


**MARMA CHIKITSA A NON- INVASIVE APPROACH TO DEAL WITH DIABETIC RETINOPATHY**
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**ABSTRACT**

Ayurveda represents a very effective alternative system of medicine with its effective therapies like Yoga, Mud Therapy, *Ahara Chikitsa* and many others. Among which *Marma Chikitsa* is developing and gaining importance. It is a precise art of touching an individual in exactly the right place at a critical moment of time, for the purpose of healing and bringing flawless results in a lot of disorders that are creating hindrances in healthy life of an individual. One of such lifestyle related disorders is diabetes mellitus which if not controlled later on leads to neuropathy, nephropathy and retinopathy. Today diabetic retinopathy has become one of the leading causes of blindness worldwide. So, attracting researchers to find out ways to control its progression and treating it well. Treatment involves laser, photocoagulation, vitrectomy etc. They are effective for short time, but on the other side, having high reoccurrence rates and discomfort to an individual. Here hidden treasures of *Ayurveda* can be explored to help mankind. One of such hidden asset is *Marma Chikitsa*. *Marma Chikitsa* involves pressing *Marma* points which causes release of blockage of energy, removes excess *Ama*, facilitates easy flow of energy, nourishes the tissues, produces endorphins and cortisol like hormones in-turn induces calm shut off FFF response and improves blood circulation. All these activities cause better functioning of that particular area. Some of the *Marma* points stimulation that are related to eyes and some that helps in better metabolism like *Apanga*, *Avarta*, *Sthapni*, *Vidhura*, *Kurcha*, *Kurchshira*, *Indravasti* and *Nabhi* can play a good role in checking progression of retinopathy with *pathya Ahara*, healthy lifestyle, exercises and proper medication. *Marma Chikitsa* can be a safe, convenient, cost-effective adjuvant remedy in dealing diabetic retinopathy.

**KEYWORDS:** Diabetes, Diabetic retinopathy, *Marma Chikitsa*.

**INTRODUCTION**

Diabetes mellitus is a syndrome with disordered metabolism and inappropriate hyperglycemia due to either deficiency of insulin or a combination of insulin resistance and inadequate insulin secretion. Generally it is of two types i.e. Type-1 and Type -2 diabetes mellitus. Majority of people suffer from Type-2 DM (>90%). Uncontrolled diabetes mellitus eventually gives rise to a lot of micro vascular and macro vascular complications–Neuropathy, Nephropathy, Retinopathies, cerebrovascular diseases, Ischemic heart diseases and peripheral heart diseases.<sup>[1]</sup> Diabetic Retinopathy (DR) is one of the most common chronic complications seen in patients with diabetes mellitus.<sup>[2]</sup> It is the leading cause of new onset blindness in industrialized countries and more frequent cause of blindness in middle income countries. WHO estimated that diabetic retinopathy is responsible for 4.8% of the 37 million cases of blindness.<sup>[3]</sup> The severity of diabetic retinopathy depends upon the duration of diseases. The longer the patient has diabetes; higher is their inclination towards developing diabetic retinopathy. Incidence of DR after 10 years is 50% and after 30 years 90%.<sup>[4]</sup> According to a Study -prevalence of diabetic retinopathy in India: The All India Ophthalmological Society Diabetic Retinopathy Eye Screening Study 2014, entire data showed 21.18 % patients with DR had a vision of 6/18 or worse.<sup>[5]</sup>

**PATHOLOGY<sup>[6-9]</sup>**

Diabetic Retinopathy is a result of micro angiopathy which affects the retinal pre capillary arterioles, capillaries and venules. This micro angiopathy causes:

- (1) Micro vascular leakage
- (2) Micro vascular occlusion

**1. Micro vascular leakage**

Normally capillaries are lined by single layer of endothelial cells and basement membrane. But in retinal capillaries, they are also lined by Pericytes. These Pericytes are specifically lost early in diabetic retinopathy forming micro aneurysms. Further rupture of thin walled micro aneurysms lead to superficial and deep hemorrhages in the form of flame shaped and dot- blot hemorrhage respectively. Moreover there is breakdown of blood retinal barrier that causes leakage of plasma forming hard exudates and also retinal edema.

**2. Micro vascular occlusion**

Prolonged diabetes mellitus causes thickening of capillary basement membrane, capillary endothelial cell damage and proliferation, changes in R.B.C's and increased stickiness and aggregation of platelets. All together leads to micro vascular occlusion which in turn lead to retinal hypoxia. Appearance of ischemic areas due to occlusion of

capillaries manifest as “cotton wool spots” or soft exudates. Venous dilation, beading and looping of the veins occur secondary to ischemia.

The two main effects of retinal hypoxia are 1) Arteriovenous shunts 2) Neovascularisation together termed Intraretinal micro vascular abnormalities (IRMA) resulting in development of neovascularisation at the optic disc (NVD) or elsewhere (NVE). These new vessels may proliferate in the plane of retina or spread into the vitreous as vascular fronds. Vitreous detachment and vitreous hemorrhage may occur in this stage. Later fibrovascular tissue contracts to cause retinal detachment and blindness.

### Management

As prevention is better than cure this principle is well applicable over here such that prevention of retinopathy is best. There are certain medical aids like photocoagulation, vitrectomy, laser treatment commonly used in allopath units. It cannot be cured completely, but its occurrence can be delayed by tight glycemic control through proper diet, physical exercise and managed therapeutics.

### Ayurvedic Review

There is no such description of diabetic retinopathy in our texts. But Acharyas have mentioned effect of diabetes on eyes in *Poorva Roopa* of *Premeha* as “*Netra Updeha*”<sup>[10]</sup> and also *Premeha Janya Netra Rogas* are mentioned by *Pujyapada Mahamuni* in their text *Netra Prakashika*.<sup>[11]</sup>

*Samprapti* of Diabetes on modern parameters can be well understood by *Agnimandha* or weak *Chayapchaya Kriya* causing improper metabolism that leads to increased glucose level. Uncontrolled diabetes then steps out to cause complications like diabetic retinopathy. *Samprapti* of diabetic retinopathy can be understood hypothetically by these *Srotodushti* types as.

*Kleda (Kapha Dosh)* which is the main causative factor in *Premeha* and *Netras* which are seat of *Pitta Dosh* having fear of *Kapha Dosh*. Increased *Kleda* and *Kapha Dosh* along with *Pratiloma Gati* of *Vyan Vayu* reach eyes travelling through *Rasayanis* (micro capillaries) and causes *Srotorodha* there, which can be understood with micro vascular occlusion. Due to prolonged *Srotorodha* there occurs *Vimargagamna* and *Atipravrti* of the *Doshas* in later stages that can be indicative of hemorrhages and neovascularisation respectively. Also micro aneurysms that are formed first are reflective of *Siragranthi*. This is how vitiated *Doshas* cause *Srotodushti* in retinopathy.<sup>[12,13]</sup>

If we think about the treatment, *Ayurveda* talks about *Samprapti Vighatan* and *Nidaan Parivarjan* as treatment of every disease. In diabetic retinopathy pathology behind is micro vascular occlusion than micro vascular leakage that leads to formation of micro aneurysms, hard and soft exudates, dot and blot hemorrhages and neovascularisation. So treatment lies in either preventing retinopathy or when it occurs than trying to impede its progression. *Ayurveda* the holistic science introduces a lot of non- invasive techniques to tackle diseases. One such remedy is *Marma Chikitsa*.

**Marma Chikitsa** - is an ancient non-invasive practice whose focus is the manipulation of subtle energy (*Prana*) in the body for the purpose of supporting the healing process.<sup>[14]</sup> It is based on the utilization of 107 points in the body which are considered to be access points to body, mind and consciousness. It is the art of touching an individual at exactly the same point so that energy blocked over there can be released.<sup>[15]</sup> It is being proved scientifically that in acupuncture and acupressure on pressing the vital energy points there is stimulation of the nerve fibers there and causes Hypothalamic-pituitary-adrenocortical axis that releases endorphins, cortisol and serotonin like hormone which in turn release anxiety, reduces pain, improves blood circulation and causes a relaxation response.<sup>[16]</sup>

So, *Marma Chikitsa* can be helpful to deal with diabetic retinopathy. *Marma* points that can be used will work in two ways - firstly, control diabetes and maintain metabolic process. Secondly, maintain vision.

*Acharya sushruta*<sup>[17]</sup> and David Frawley<sup>[18]</sup> have mention certain *Marma* points that work on both of these postulates. *Kurchashira*, *Indrabasti* and *Nabhi Marmas* of upper extremity and trunk are the points that control metabolism and action of *Pachaka Pitta* which will in turn help to maintain glucose level and prevent individual to face complication soon. *Apanga*, *Avarta*, *Sthapni*, *Vidhura* and *Kurcha* are the *Marma* points that enhance working of *Alochaka Pitta* and are directly related to vision which in turn maintain visual status of eye having retinopathy. On applying pressure on these points also there is release of *Srotorodha* and easy flow of blood resulting in proper nourishment of eyes. These *marma* points can be stimulated by pressing each point 20 times in one shift and twice a day. These can be done by a specialist and even self *Marma* therapy is also popular such that individual can self stimulate these points at home.

### CONCLUSION

Diabetic retinopathy which is now a day's a current topic as it is being counted in one of the cause of avoidable blindness. In modern sciences, the only ways are laser, photocoagulation and surgery. In fact they too recommend prevention through diet, exercise and tight glycemic control through medicines. Here *Ayurveda* can hunt their hidden non invasive techniques like *Marma Chikitsa* that is so easy to do, consume no time and is not having any fallouts.

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