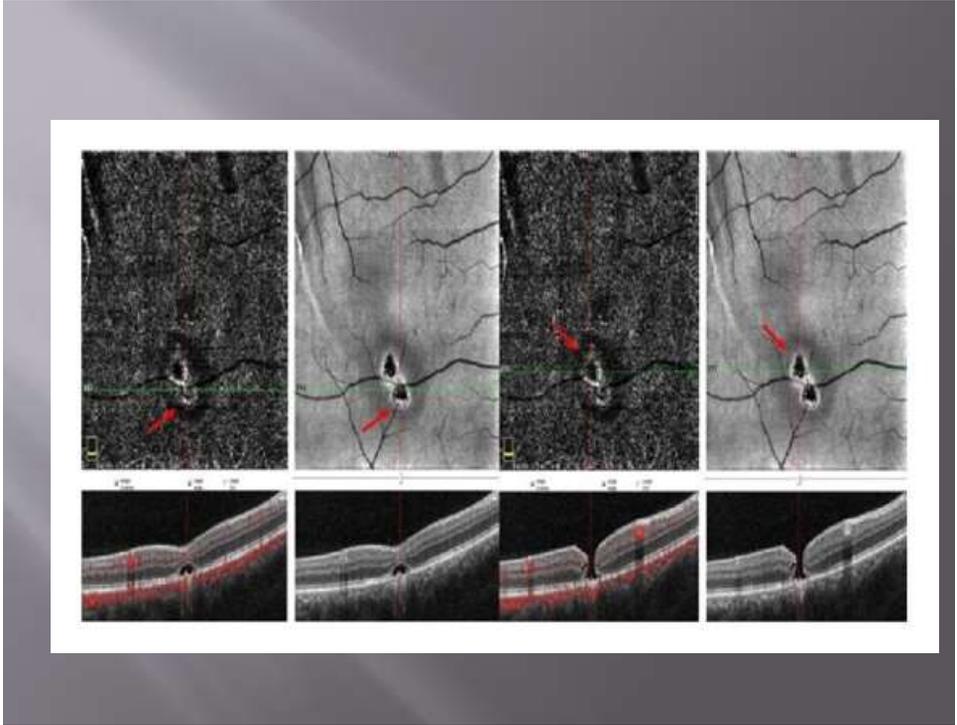
Leukemic retinopathy



Complications

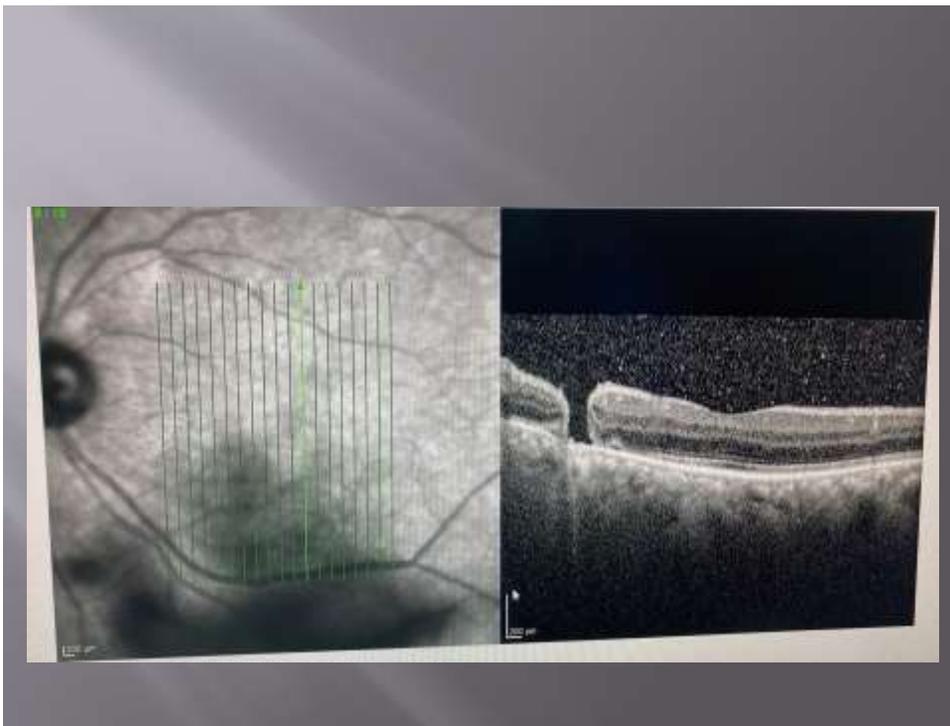
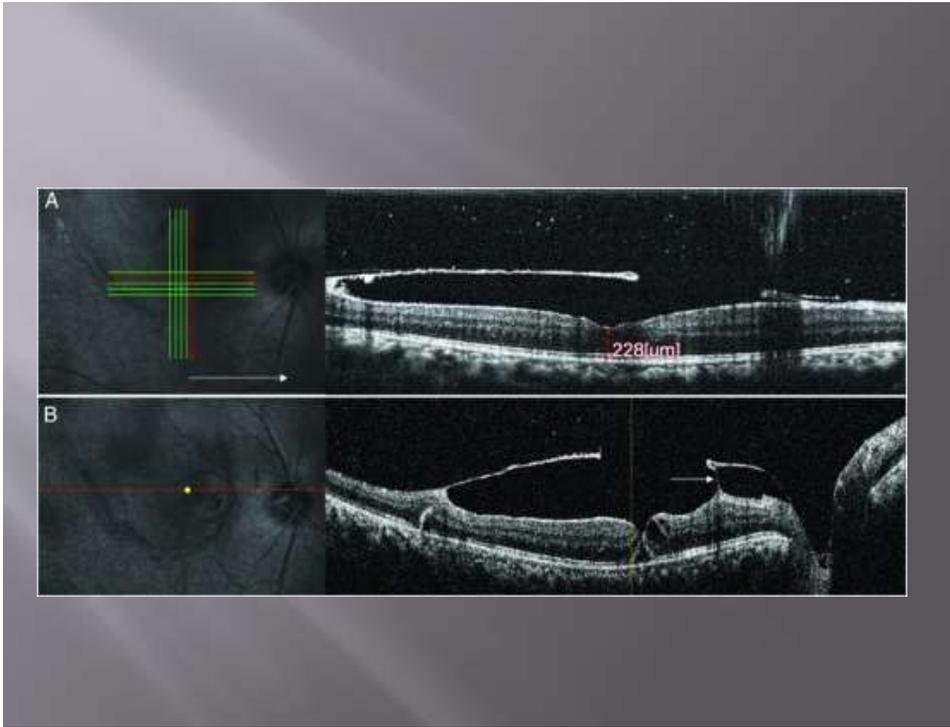
Full thickness macular hole



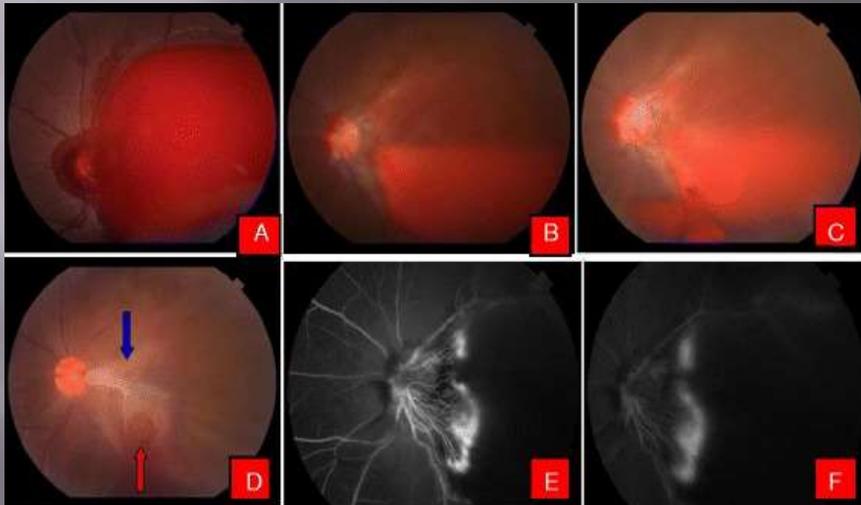


Parafoveal hole





Tractional retinal detachment and epimacular membrane



Take home message

Nd:YAG laser hyaloidotomy can be appreciated to be an inexpensive, effective and a safe outpatient procedure for the treatment of premacular subhyaloid hemorrhage.

It produces rapid drainage of blood with restoration of visual function which would otherwise warrant more invasive vitreoretinal procedures and its associated serious complications.

This is particularly beneficial for patients with poor vision in the fellow eye, patients requiring rapid visual rehabilitation to be able to continue their work and patients with contraindication to surgery like bad general condition and pregnant females.

Good selection of cases with thin posterior hyaloid, being away from the fovea and blood vessels and avoiding cases with tractional membranes and thick posterior hyaloid can markedly minimize complications of the technique.

Thank You