ANTI VEGF BEFORE DIABETIC VITRECTOMY, IS IT NECESSARY?

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- VEG has been shown to contribute significantly to PDR.
- Increased production of VEGF produced by retinal pigment epithelium (RPE) cells, pericytes and endothelial cells secondary to ischemia can be blocked by retinal laser photocoagulation by decreasing the ischemic area.
- IV anti VEGF blocks the effect of VEGF on receptors and inhibits retinal new vessels and cells in neovascular membranes causing regression of neovascularization elsewhere in the retina and on the optic disc.

Anti-VEGF Types

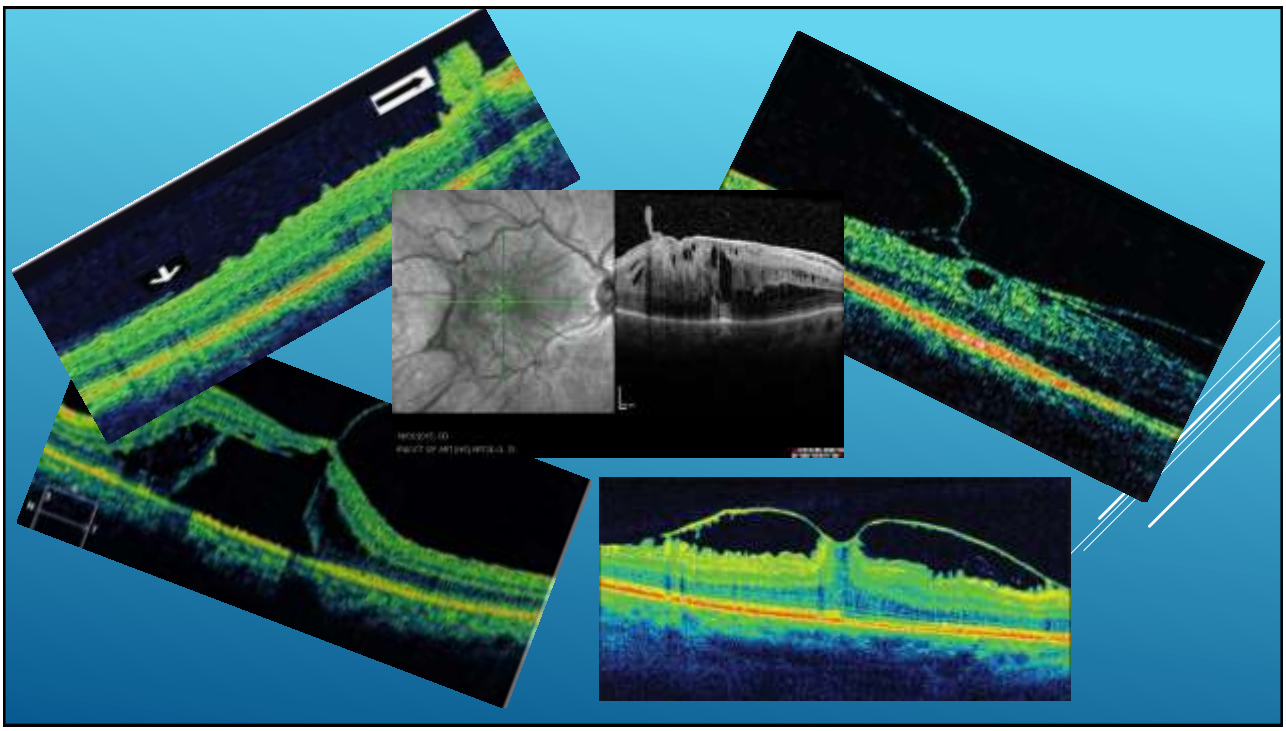
- Bevacizumab (Avastin) : 1.25 mg in 0.05 ml
- Ranbizumab (Lucentis): 0.3-0.5 mg in 0.05 ml
- Aflibercept (Eylea): 2.0 mg in 0.05 ml

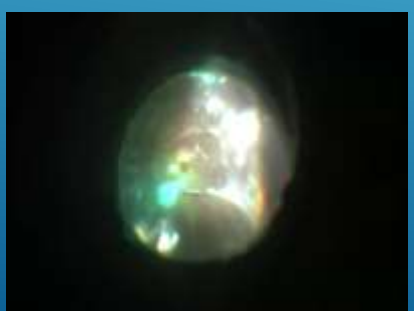
Anti-VEGF

- Role : It dries the vitreoretinal interface 1-7 days (4 days) before diabetic vitrectomy .
  - It facilitates dissection.
  - It helps in reducing intraoperative bleeding, thus facilitating fibrovascular membrane peeling.
  - It is also reported to reduce postoperative vitreous hemorrhage.

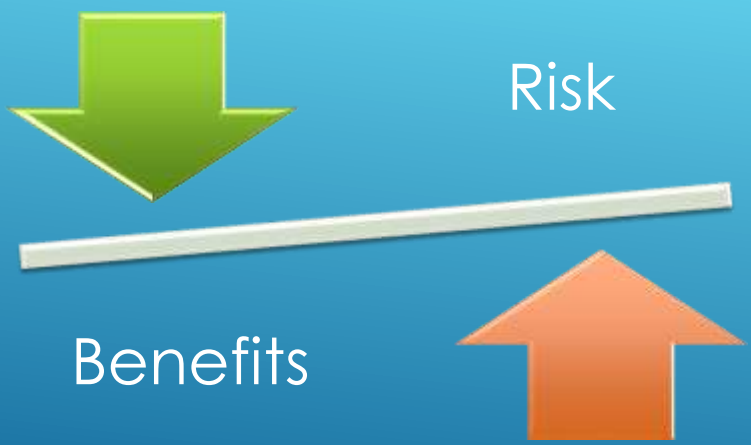
Preoperative injection of Anti VEGF :

- Decreases the surgical time.
- Reduces the rate of vitreous hemorrhage during and after PPV in patients with PDR.
- Removal of vitreous hemorrhage may not only create iatrogenic breaks but also extend the breaks, resulting in more bleeding.
- Helpful for limiting fibro-vascular proliferation before vitrectomy , making surgery easier.





- In cases we have anteroposterior traction, anti VEGF injection before vitrectomy is not recommended as it increases the glial element of the membrane which in turn increases the anteroposterior traction.
- This traction in such cases will increase incidence of many complications and will make the surgery more difficult.
- Difficulties will be noticed in peeling the membrane and reattaching the retina. Such traction also may induce macular holes in already ischaemic macula with weak structure.



So, finally we can say that it is recommended to use intravitreal anti VEGF injections before diabetic vitrectomy except in cases with extensive anteroposterior traction it is not recommended.

THANK YOU