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Concept of *Marma Chikitsa* in Diabetic Retinopathy

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ABSTRACT

Nowadays, diabetic retinopathy is one of the main reasons people go blind in the world. Thus, encouraging researchers to look for strategies to stop its progression and provide effective treatment. Laser, photocoagulation, vitrectomy, etc. are used in treatment. They are beneficial for a brief period of time, but on the flip side, they have significant reoccurrence rates and cause discomfort to the person. Ayurveda's undiscovered riches can be discovered here to benefit humanity. One such undiscovered resource is Marma Chikitsa. Pressing Marma points releases energy blockages, eliminates excess Ama, facilitates easy energy flow, nourishes tissues, and produces endorphins and cortisol-like hormones, which in turn cause a calm shut-off FFF response and enhance blood circulation. All of these activities lead to improved performance in that specific area. With Pathya Ahara, a healthy diet, exercise, and the right medication, some Marma points, including Apanga, Avarta, Sthapni, Vidhura, Kurcha, Kurchshira, Indravasti, and Nabhi, that are associated with the eyes and others that promote better metabolism, can be very effective in slowing the progression of retinopathy. Marma Chikitsa may be a reliable, practical, and affordable adjuvant treatment for diabetic retinopathy.

Key words: Diabetes, Diabetic retinopathy, Marma Chikitsa

INTRODUCTION

Diabetes mellitus is a syndrome characterised by abnormal metabolism and inappropriate hyperglycemia that can be brought on by either an insulin deficit or by a concomitant insulin resistance and insufficient insulin production. Typically, diabetes

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mellitus comes in two forms: type 1 and type 2. Type-2 DM affects the vast majority of patients (>90%). microvascular Numerous and macrovascular consequences, such as neuropathy, nephropathy, retinal diseases, cerebrovascular disorders, ischemic heart diseases, and peripheral heart diseases are finally brought on by uncontrolled diabetes mellitus.^[1] One of the most frequent chronic problems experienced by people with diabetes mellitus is diabetic retinopathy (DR).[2] It is the driving cause of unused onset visual impairment in industrialized nations and more visit cause of visual deficiency in centre salary nations. WHO evaluated that diabetic retinopathy is capable for 4.8% of the 37 million cases of visual impairment.[3] The seriousness of diabetic retinopathy depends upon the term of maladies. The longer the persistent has diabetes; higher is their slant towards creating diabetic retinopathy. Frequency of DR after 10 year a long time is 50% and after 30year a long time 90%. [4] Concurring

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to a Think about predominance of diabetic retinopathy in India: The All India Ophthalmological Society Diabetic Retinopathy Eye Screening Think about 2014, whole information appeared 21.18 % patients with DR had a vision of 6/18 or more regrettable.^[5]

Pathology

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

- 1. Micro vascular leakage
- 2. Micro vascular occlusion

Micro vascular leakage: Regularly capillaries are lined by single layer of endothelial cells and basement membrane. But in retinal capillaries, they are too lined by Pericytes. These Pericytes are particularly misplaced early in diabetic retinopathy shaping micro aneurysms. Encourage break of lean walled micro aneurysms lead to shallow and profound haemorrhages within the frame of fire shaped and dot-blot haemorrhage separately. In addition, there's breakdown of blood retinal boundary that causes leakage of plasma shaping difficult exudates additionally retinal odema.

Micro vascular blockage: Long-term diabetes mellitus results in thickening of capillary basement membrane, proliferation and damage to capillary endothelial cells, changes in RBCs, and an increase in platelet stickiness and aggregation. All of these factors work together to cause microvascular occlusion, which causes retinal hypoxia. "Cotton wool spots" or soft exudates are the symptoms of ischemic areas caused by capillary occlusion. Secondary to ischemia, vein looping, beading, and dilation take place.

- a) Arteriovenous shunts are one of retinal hypoxia's two main side effects.
- b) Neovascularization is also referred to as Neovascularization at the optic disc (NVD) or elsewhere (NVE) is a result of intraretinal microvascular abnormalities (IRMA). These fresh blood vessels might grow into vascular fronds in the vitreous or multiply in the retinal plane. In this

stage, vitreous detachment and haemorrhage are both possible. Later, retinal detachment and blindness are brought on by fibrovascular tissue contracting. [6-9]

AYURVEDIC REVIEW

Such a description of diabetic retinopathy is not found in any of our texts. But in *Poorva Roopa* of *Premehaas "Netra Updeha," Acharyas* mention the impact of diabetes on the eyes^[10] and also *Premeha Janya Netra Rogas* are mentioned by *Pujyapada Mahamuni* in their text *Netra Prakashika*.^[11] *Agnimandha* or a weak *Chayapchaya Kriya* can effectively understand *Samprapti* of Diabetes on modern parameters, which results in improper metabolism and elevated glucose levels. Diabetes that is not under control then progresses to cause complications like diabetic retinopathy. These *Srotodushti* types can theoretically be understood as *Samprapti* of diabetic retinopathy.

Premha and Netras, are the seats of Pitta Dosha, have a fear of Kleda (Kapha Dosha), which is the primary contributing factor. Increased Kleda and Kapha Dosha, as well as Pratiloma Gati of Vyan Vayu, travel through Rasayanis (microcapillaries) to the eyes and cause Srotorodha, which is explained by micro vascular occlusion. Vimargagamna and Atipravrati of the Doshas, which can be indicative of hemorrhages and neovascularization, respectively, are caused by prolonged Srotorodha in the later stages. Additionally, the first-formed microaneurysms are indicative of Sirgaranthi. This is how Srotodushti in retinopathy is brought on by vitiated Doshas. [12,13] If we consider the methods of treatment, Ayurveda speaks of Samprapti Vighatan and Nidaan Parivarjanas methods of treating everv illness. Microvascular occlusion microvascular leakage, which cause microaneurysms, hard and soft exudates, dot and blot hemorrhages, and neovascularization, are the pathologies responsible for diabetic retinopathy. Therefore, the best course of action is to either prevent retinopathy or, if it already exists, to stop it in its tracks. The holistic science of Ayurveda introduces numerous non-invasive methods for treating illnesses. Marma Chikitsa is one such medication.

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Potential mechanism of action for Marma Chikitsa

The exact art of touching someone precisely in the right spot at precisely the right time is known as *Marma* therapy. It is a crucial component of *Pranic* healing. It is one of the least harmful, expensive, and safest forms of therapy. Additionally, there are no side effects from this therapy and no prior preparation is necessary. Even *Sushruta's* idea of "*Hastamaeva Pradhantamam Yantram*" is satisfied by it. These vital and potent *Marma* points can be stimulated with the right amount of pressure, which causes biochemical changes in the body and the brain that suppress the symptoms. The outcome is anticipated to be both immediate and substantial. [14,15]

The Marma therapy technique

These Marma points can be used: Kurcha, Kurchashira, Indrabasti, and Nabhi Marmas for the upper extremity, trunk and Apanga, Avarta, Sthapni, and Vidhura Marmas for the head. In each sitting, the stimulus can be applied to the corresponding Marma points using the pulp portion of the thumb or the lateral border of a finger. A total of 3 sittings per day- morning, during the day, and in the evening are advised. Rhythm and respiration are similar in many ways. In one sitting, 20 presses of the Marma points are made. Supine and prone positions should be used for Marma point stimulation. The patient can incorporate it into their daily routine by learning self-stimulation techniques.[16,17]

DISCUSSION

Marma Chikitsa is a traditional non-invasive technique that focuses on adjusting the body's subtle energy (*Prana*) in order to aid in the healing process. ^[18] It is based on the use of 107 body points that are thought to be access points to the body, mind, and consciousness. It is the practice of touching someone precisely where they are so that energy that has been blocked there can be released. ^[19] The Hypothalamic-Pituitary-Adrenocortical Axis, which releases endorphins, cortisol, and serotonin-like hormones, which in turn release anxiety, reduce pain, improve blood circulation, and trigger a relaxation response, is

stimulated when the vital energy points are pressed in acupuncture and acupressure, according to scientific research.[20] Therefore, Marma Chikitsa may be useful in treating diabetic retinopathy. The Marma points that can be used first control diabetes and keep the metabolism running smoothly. Second, keep your eyes open. Acharya Sushruta^[21] and David Frawley^[22] have mention certain Marma points that work on both of these postulates. The upper extremity and trunk's Kurchashira, Indrabasti, and Nabhi Marmas are the points that regulate Pachaka Pitta's metabolism and action, which will help to maintain glucose levels and prevent individuals from experiencing complications anytime soon. The Marma points Apanga, Avarta, Sthapni, Vidhura, and Kurcha support the function of Alochaka Pitta and are directly linked to vision, maintaining the visual status of an eye with retinopathy. When pressure is applied to these points, Srotorodha is also released, facilitating easy blood flow and providing the eyes with the nutrition they require. Each of these Marma points can be activated by pressing it 20 times in a single shift and twice daily. These can be carried out by an expert or even by the individual Marma therapy is also widely used so that people can self stimulate these *Marma* points at home.

CONCLUSION

Diabetic retinopathy is a topic of discussion at the moment because it is one of the leading causes of preventable blindness. The only methods in contemporary sciences are laser, photocoagulation, and surgery. In fact, they also advise prevention through healthy eating, regular exercise, and strict glycaemic control through medications. Here, Ayurveda can look for its secret, non-invasive techniques like Marma Chikitsa, which is simple to perform, takes little time, and has no negative side effects.

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