

“AN OPEN CONTROLLED CLINICAL STUDY OF DARVYADI PHANT IN TRITIYA-CHATURTHA PATALGAT DOSHDUSHTI WITH SPECIAL REFERENCE TO BACKGROUND (NON-PROLIFERATIVE) DIABETIC RETINOPATHY”.

***Vd. M. A. Lahankar¹, Vd. Swapnil Sankpal², Vd. Shubhangi Kamble³**

Prof¹, Lecturer², P.G.Scholar³ of Department

Department of Shalakyatantra, R.A. Podar Medical (Ayu) College, Worli Mumbai-18.

Article Received on
23 Feb. 2017,

Revised on 01 March. 2017,
Accepted on 21 March. 2017

DOI: 10.20959/wjpr20174-8193

***Corresponding Author**

Vd. M. A. Lahankar

Prof, Department of
Shalakyatantra, R.A. Podar
Medical (Ayu) College,
Worli Mumbai-18.

ABSTRACT

Diabetis Mellitus is a group of metabolic diseases characterized by hyperglycemia originating from an absolute or relative lack of insulin; it gives way to abnormalities in the metabolism of carbohydrates, proteins and fat in the body. Diabetes mellitus is associated with a number of ocular complications diabetic retinopathy.^[1] is one of them. In Ayurveda due to similarity in clinical features disease tritiya chaturth patalagata dosh dushti.^[2] can be correlated to background (non-proliferative) diabetic retinopathy. In this open control study, group A patients treated with drug darvyadi phant^[3] and group B patients treated with antioxidant. In modern clinical science there is restricted and limited treatment i.e. antioxidants, laser

photocoagulation in background (non-proliferative) diabetic retinopathy^[4] but it may damage retina by retinal scarring. But the drugs of darvyadi phant having, Pramehahara, Kledahara, Aaampachana, Raktavahasrotodushtihara, Vatanulomana, Shophhara properties and having no side effects. So in the present study we have observed effective results of darvyadi phant over the effect of antioxidant therapy.

KEYWORDS: Diabetis Mellitus, tritiya chaturth patalagata dosh dushti background (non-proliferative) diabetic retinopathy, darvyadi phant, antioxidants.

INTRODUCTION

Diabetes mellitus is a metabolic disorder. Diabetes mellitus is associated with a number of ocular complications which can lead even to blindness if not treated and Diabetic Retinopathy is one of the common complications of diabetes that potentially damages Retina. It is a vascular disorder affecting the microvasculature of the retina. It involves an abnormal pathology of major retinal cells including retinal pigment epithelium, micro aneurysms, intra-retinal oedema, hemorrhage, exudates and intraocular neovascularization. The current approach of treatment based on anti-inflammatory, anti-angiogenesis, anti-oxidant drugs and widely used latest advancement laser photocoagulation therapy though effective may cause retinal damage and scarring.

All these treatment strategies have limited role in this clinical condition and yield undesired effects and that can worsen the visual abilities. Ayurvedic descriptions on Madhumeha can be equated with diabetes mellitus in aetiopathogenesis and management.

Drugs of darvyadi phant having properties, Pramehahara, Kledahara, Aaampachana, Raktavahasrotodushtihara, Vatanulomana, Shophhara, wholesome to the eye i.e. chakshushya and Rejuvenation i.e. Rasayana. The drugs taken in this study (Daruharidra, Devdaru, Triphala, Musta, Guduchi, Punarnava, Yashtimadhu) possess many of these properties, fulfilling the above said criteria and effective for treatment.

A) AIM

The clinical study is aimed at managing the Diabetic Retinopathy with Darvyadi Phant in Tritiya-Chaturtha Patalgat doshdushti with Special Reference to Background (Non - Proliferative) Diabetic retinopathy

B) OBJECTIVES

- 1) To evaluate efficacy of Darvyadi phant in the management of Diabetic Retinopathy.
- 2) To Review ancient literature on Tritiya Chaturtha Patalgata doshdushti.
- 3) To provide simple and effective herbal treatment in the management of Diabetic Retinopathy.

MATERIALS AND METHODS

Study Design

- 1) Subject Recruitment:- Patients was selected from OPD and IPD.

- 2) Total Number of Patients – 60
- 3) Duration of Study- 12 weeks
- 4) Follow up- after every 15 days
- 5) study type : Open controlled clinical study.

Sampling techniques

A total of 60 patients were divided into two groups (Group A=30 patients, Group B=30 patients) by a stratified sampling method

Inclusion criteria

1. Age: Between 30-70 years.
2. Sex: Both male and female.
3. Disease: Type 2 Diabetes Mellitus having
4. Background (Non-proliferative) Diabetic Retinopathy.
5. Patient with good glycemic control.

Exclusion criteria

- 1) Age below 30 years and more than 70 years.
- 2) Proliferative diabetic retinopathy
- 3) Type 1 diabetic retinopathy
- 4) Uncontrolled Diabetes mellitus.
- 5) Other types of vascular retinopathies like Hypertensive retinopathy, Retinopathy of blood dyscrasias, Retinopathy of prematurity, Gestational diabetic retinopathy, Sickle cell retinopathy.

Patient having glaucoma, myopic degeneration.

- 6) Active inflammatory and infectious diseases of eye like Uveitis, scleritis, etc.
- 7) Patient having Mature cataract.
- 8) HIV and HbsAg positive patients.

Treatment plan

Group A

The drugs of Darvyadi phant are

Contents

Daruharidra, Devdaru, Triphala, Musta, Guduchi, Punarnava, Yashtimadhu

Dose: 40ml twice aday before meal.

Drugs were used in the the form of warer soluble Ghana as a powder.

Ghana powders were prepared by a procedure of spray drying method.

Group B Antioxidant capsule

Cap. Retinox

30 patients of control group were treated with antioxidant capsule,

1 capsule after dinner for 12 week without gap.

Criteria for assessment:

Subjective

1. Dimness of vision
2. History of DM

Objective

Fundosopic Findings

1. Micro aneurysms
2. Dot and blot spots
3. Soft exudates
4. Cotton wool spots
5. CSME(Clinically Significant Macular Oedema

OBSERVATION AND RESULT

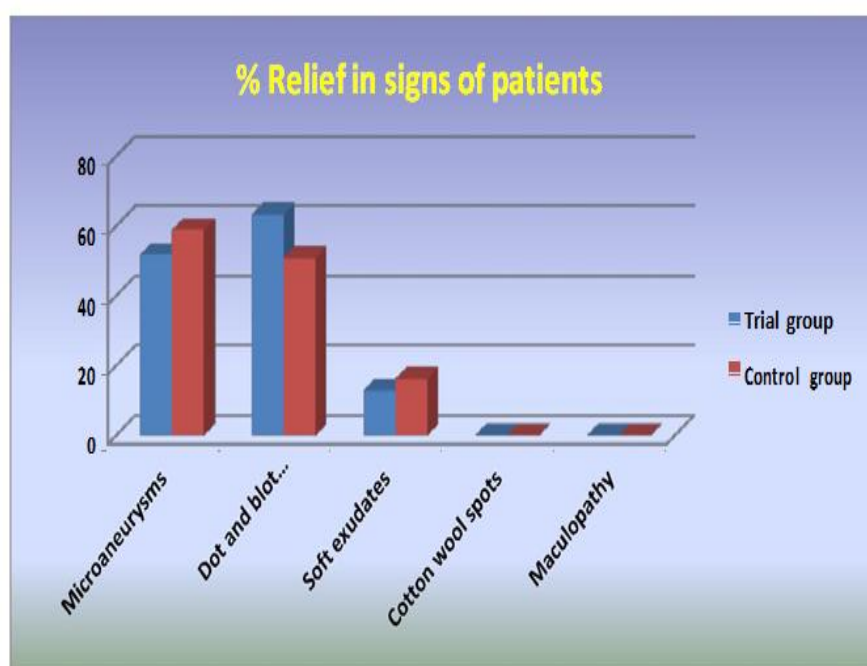
Statistical evaluation

1. Wilcoxon Matched – Pairs Signed – Ranks Test:
2. Mann-Whitney Test:

Showing effect on symptom score of 60 patients of Background (Non-proliferative) Diabetic Retinopathy.

Signs	Group	Total score		Total	% relief
				Relief	
		BT	AT		
Micro	Group A	60	29	31	51.67

Aneurysms	Group B	51	21	30	58.82
Dot and blot	Group A	49	18	31	63.26
Hemorrhages	Group B	53	26	27	50.94
Soft exudates	Group A	39	34	05	12.82
	Group B	37	31	06	16.21
Cotton wool	Group A	07	07		
Spots				No change	
	Group B	05	05		
Maculopathy	Group A	03	03		
				No change	
	Group B	03	03		



Showing % Relief in Symptoms of patients

DISCUSSION

1. **Darvyadi phant** contains drugs – Daruharidra, Devdaru, Triphala, Musta, Guduchi, Punarnava, Yashtimadhu. The contents of the phant having properties the drugs is breaking a new ground for anti-angiogenic agents (which inhibit vascular endothelial growth factors level in retina), antioxidants.

2. Drugs possess potent hypoglycaemic, antioxidant, platelet adhesion properties with free radical scavenging effects are also beneficial. Hence, for promising results, considering the properties like Chakshushya, Pramehahara, Kaphahara, Rattavahastrotodushtihara, Medohara, Shophahara, and Rejuvenating action, so selection of drugs has been made.
3. The plants rich in polyphenols, terpenes, flavonoids, linoleic acid, selenium are found to possess regulate or inhibit vascular endothelial growth factors property of angiogenesis which is a key for diabetic blindness.
4. In the pathogenesis of Prameha, there is Kaphavruddhi, vitiated vaat dosha, Dhatushaithilya and Rasayani dourbalya, Maans and Rakta dhatu dushti. Kapha dosha having predominance of mahabhoota Pruthvi and Jala. Kapha dosha plays significant role in Prameha. So here,, Darvyadi Phant" is selected to breakdown its samprapti.
5. Overall effect of the drug is Tridoshashamak and hence it disintegrates the pathology of the disease Tritiya Chaturtha patalgat doshadushti, which is Tridoshaja in its manifestation.

CONCLUSION

1. Darvyadi phant definitely exerts positive effects on Micro-aneurysms and Dot and blot hemorrhages as Wilcoxon matched pairs signed ranks test is highly significant for these symptoms.
2. From Mann-Whitney test P value is > 0.05 , which means the drug in trial group was equally effective as in control group with respect to above signs.
3. Patients of trial group and control group did not get relief from signs cotton wool spot and maculopathy.

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