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A CONCEPT OF MADHUMEHVIDAGDHA DRISHTI AS COMPLICATION OF MADHUMEH W.S.R. TO DIABETIC RETINOPATHY

Varsha B. Solanki¹, Hemangi Shukla², Jayesh Katrodiya³, Dhaval Sojitra⁴

¹PG. Scholar, ²Associate Professor& HOD, ³PG. Scholar, ⁴ PG. Scholar, Department of Shalakyatantra, Govt. Akhandanad Ayurved Collage, Ahmedabad, Gujarat, India

Email: slnkvrsh@gmail.com

ABSTRACT

Diabetes is a metabolic disorder that is characterized by high blood glucose & either insufficient or ineffective insulin. Complication of elevated glucose levels in the blood, over a time, results in microvascular retinal changes. These retinal changes develop retinopathy known as Diabetic retinopathy (DR). It is a serious sight-threatening complication of diabetes. If left untreated, it is the number one cause of blindness in people between the ages of 20-64 years in the United States. The treatment like photocoagulation, vitrectomy, anti-inflammatory injections etc. may help before the retina has been severely damaged. There is no permanent cure for DR. There is no exact correlation of DR in $\bar{A}yurv\bar{e}d$. But the reference of Charaka ch rya all the innate disorders do not arise without $V\bar{a}ta$, Pitta&Kapha. The wise physicians having observed the location, characters, & function of Vāta, Pitta and Kapha define the disorders caused by them. Kapha is the main Dosha involved in Samprāpti of Pramēha. ĀchāryaSushruta has told that when PramēhaVyādhi manifests, if it left untreated will cause Māmsa, ShōnitaDuṣhti. In this stage, if proper treatment is not given, Upadravās of Pramēha occurs. So we can contemplate DR as MadhumēhvidagdhaDriṣhti. As Madhumēh can be correlated with DM. Vidagdh means destroyed or decomposed and Drishti means retina. Thus, "MadhumēhvidagdhaDrishti" can be defined as "Drisht (Retina) which is destroyed by Madhumēh (DM)"

Keywords: Diabetic retinopathy, *MadhumēhvidagdhDristi*, *Dristi*, *PramēhaUpadravās*

INTRODUCTION

Diabetes Mellitus affects almost every system in the body. It is associated with long term complications involving eyes, kidneys, nerves and blood vessels. Eyes are specially subjected to diabetic disturbances because of their peculiar structure and metabolism. Diabetic retinopathy (DR) in the eyes is one of the major vascular complications of diabetes.

The Netraor Drishti (eye) is the seat of the Cakshurindriya which plays an important role among other Gyanendriyas. So, Āchārya Sushruta has described anatomy of the eye "Drishtimandala" as inner most Mandal among five 1 Anatomicaly, "Drishtimandala" can be considered as pupil, lens and retina. Retina is an innermost tunic of the eyeball. It is a thin, delicate, and transparent membrane & most highly developed tissue of the eye². Any pathology which affects the retina, leads to defective vision & vision loss. If you are not able to keep your blood sugar levels in a target range, it can cause damage to your blood vessels. Diabetic retinopathy happens when high blood sugar damages the tiny blood vessels of the retina.

Prevalence of Diabetic retinopathy

Worldwide prevalence of DR- A recent pooled analysis from 35 populations- based studies

estimated the 93 million people worldwide have DR of whom 17 million (~18%) have proliferative DR, 21 million (~23%) have diabetic macular oedema (DME) & 28 million (~20%) have sight-threatening DR³.So, it is the leading cause of blindness. So to find out such phenomenon of Diabetic retinopathy has been selected for the present study.

Diabetic retinopathy:

Diabetic retinopathy, the most common diabetic eye disease, occurs when blood vessels in the retina change. Sometimes these vessels swell and leak fluid or even close off completely. In other cases, abnormal new blood vessels grow on the surface of the retina. Diabetic retinopathy usually affects both eyes. People who have diabetic retinopathy often don't notice changes in their vision in the disease's early stages. But as it progresses, diabetic retinopathy usuallycannot be reversed.

Pathology:

Histopathological examination of eyes with diabetic retinopathy shows a Loss of intramural pericytes, Thickening of the basement membrane & Progressive closure of the retinal capillaries.

The initial loss of the formation of dilatations of the vessels seen as microaneurysms and a breakdown of the blood retinal barrier,

Allowing, leakage of the vascular contents into the surrounding tissues

Oedema is present around such areas, as well as hard exudates and small localised deep haemorrhage known as dot and blot haemorrhages.

There is increased aggregation of platelets, causing capillary non-perfusion. Extensive closure of the capillaries leads to ischemia of the retina.

The body attempts to re-establish blood supply by opening up shunt vessels, "intraretinalmicrovascular abnormalities" (IRMA). Neovascularization at the border between well & poorly perfused retinal areas.

Neovascular tissue is more friable, bleeds easily & incites a fibroblastic response⁴.

Signs& symptoms:

In the initial stages of diabetic retinopathy, patients are generally asymptomatic. In the more advanced stages of the disease, however, patients may experience symptoms:

- Sudden changes in vision
- Floaters in vision
- Blurred vision
- Distorted vision
- Progressive visual loss
- Reduction in night vision
- Seeing dark spots or patches

Signs of diabetic retinopathy:

- Dot and blot haemorrhages
- Microaneurysms
- Hard & soft exudates
- Cotton wool spots
- Venous abnormalities loops, beading & dilatation
- Retinal oedema
- Neovasculazation
- Intraretinalmicrovascular abnormalities
- Vitreous haemorrhage

Madhumehvidagdhadrishti:

There is no exact correlation of DR in $\bar{A}yurv\bar{e}da$. Anatomically retina may be corre-

lated with "*Driṣhti*". So, DR can be considered as a *DriṣhtigataRōg*. Signs & symptoms of DR are not observed in a single *DriṣhtigataRōg*, but in various *DriṣhtigataRōgas* as

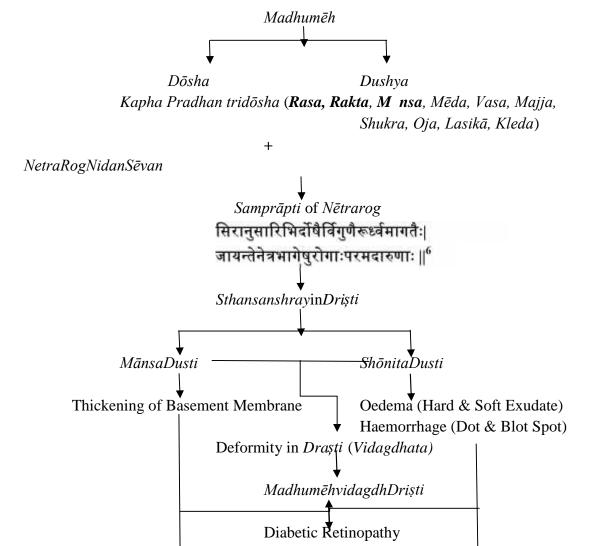
- Distorted vision in *DwitiyapatalgataTimir*,
- Spots & patches are seen in TritiyapatalgataTimir,
- Night blindness can be considered as a Nakttāandhya & KaphavidagdhaDrişhti.

So, DR can be distinctly defined as 'MadhumēhvidagdhaDrişhti'.

 $\bar{A}yurv\bar{e}d$ is the science of life which is based on $V\bar{e}dic$ fundamentals. One can treat any disease which is not mentioned in $\bar{A}yurv\bar{e}dic$ texts by following its fundamentals.

Kapha is the main Dōsha involved in Samprāpti of Pramēha. ĀchāryaSushruta has told that when PramēhaVyādhi manifests, if it is left untreated will cause Māmsa, ShōnitaDuṣhti. In this stage, if proper treatment is not given, Upadravās of Pramēhaoccurs⁵.

Data in *Rakta & RaktavahaSrotas* is mainly responsible for the wide range of complications seen in *Prameha*.



Chikitsa:

• Nid nParivarjana

1. Chikitsa of Pramēha

Vir chana Karma (ShodhanChikitsa)⁷

Prameha is a systemic disorder, so to eliminate the vitiated doshas from the body, koshthashuddhi by virechana is must. Since many diabetics have autoantibodies, a cleansing in form of virechana is helpful to flush out the toxins. Moreover retinal exudation and hemorrhagic features of Diabetic Retinopathy

seems to be alike *UrdhwagaRaktapitta* (extravasation/exudation per supra clavicular parts). Hence basic line of treatment of this disease i.e. *Virechana* can be adopted to reduce the intra vascular pressure as a whole.

2. NetraR gaNid nParivarjan

• Anjana Karma (L khanAnjana)

While mentioning the treatment of the *DrishtigataRōga*, *ĀchāryaSushruta* mainly give stress on the *Anjana karma* rather than other the *Kriyakalpa*. Because, it is very effective in

DrishtigataRōgas. Āchārya has also mentioned that Anjana can be done only when the Dōshas are located precisely in the eye. And here in diabetic retinopathy, the dōshas are resided in the eye specifically in the retina. Among three type of Anjana, LēkhanaAnjana is effective in MadhumēhvidagdhaDrishti, as The Dōshas accumulated in the regions of the eye and the eye lids, in both, the passages, and in the capillaries of the eye, as well as in the gristle of the nose would be secreted through the mouth, the nostrils and the corners of the eyes by application of the Lēkhana Anjana⁸.

Sampraptivighatanmev hi chikitshall

In Samprāpti of MadhumēhvidagdhaDriṣhti, Kapha Pradhan TridoshaDusti & Mamsa — ShonitaDushti occurs. So LēkhanaAnjana which act on KaphaDōsha as well as Mamsa & ShonitaDushti can be implied in the treatment of MadhumēhvidagdhaDriṣhti.

CONCLUSION

Diabetic retinopathy can be defined as *MadhumēhvidagdhaDriṣhti*. It can be effectively treated by *Virechan Karma* and *LēkhanaAnjana*

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