

## AYURVEDIC MANAGEMENT OF BRANCH RETINAL VEIN OCCLUSION WITH RETINAL HEMORRHAGE: A CASE STUDY

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### ABSTRACT

Branch Retinal Vein Occlusion (BRVO) is common retinal vascular disease. It presents as sudden onset of painless unilateral visual field defect, metamorphopsia. Its complications are Retinal hemorrhage and chronic Cystoid macular edema (CME) leading to poor visual acuity. The patient in the study was having BRVO with retinal hemorrhage and CME. According to Ayurved, Retinal hemorrhage can be correlated to a *vyadhi* known as *Akshigat Raktapitta* (*Akshi* ~ Eye, *gat* ~ situated in, *Raktapitta* ~ bleeding disorder caused by vitiation of *pitta dosha* in *rakta dhatu*,). It is a type of *Urdhwaga Raktapitta* (disorder with bleeding from upper orifices) in which *kapha* is *anubandhi dosha*. According to *Ashtanga Hrudaya pittashaman* drugs with *tikta*, *kashay rasa* and *vi-rechan* should be used orally for treating the disease. Hence, *vasaguduchyadi kashay*, *jatamansi fant*, Tablet *sutshekhar rasa* and *eranda bhrushta haritaki churna* were given to the patient for 3 months. The patient was assessed clinically for visual symptoms. Ocular coherence tomography (OCT) was repeated after treatment for evaluation of CME. The results proved to be significant on the basis of clinical assessment and OCT.

**Keywords:** BRVO, CME, Retinal hemorrhage.

### INTRODUCTION

Branch Retinal Vein Occlusion (BRVO) <sup>1</sup> is retinal vascular disease with occlusion of branch of retinal vein. In this, part of retina drained by the occluded vein is mainly affected. The visual impact of BRVO is related to the site and size of the occlusion and is very significant if the affected area is macula or fovea. BRVO is associated with arteriosclerosis & hypertension. It presents as sudden onset of painless unilateral visual field defect, metamorphopsia. It complicates into retinal hemorrhage and chronic cystoids macular edema (CME) leading to poor visual acuity. Though Pan

retinal photocoagulation (PRP) is the treatment for CME, it is not much beneficial in chronic cases. This calls for Ayurvedic solutions in chronic cases.

In classics of Ayurved, like *Charaka Samhita*, *Sushruta Samhita* and *Ashtanga Hrudaya*, there is detailed explanation of the disease *Raktapitta* (bleeding through external orifices) <sup>2</sup>. It is a disease in which *rakta vaha srotas* is mainly involved. *Urdhwaga raktapitta* is the condition in which bleeding occurs through the upper orifices (nose, eye, ear and oral cavity) <sup>2</sup>. In *urdhwaga raktapitta*, *pitta* is the main *dosha* & *kapha* is the

*anubandha dosha* and is said to be easily curable<sup>2</sup>. *Pittashaman* drugs with *tikta, kashay rasa* and *virechan* have been indicated as medication for treating *urdhwaga Raktapitta*.<sup>2</sup>

### Aims and Objectives

1. To explore pathogenesis of retinal hemorrhage in Ayurvedic terms
2. To evaluate the effect of drugs indicated for *raktapitta* on retinal hemorrhage.

### Materials and methods

Case history: A 59 year old male patient (known hypertensive) came to outpatient department for diminished vision of right eye (6/60 and 6/60 with glasses), central scotoma, abnormal color vision (for all colors) and metamorphopsia. He had sudden onset of these symptoms 17 months back. Ocular coherence tomography (OCT) right eye (done on 6/2/13): Showed macular edema. He was previously diagnosed as BRVO with retinal hemorrhage and CME.

Previous Treatment: Patient was treated with topical steroids followed by intra ocular Avastin injection twice. Pan retinal Photocoagulation (PRP) was also done.

Patient then approached for Ayurvedic treatment.

Food habit: regular intake of hot and spicy (*katu rasatmak & ushna*) food

Habit of Tobacco chewing since last 15 years

Examination (done on 8/7/14):

- Visual Acuity of Right Eye: 6/60 and n/- without glasses  
6/60 and n/36 with glasses
- Right eye Anterior segment normal
- Funduscopy of Right eye: Retinal hemorrhage, vitreous floaters with macular edema

• *Naadi* : *Pittapradhan*

Pathogenesis<sup>2</sup>

*Hetusevan (katu, ushna aahar, tobacco<sup>3</sup>) → pitta prakopa*

*Purvarup* : inability to identify the colors.

*Rup*: retinal hemorrhage, diminished vision.

*Dosh and Dushya*: *Pitta and Rakta*

*Sthan*: Right Eye

*Nidaan* : *Akshigat urdhwag raktapitta*

*Chikitsa sutra*: *Pittashamak, Pratilom chikitsa*.<sup>2</sup>

Treatment given

1. Tablet *Sutshekhar Rasa* 125mg TDS<sup>4</sup>
2. *Vasaguduchyadi kashay* 40 ml in morning with honey<sup>5</sup>
3. *Jatamansi Fant (Nardostachys jatamansi )* 40 ml at night<sup>6</sup>
4. *Eranda Bhrushta Haritaki Churna* 5gm at bedtime.<sup>7,8</sup>

Medicines were given to the patient for 3 months and follow up was taken every 15 days.

**Observations and result:** Visual Acuity: The vision showed marked improvement for distant and near objects. [Table 1]

**Table 1:**

Acuity of vision of Right eye	Without glasses	With glasses
<b>Before Treatment (8/7/14)</b>	6/60 n/-	6/60 n/36
<b>After one month (5/8/14)</b>	6/24 n/36	6/18 n/10
<b>After two months (5/10/14)</b>	6/24 n/18	6/12 n/8
<b>After three months (5/11/14)</b>	6/18 n/10	6/9 n/6

Metamorphopsia (Distortion of images) was significantly reduced (recorded by Amsler grid). Color vision was recorded by Ishiara

chart & color light source. It improved totally. Retinal hemorrhage resolved completely as seen in funduscopy. Macular edema was

evaluated by OCT which was done before

and after treatment.[image 1-4]

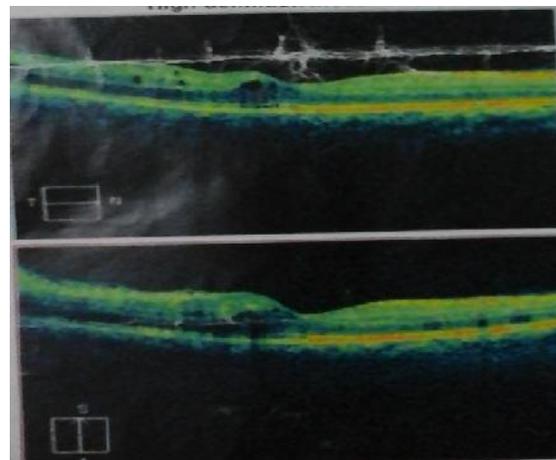
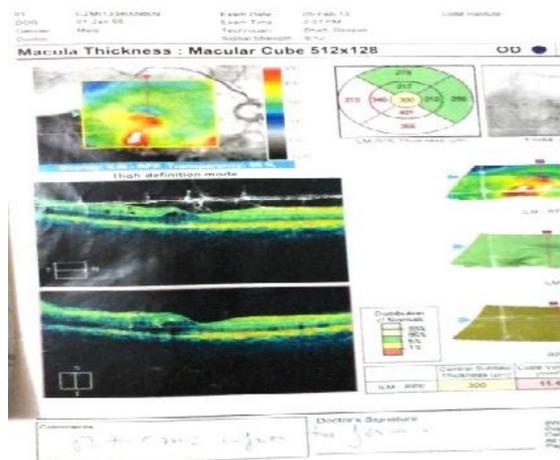


Image 1&2: OCT of Rt. eye dated 6/2/13 showing Macular edema

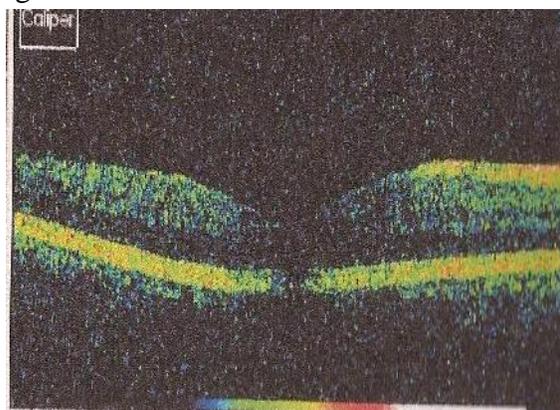
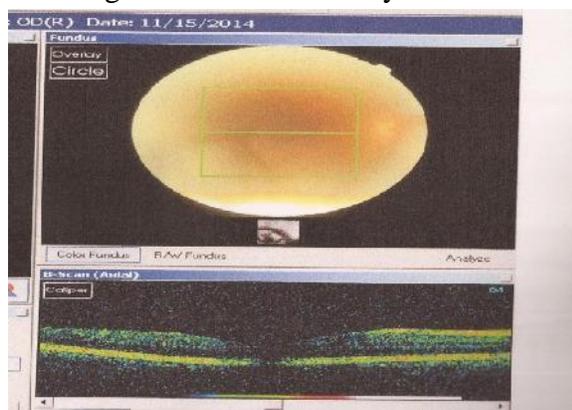


Image 3&4 : OCT of Rt. dated 15/11/2014 eye showing normal structure of macula.

## DISCUSSION

BRVO<sup>1</sup> is the retinal disorder presenting with sudden painless vision loss. It causes a major visual handicap when macula is involved. Consequent retinal hemorrhage and CME together can lead to complete or partial blindness. Hence these complications become a matter of concern. Retinal hemorrhage is comparable to *urdhwag raktapitta* in which eye is one of the sites of bleeding.<sup>2</sup>

Though the patient was having visual symptoms and signs, food habits and other systemic examination like *naadi*, etc were also taken into consideration for making diagnosis. Probable pathogenesis was thought of as follows;

*Hetu*: Patient had habit of chewing tobacco<sup>3</sup> daily for many years. It causes *pit-taparakopa* and hampers vision. Patient used to have hot and spicy food (*katu, ushna aahar*) regularly. Both of these habits can be included in the causative factors of vitiation of *pitta* leading to *raktapitta*.<sup>2</sup>

*Purvarupa and rupa*: patient was having abnormal color vision of the affected eye, which is similar to the symptom – inability to distinguish between blue, red and

yellow color (*purvarupa* of *raktapitta*)<sup>2</sup>. Fundoscopy of the affected eye was showing retinal hemorrhage which can be correlated with the *Urdhwaga Raktapitta* in which the sites of bleeding are nose, eye, ear and oral cavity<sup>2</sup>.

*Nidaan:* On the basis of causes, signs and symptoms, the diagnosis was made as *Akshigat Urdhwaga Raktapitta*.

Treatment:

Line of treatment for treating *Raktapitta* is described as oral use of *pittashaman* drugs with *tikta*, *kashay rasa* and *virechan*<sup>2</sup>. Though there are numerous medicines alleviating pitta, a combination of commonly used medicines was used for the treatment.

1. Tablet *Sutshekhar Rasa* 125mg TDS<sup>4</sup>
2. *Vasaguduchyadi kashay* 40 ml in morning with honey<sup>5</sup>
3. *Jatamansi Fant (Nardostachys jatamansi)* 40 ml at night<sup>6</sup>
4. *Eranda Bhrushta Haritaki Churna* 5gm at bedtime.<sup>7,8</sup>

The probable action of the medicines was as follows,

The *vasaguduchyadi kashay* has medicines of *tikta* and *kashay rasa* hence has *pittaprasaman* properties. It is indicated for treating *pandurog*, *raktapitta* and *kamala*<sup>5</sup>, so it can be used in hemorrhage. *Jatamansi* also has *tikta* and *kashay rasa* and has property to control bleeding and alleviate *pitta*<sup>6</sup>. *Sutshekhar* is drug of choice for *pittavikara*<sup>4</sup>. *Eranda Bhrushta Haritaki Churna* is *mrudu virechan*,<sup>7,8</sup> and was used as *virechan* is indicated in *urdhwaga raktapitta*.<sup>2</sup> In addition to that *Haritaki* itself is *pittashamak* & *chakshushya* (beneficial for eyes).

This explains the efficacy of the medicines in management of retinal hemorrhage.

The medicines are not only efficient to cure the *raktapitta* in the form of retinal hemorrhage but also effective in its consequent complications like CME.

## CONCLUSION

BRVO can be compared with a disease of *raktavaha srotas* as it involves blood vessels. The pathogenesis of retinal hemorrhage can be correlated to *Urdhwag Raktapitta* according to Ayurved. The medicines indicated for *Urdhwag Raktapitta* proved to be significant for treating retinal hemorrhage. The patient had symptomatic relief with significant improvement in visual acuity & color vision. In addition, marked improvement in macular edema was also seen in OCT. However, the pharmacodynamics and pharmacological action of these medicines on the macular area and retinal blood vessels needs further study.

One can conclude from this study that ophthalmic disorders need not be treated only with local medications but also, use of only systemic medicines can also be beneficial in eye diseases. This study proves that when the diagnosis of the disease and the treatment of the disease, both are done on the basis of Ayurvedic principles, the results ought to be positive and certainly confirms that Ayurved definitely can be labeled as evidence based science.

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