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Ayurvedic Management of Branched Retinal Vein Occlusion - A Single Case Study

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ABSTRACT

A Branched Retinal Vein Occlusion is one among the common retinal vascular occlusive disorder. The main risk factor for the disease includes hypertension. Hypertension is present in up to 73% of Retinal Vein Occlusion patients over the age of 50 years and in 25% younger patients. BRVO is associated with variable amount of loss of vision. Ascontemporary science has concerned the effective treatment of BRVO is a questionable area, in this scenario Ayurvedic approach for the same deserves an important position. Also Ayurveda could assure a well cost effective management in such cases. One such male patient aged 38 years old who was working as a driver consulted OPD of VPSV Ayurveda College Hospital, Kottakkal for the complaints of blurring of vision of left eye since 3 weeks. He was diagnosed as a case of BRVO and it was confirmed with Fundus examination and optical coherence tomography (OCT).The case was correlated to *sannipathika timira* with *pitta-kapha*predominance based on the similarities in etiopathology, symptomatology and total clinical presentations. So treatment started by focusing on the vitiated *pitta* and *kapha dosha*. He was treated with *thalapothichil*, *lepa*,internal medications, *seka*, *nasya*,and *anjana*.Assessment was done before and after treatment by analysing visual acuity and OCT.Both showed the remarkable improvement after 4 weeks of treatment. It could be maintained well after a period of three months follow up.

KEYWORDS

Branch retinal vein occlusion, sannipathika timira, pitta kapha hara chikitsa

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INTRODUCTION

Retina is the innermost,light sensitive layer of the eye. Retinal vein occlusion (RVO) is the most common retinal vascular occlusive disorder and is usually associated with a variable amount of loss of vision. A blockage in the Retina's main vein is referred to as a central retinal vein occlusion (CRVO), while a blockage in the smaller vein is called branch retinal vein occlusion (BRVO) in which the later is more common.BRVO may present as hemispheric occlusion; due to occlusion in the main branch at the disc or as quadratic occlusion; due to occlusion at the level of AV crossing and as small branch occlusion either as macular or peripheral branch occlusion[1].

The main risk factor for RVO and BRVO includes hypertension along with other factors like age, hyperlipidemia, DM, and raised IOP.Over all prevalence for HTN in India was estimated as 29.8%, while HTN is present in up to 73% of RVO patients over the age of 50 years and in 25% of younger patients[2].Hypertensive retinopathy refers to fundus changes occurring in patients suffering from systemic hypertension. Three factors which play role in the pathogenesis of hypertensive retinopathy are vasoconstriction, arteriosclerotic changes, and increased vascular permeability[3].The loss of vision in BRVO is caused by macular oedema which can have multiple pathophysiologic mechanisms. Patients with long-standing systemic arterial HTN undergo retinal artery arteriosclerosis that results in the thickening of the arterial wall clinically evident as ' silver and copper' wiring appearance. Retinal arteries and veins share a common adventitious sheath; therefore thickening of the arterial wall that can compress the retinal vein at a point where they cross resulting in turbulent flow and potential thrombus formation[4]. Increased vascular permeability resulting hypoxia and is responsible for exudates, focal retinal oedema,focal intradermal periarterial transudate(FIPT's) and disc edema[5].

As contemporary science is concerned the effective treatment of BRVO is a questionable area, in this scenario Ayurvedic approach for the same deserves an important position. Based on the similarities in etiopathology and clinical presentations BRVO can be correlated with *timira*. *Timira* is described as a disease invading the 1st 2nd and 3rd *patalas* of eye. The *doshas* which become aggravated are recognised by etiopathology and clinical presentations and treated suitably.

CASE REPORT

A 38 year old male patient who was a known case of HTN (on medication since 9 months) reported on 26th August 2019 to *Salakyatantra* OPD, VPSV Ayurveda College Hospital, Kottakkal, Kerala with complaints of sudden blurred and reduced vision of left eye since 3 weeks.

HISTORY OF PRESENT ILLNESS

A 38 years old male patient who was a known case of Hypertension (on medication since 9 months), noticed blurring of vision of left eye before 3 weeks. He was working as a driver since 10 years, so it make him little nervous when he had to see things as covered or hazy. He could only see below the lips of the person's face. And also his near and far vision was affected, and was unable to view clearly from the side mirror of his vehicle. He suspected that it is due to his irregular sleep pattern because of long journeys, as a part of his job. Considering the family history, there were no similar complaints in the maternal or paternal first degree relatives. He had no habit of consumption of alcohol, and was not addicted to smoking. Patient had no history of diabetic mellitus, or any other major illness, but he was identified as having Hypertension 9 months before, when he had to face a shock from an incident of death of his brother. Again before 2 weeks his father was died which aggravated the symptoms. When he consulted an allopathic physician for the complaints of blurred and reduced vision it was diagnosed as left eye inferior branch retinal vein occlusion with cystoid macular oedema (CME) due to hypertension. He was reluctant to receive allopathic treatment and consulted in VPSV Ayurveda College OPD of *Salakyatantra*. With these observations the case was diagnosed as *Sannipathika timira* with *Kapha Pitha* predominance and treatment started at OP level.

EXAMINATION & INVESTIGATIONS

Presentation of BRVO depends on the extent of macular circulation compromised by the occlusion. As the patient here was presented with the sudden onset of blurred vision and a relative visual field defect, macular involvement was suspected. Initially before starting the treatment, the patient was presented with a visual acuity of distant vision 6/6(Right); 6/12 p (Left) and near vision N6 (Right);N12 (Left).Fundus photography showed dilatation and tortuosity of the inferior retinal vein, flame shaped and dot haemorrhages, retinal oedema and cotton wool spots affecting the sector of retina drained by inferior retinal vein. Optical Coherence Tomography (OCT) allowed the

quantification of the severity of macular oedema. Initially centre retinal thickness was 344micro metre, with an average of 363.9 micrometre.OCT also helped to monitor the response to treatment.

TREATMENT

First line of treatment:

1. *Thalapothichil + mukhalepam* -7days
2. *Mukkadi bidalakam* in milk
3. *Nitya virechanam* with *triphala* and *trivrit choornam*
4. *Punarnavadi kashaya* 90 ml twicebefore food
5. *Rasnajambeeram talam*
6. *Triphala kashaya sekam*

2nd week onwards

7. *Marsha nasyam* with *anutaila* -7 days
8. *Elaneer anjanam*and thereafter *kshalanam*
9. *Varanadi kashaya* tab 2-0-2 before food

Advice (during follow up period)

Elaneer anjanam + kshalanam

*Triphala + Trivrit choornam*with hot water at night

Strict control of hypertension with contemporary medicine.

IMPROVEMENT

Assessment was done on before treatment,after treatment, and follow up visits based on analysis of visual acuity (table no. 1), & examination of Fundus and OCT (Fig. 1,2, 3)

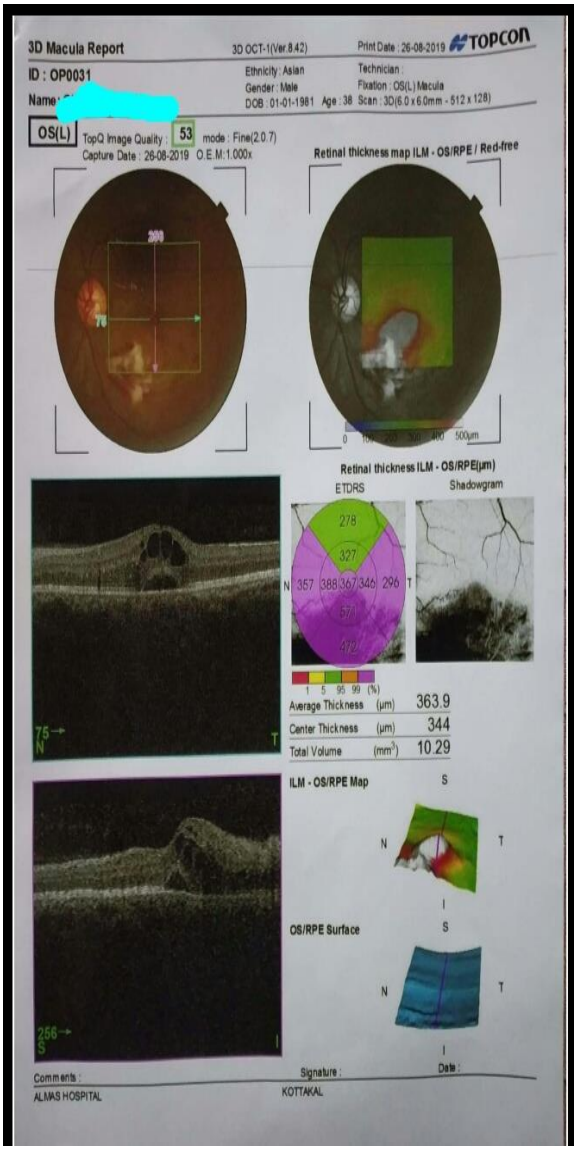

Figure 1 OCT before treatment

Date		Right	Left
26/08/19	Vd Vn	6/6 N6	6/12(p) N12
03/09/19	Vd Vn	6/6 N6	6/9 N6 (with strain)
11/09/19	Vd Vn	6/6 N6	6/18 N6(p)
18/09/19	Vd Vn	6/6 N6	6/6(p) N8
24/09/19	Vd Vn	6/6 N6	6/6(p) N6
1/11/19	Vd Vn	6/6 N6	6/6 N6
29/11/19	Vd Vn	6/6 N6	6/6 N6

Table 1 Analysis of visual acuity

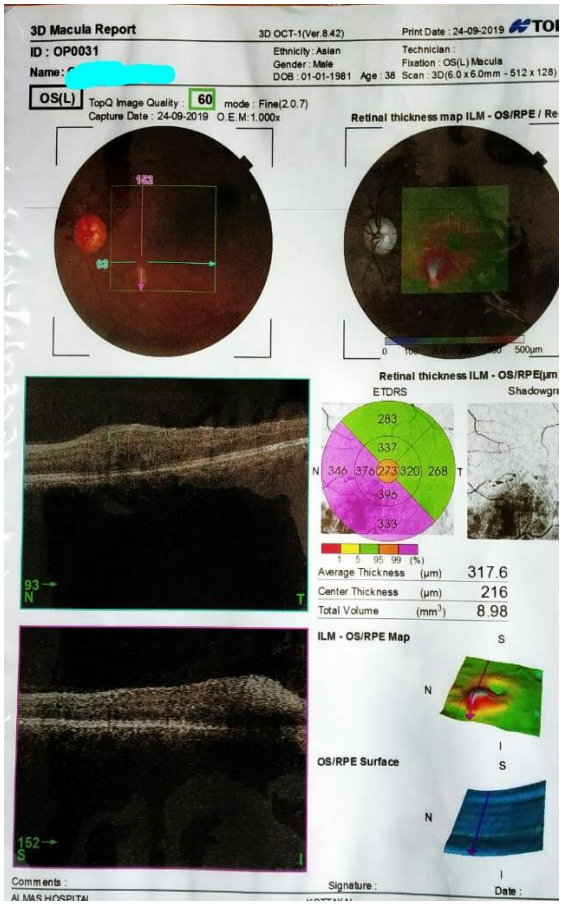

Figure 2 OCT after treatment

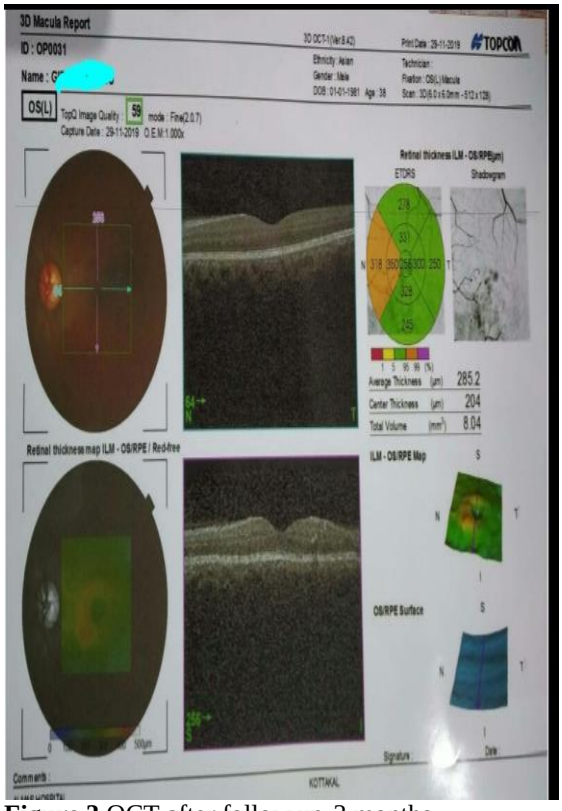

Figure 3 OCT after follow up-3 months

After 4 weeks of treatment, visual acuity of distant vision of left eye improved from 6/12(p) to 6/6 and near vision of left eye improved from N12 to N6. And patient presented with significant improvement in oedema. Central macular thickness has come down to 273micrometre from 360 micrometre. After follow up, the central macular thickness reached within normal limits. (Fig. 4, 5)

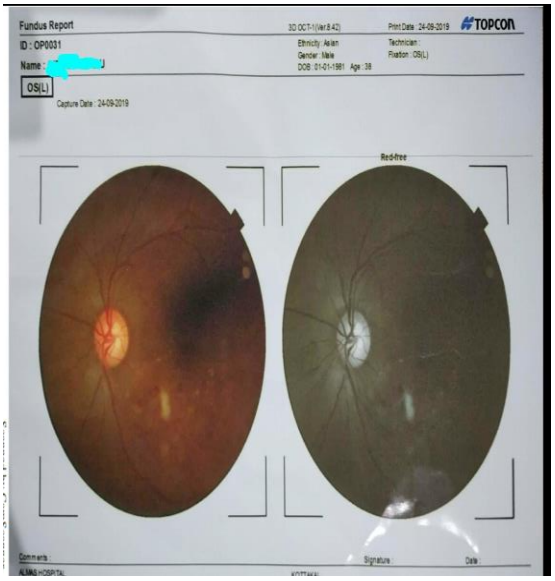

Figure 4 Fundus photography after treatment

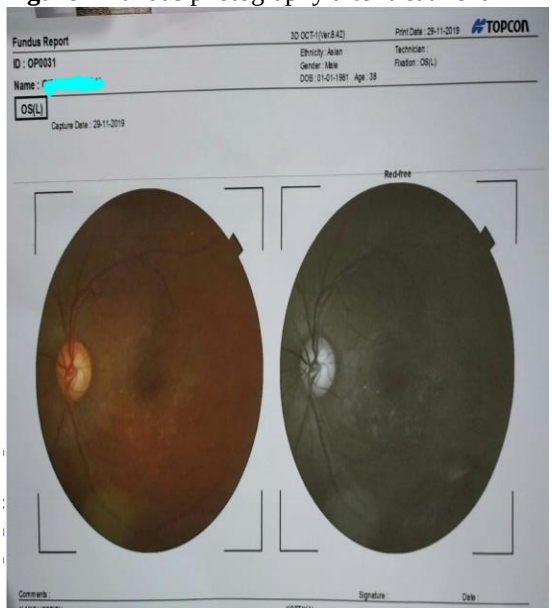

Figure 5 Fundus Photography after follow up

DISCUSSION

As common *nidana* for *timira*, *Vagbhata* explains involvement of *chintha* , *soka*, *bhaya*, etc[6]. Here the patient had to suffer and overcome some kinds of fears, thoughts, and sorrow in his life which triggered the onset of the disease. As a part of his job as a driver he had to sit for a long time and to control *Vegas* like sleep, hunger ,thirst etc. And also was having improper food habits.

The vitiated *doshas* spread to eye through *siras* and progressed to the 1st, 2nd and 3rd*patalas* with their signs and symptoms[7].Indistinct vision (*avyaktha darsana*, Deranged vision (*vihwala darsana*), sees near objects with great effort(*yatnadasanam*),cannot see small objects at far (*doore sookshmamcha nekshathe*),sees even big objects as though covered with cloth *(chadithaniva vaasasaa*) ,sees the face of others as though devoid of ears , nose and eyes (*karna nasakshi yukthani vipareethani veekshathe*) etc[8]. Suggests evidences for involvement of 1st (*tejo jalasritha*),2nd(*mamsasritha*) , and 3rd(*medo asritha)patalas*.As the patient sees objects appears like as oily, white, like moving in water and moving clouds in the sky, and also in different colours, the diseases suggested of due to *kapha pitta dosha* vitiation[9].These facts support the correlation between the BRVO and *timira*.*Samprapthi vighatana* was done by considering both the pathophysiology of BRVO and *sampraptht*iof *sannipathika timira.Virechana,nasya,*and *Anjana* are indicated as *samanya chikitsa* in *timira*[10]. *Seka* and *lepa* using cold drugs over the eyes face and head are also mentioned under *paithika timira chikitsa*[11]. So treatment started with *thalpothichil* and *mukhalepa* with *Triphala choorna*, *Manjishta* and *Yashti* mixed in *Triphala kashya*.Along with this *mukkadi* pasted in milk also applied over eye lids.The drugs used here are all *pitha kaphahara* in nature.*Thalapothichil* comes under *Keraliyachikitsa krama*, which accelerates the drug absorption.The dense subcutaneous connective tissue has the richest cutaneous blood supply in the body. The cell membranes which are made up of phospholipid absorb the lipid soluble medicinal extracts and enter directly into the blood circulation.*Mukkadi yoga* is explained in *Netra prakarana Sahasrayoga*, which is said to be useful in inflammatory signs and symptoms of eye. ie, *sopha,ruja,daha, raga*, etc. The contents of *mukkadi yoga* are predominantly *pithasamaka*,works on vitiated *pitta& rakta* and majority have hemostatic activity[12]. *Triphala* possess *tridosha samaka* property, *chakshushya* as well as good *koshta*

sodhaka hence it can be used in all *Netra vikaras* for the purpose of *sodhana* (procedure by which excess accumulation of vitiated *doshas* from the body is removed).*Acharyas* also highlighted the role of *Triphala prayoga* as *samana* mainly in *drishti gata vikaras*(group of eye diseases in which vision is mainly affected). The *chakshushya* property of *Triphala* seems to be an overall impact of this compound on the body as a whole, but the clinical and time tested experience of our ancient scholars may be the logic behind this special/ empirical effect(*prabhava*)[13].*Netra seka* with *Triphala kwatha* can act as *tridosha samaka*; but it comes under *lekhana Netra seka*, which can be used mainly in *kaphaja* netraroga[14].Studies had also proven the effects in stress reducing potential and as antioxidant.Studies had also proven the effect of *Punarnavadi* and *Varanadi* as anti inflammatory drug. They are used here to reduce oedema.*Talam* is a practice of application of medicine on the vertex of head which is anatomically known to be the *bregma*.It also accelerates absorption of the drug[15]. Here, *talam* is done with *Rasnaadi choorna* which is *kaphavatahara* in nature.So it also pacifies the aggravated dosha.Due to anatomical communications the medicine applied through the nasal cavity reaches all the areas, particularly strengthens the *'sringataka marma'* which is the seat of all the centres of eye, ear, nose and tongue[16].Anutaila[17] as the name indicates, have capacity to penetrate minute channels.It is prepared with 27 drugs processed in *tila taila* and *ajaksheera*.Majority of ingredients of it shows *tikta katu rasa* and *laghu guna* .These properties are very much in favour of clear he *srotas.Katu vipaka,ushna virya* and *tikshna* properties produce *draveekarana(* liquefaction) of vitiated *kapha dosha*.Most of the ingredients also possess anti inflammatory and antibacterial properties[18].*Anjana* type of ocular drug administration keeps the drug in contact with the eye surface longer. *Elaneer kuzhambu*[19] contains the ingredients suspended in tender coconut water which is akin to plasma concentration[20] thus, facilitating drug absorption by ocular tissue which also enters the systemic circulation.*Elaneer kuzhambu* is indicated in *paithika timira* and has simultaneous action of *chedana* and *ropana*.Studies revealed that it also has antioxidant and anti inflammatory properties.

CONCLUSION

BRVO is one among the common retinal vascular occlusive disorder.Hypertension is a main risk factor behind the disease. An

Ayurvedic approach was made to treat the BRVO based on *Timira chikitsa*. Treatment selected by considering the etiopathology and clinical presentations of the disease based on the analysis of *dosha*.Thus it made remarkable changes in the symptoms and give a better outcome.

REFERENCES

1. .Khurana,A.K.,Khurana,Aruj.K.,& Khurana,Bhawna.Comprehensive opthalmology,(2015) 6thedition page no. 271
2. .Kanski,Jack.J.,& Bowling,Brad. Clinical Ophthalmology A Systemic Approach.( ),7th edition,page.no.
3. .Khurana,A.K.,Khurana,Aruj.K.,& Khurana,Bhawna.Comprehensive opthalmology,(2015) 6thedition page no. 271
4. Karia N.Retinal vein occlusion:pathophysiology and treatment options.Clin Ophthalmol.2010 Jul 30;4:809-16
5. .Khurana,A.K.,Khurana,Aruj.K.,& Khurana,Bhawna.Comprehensive opthalmology,(2015) 6thedition page no. 271
6. Prof.Srikanta Murthy,K.R., Vagbhata's Ashtanga hrdayam,Uttara sthana, English translation (2015), 8th edition, 13/94-95
7. Prof.Srikanta Murthy,K.R.,Illustrated Susruta samhitha,Uttara sthana,English translation (2017) edition, 7/6-14
8. Prof.Srikanta Murthy,K.R.,Illustrated Susruta samhitha,Uttara sthana,English translation (2017) edition, 7/6-14
9. Prof.Srikanta Murthy,K.R.,Illustrated Susruta samhitha,Uttara sthana,English translation (2017) edition, 7/6-14
10. Prof.Srikanta Murthy,K.R., Vagbhata's Ashtanga hrdayam,Uttara sthana, English translation (2015), 8th edition,13/47
11. Prof.Srikanta Murthy,K.R., Vagbhata's Ashtanga hrdayam,Uttara sthana, English translation (2015), 8th edition,13/64
12. K.V Krishnan Vaidyan & S.Gopala pillai,Sahsrayogam,35th edition,Vidyarambham publishers,Mullakkal,Alappuzha; November 2017, page no.381
13. G opinathan.G., & Dhiman,K.S.,Triphala in eye diseases: A critical review,Dept.of Shalakyatantra, IPGT & R.A, Jamnagar, 2013,Published in Homeopathy & Ayurvedic medicine.
14. Sharangadhara,Sharangadhara samhitha, Pandit Parashuramashastri,Varanasi; Chaukhabha Orientalia Publications; Uttarakhanda 13/2 : 379
15. Shripathi Adiga & Ramya S Adiga, The concept of Thalam in Ayurveda : An analytical approach, volume- v- issue- 4 ,July - August 2017, Journal of Ayurveda & Holistic medicine.
16. Ashtanga sangraha with Hindi Commentary by Kaviraj Atridev Gupta,Vol.1,Sutrasthana,Chapter 29/3,published by Krishnadas Academy,Varanasi,reprint 2002.
17. Caraka samhitha with English translation & critical exposition based on

Cakrapani datta's Ayurveda dipika by R.K Sharma & Bhagwan dash,Vol.1,Sutrasthana,chapter 5/63-67,published by Chowkhamba Sanskrit series office, Varanasi,Reprint,2016

18. Dr. Sreelum,Dr. Manjusha Rajagopala,Role of Anutaila Nasya and Varunadi Ghrita in Dhushta Prathishyaya w.s.r to Chronic sinusitis,M. S thesis,Dept.of Shalakya tantra ,IPGT & RA ,Jamnagar ,2005.

19. K.V Krishnan Vaidyan & S.Gopala pillai,Sahsrayogam,35th edition,Vidyarambham publishers,Mullakkal,Alappuzha; November 2017, page no.390

20. Dr.Radhika.k.Varma., Dr. R. Manjusha, Pharmacognostical and physiology chemical analysis of Elaneer kuzhambu - An ayurvedic polyherbal formulation, Dept. Of Shalakya tantra,IPGT& RA, Jamnagar,2013,Published in International Journal of Pharmacy & Life sciences.