

## Editorial

# Anti VEGF in ROP Patients - A Double Edged Sword

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**Editorial**

There has been a major upsurge in the prevalence of ROP with mushrooming NICU and better health care. In a populous country like India, it is a menace of sort. So is the rising use of Anti VEGF's around the world. Beat- ROP study further popularized the role of Bevacizumab in APROP and zone 1 & 2 involvement. However, is the role of Anti-VEGF a panacea or a sword of Damocles is what I want to share based on my experience.

I am encountering a very high percentage of APROP among my ROP patients I treat. Conventional laser in one or two sittings in the NICU under observation in zone 3 & zone 2 anterior offers me no difficulty. I am aware of a long term myopic shift, field constriction, rarely recurrence, but am satisfied at least I have saved the child going blind. The challenge is APROP and zone 2 posterior involvements where Anti vegf followed by laser later is a pragmatic choice according to me. Injection Bevacizumab is an off label drug, is effective in mitigating the disease in 2-3 days but has a legal problem if anything goes wrong locally like endophthalmitis, vitreous H'age, RD and systemic side effects like Neuro developmental delay, Lungs

& Vascular side effects. I already had my share of endophthalmitis post injections and I advise all not to inject both eye simultaneously. It can be a disaster. Apart from that hypotension, general anesthesia hazards and even cardiopulmonary compromises are already reported. On one side we save the vision, maintain visual field, get a quick response but if luck is not our side the court may ask why you used an off label drug, despite proper consent.

Bevacizumab has a longer half life than Ranibizumab (more costly, more recurrence of ROP) and greater risk of crossing blood retinal barrier and systemic absorption. VEGF is important for growth of brain, lungs and vascular system. If we hinder its growth in early life of the baby where maximum growth & maturation takes place I am afraid we may have lots of ROP survival defective in Neuro and motor system as they grow. Long term follow up reports are still to come.

I had few patients of APROP who had no access to Bevacizumab due to some technical and economic reasons where I had satisfactory results in 2-3 weeks following heavy laser in zone 3 & zone 2 anterior. It was not ideal but it did work.

To conclude I sleep well when I do only lasers in ROP but with Anti-Vegf's it is an anxious post op day. I may get Laurels or brickbats is not the issue. I don't know even if I succeed what is the long term systemic side effects of these Anti Vegf's. Till I get some long term datas in these premature babies I keep my finger crossed and pray for these weak babies whose vision may have been compromised but may have physical & mental handicap as they get older.