## conferenceseries.com Ayad Shafiq, J Clin Exp Ophthalmol 2017, 8:2 (Supply Dol: 10.4172/2155-9570-C1-060 2nd GLOBAL PEDIATRIC OPHTHALMOLOGY CONGRESS

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## Contralateral effect of micro-dose bevacizumab (Avastin) injection in zone 1 aggressive posterior retinopathy of prematurity (APROP)

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**Statement of the Problem:** Systemic absorption of bevacizumab is a major concern in premature babies whose developing organs and brain may be adversely affected by suppression of vascular growth factors.

**Rationale:** We assessed the contralateral effect on the untreated eye by documenting serial images of the retinal vessels. Could even a micro-dose of bevacizumab have a demonstrable effect on the untreated eye by systemic vascular absorption? Most babies with APROP have simultaneous bilateral treatment. The asymmetry in this case allowed a short period of careful observation which could provide important qualitative evidence of systemic drug effect.

Type of Study: This was an observational study of a single case.

**Methodology:** Both eyes were photographed prior injection, at day 5 and at day 12. Images were compared to assess dilatation and tortuosity in both treated and untreated eyes.

**Results:** Both eyes responded to injection of one eye. A smaller but lesser reduction was noted in the untreated eye in vascular tortuosity and dilatation of posterior pole vessels.

**Conclusion:** Even a micro-dose of 0.16 mg bevacizumab injected in one eye, has a qualitative effect on retinopathy of prematurity in the untreated eye. Systemically absorbed bevacizumab appears to be absorbed adequately to have an end organ effect. The 'standard' dose currently used in premature babies is 0.625 mg, four times greater dose than that used in this baby. We treat APROP in all cases with a micro-dose of bevacizumab. This is effective in a case series of bilateral primary treatment. Systemic absorption has been pharmacologically proven for a larger standard dose of bevacizumab. This study adds evidence to the suggestion that even a micro-dose has systemic end organ effects. In view of the unknown potential systemic effects, research should be directed at identifying the smallest dose which is effective at preventing blindness in APROP.

## **Biography**

Ayad Shafiq began his training as a Paediatrician and changed specialisations to train as an Ophthalmologist with a special interest in Children s eye conditions, and inherited eye problems. Special interests include; Childrens eye problems from birth, Adult cataract surgery (approximately 450 operations per year for cataract) and Adult squint or strabismus.

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