

TWO CASES OF DIABETIC CRANIAL NEUROPATHY

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Received on: 11/12/2019

Revised on: 01/01/2020

Accepted on: 22/01/2020

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INTRODUCTION

Diabetes has become one of the largest global health-care problems of the 21st century. The number of people with diabetes worldwide is predicted to double between 2000 and 2030, reaching a pandemic level of 366 million people.^[1] Neuropathy is a common complication of diabetes^[2] in which cranial nerve palsies are rare and associated with long-standing poorly controlled type 2 diabetes.

I report two cases of middle aged patients with cranial nerve palsy as the complication of type 2 Diabetes.

Case number one was Indian male patient, 62 years old reported with binocular diplopia noted since 30 days ago. The patient had diplopia, blurred vision, mild, frequent periorbital pain, headache, and weakness. The patient denied recent head trauma and prodromal symptoms suggestive of a viral illness. Other medical problems included diabetes mellitus type II without appropriate control, varicose veins, and Liver cirrhosis. He had a history of Koch's Disease completely treated before 30 years. His usual medication included oral hypoglycaemic 3 times a day and long-acting insulin, but his compliance was poor. He never drinks or smokes. He works in a Hotel industry where his position gives him a lot of mental stress. He reported visual strain due to constant computer and cell phone use and *akaalsashana* (untimely food habits) due to irregular and long standing meetings.

The brain computed tomography performed in the emergency room of another hospital showed no intracranial lesion. The physical examination revealed no significant ophthalmological finding. The fundus examination was within normal limits. His best corrected visual acuity was 6/36 and 6/12 for right and left eye respectively. The pupils were equal and normally reactive. The extra ocular movement and ocular alignment were abnormal. Neurological examination revealed findings of lateral rectus palsy in the right eye. C-reactive protein level, leukocyte count, and creatinine level were within normal limits. Acute abducent nerve palsy due to diabetes mellitus was the diagnosis.

Because of excessive *kleda*,^[3] present due to diabetes mellitus and having *raktadushtikara* environment as seen by liver cirrhosis and continued *achakshushya hetus* like computer use and *rasa* and *meda dhatu dushti hetus* like *akalashana*, *snayus* in eye are affected as *snayus* are

formed from *medo dhatu*,^[4] Also *vyaana kopa* due to *akalaaashana* led to *kriyahaani*.

The treatment was directed to reduce *kleda* in *shiras* (head) as the first step. Along with that it was imperative to give *bala* to *snayus* and remove excessive *Vaata dushti* in eye.

The treatment was started with (Dated:- 20/11/18 For 07 days)

- 1) N P Vati 250 mg. 2 TID after food.
- 2) Garudanjana (manufactured by Shridhareeyam Ayurveda Eye hospital, kerala) - 1drop in morning & evening. Wash eyes after 5 minutes.

Kriyakalpa and procedures Dated:- 22/11/18 to 28/11/18.

Morning

- ❖ Takra dhara- musta amalaki 45 minutes
- ❖ Netra- Parisheka with Yastimadhu, darvi, rasna. kashaya 10 minutes.
- ❖ Bidalak with Yastimadhu, Rasna, Darvi. till it dries.

Evening

- ❖ Nasya with anu taila 6 drops in each nostril.
- ❖ Tarpan with TZ ghruta (prepared In house)- left Eye.
- ❖ Parisheka with Yastimadhu, darvi, rasna. kashaya 10 minutes. 29/11/2018.

The complaints were still the same.
The diagnosis was still Left Eye - LR palsy.

Chikitsa:-For 15 days.

- ❖ Bruhat vaat chintamani 125 mg. 1 BID after food.
- ❖ Ekangavira 125 mg 2 TID after food.
- ❖ Castrolax (eranda taila in capsule Form by Asoja soft capsules pvt. Ltd.) 2 tab before dinner.
- ❖ N P Vati 250 mg. 2 TID after food.
- ❖ Garudanjana - 1drop in morning & evening. Wash eyes after 5mins.

15/12/18 LE- LR palsy better than before.

Chikitsa:- for 35 days.

- ❖ Ekangavira 125 mg. 2 TID after food.
- ❖ Ksheerabala 101 cap. 2 TID after food.
- ❖ Mamejak ghana (prepared by Chaitanya pharma, Nashik.) 250 mg. 2 TID before food.
- ❖ Liq. Madhurantak (prepared by Ashtang herbals, Ahmedabad)- 4tsp BID before food.
- ❖ CAP. Castrolax- 2 tab before dinner.
- ❖ Tarpana – from 17th Dec 2019 with *Triphala Ghruta*- 15mins/day for 7days.

4/2/19

- ❖ Complete improvement in palsy. Both the eyes have good alignment and all the movements are within normal limits.
- ❖ Chikitsa:-For 30 days.
- ❖ Suvarna malini vasant 125 mg 1 tab HS.
- ❖ Madhurantak 4 tsp BID before food with water.
- ❖ Mamejak Ghana 250 mg 2 BID before food.

Case number two

Case number two was Indian male patient, 56 years old reported with binocular diplopia of and mild ptosis with shift of eyeball to the lateral side resulting into divergent squint noted since 45 days ago. The patient reported the right ptosis with progressive course, while no diurnal change was noted. The patient has diplopia, blurred vision, mild, frequent periorbital pain, headache and weakness. The patient also denied recent head trauma and prodromal symptoms suggestive of a viral illness. Other medical problems included diabetes mellitus type II without appropriate control and hypertension. He had a history of right divergent squint eight years ago, completely treated, right *Avabaahuka* fully treated and right facial n. palsy fully recovered. His usual medication included oral hypoglycaemic 3 times a day and oral anti-hypertensive, but his compliance was poor. He occasionally drinks alcohol and never smokes.

The brain computed tomography performed in the emergency room of another hospital showed no intracranial lesion. The functional examination revealed no significant ophthalmological finding. His best corrected visual acuity was 6/9 in both the eyes respectively. The neurological examination revealed mild ptosis of right eyelid. The pupils were equal and normally reactive. The extraocular movement and ocular alignment were abnormal with visible divergent squint and ptosis in right eye. Neurological examination revealed findings of partial Ophthalmoplegia. C-reactive, leukocyte count, and Creatinine level were within normal limits. His BMI was 28 kg/m²

He is an engineer and social and political worker having a lot of stress and travelling involved along with shift duties. Acute Oculomotor nerve palsy due to diabetes was the diagnosis. Cranial mononeuropathy requires rapid correction of hyperglycemia; insulin therapy was

initiated immediately with the help of allopathic physician.

Looking at his hectic, stressful and erratic lifestyle coupled with history of frequent *vaatavyadhis* the treatment is directed towards pacifying *saarvaehik vaatadosha* and hence *basti*,^[5] which is useful for *prameha*, *abhishyanda* was chosen along with local *vaatashamaka* therapies.

The following treatment was started 28/1/19 For 10 days.

- Brahmi Vati (suvarna) 125 mg BID after food
- Bruhat vaat chintamani 125 Mg BID after food
- Ksheerabala Avarti 3drops twice a day in nose.

1/2/19 To 7/2/19

- ❖ Shirodhara with Brahmi taila for 45mins. (Patient refused to take).
- ❖ Only for right eye
- ❖ Tarpan with Jivanatyadi ghrutam for 15mins.
- ❖ Shalishashtika (Netra) for 15mins.
- ❖ Annalepana for 15mins.
- ❖ Parisheka (netra) for 15mins with Triphala kashaya
- ❖ Basti with Rasna, Nimba, Kiratatikta, Patol, Devadaru- Kashaya 300ml + Sarshapa kalka (10gms) + Saraswata Ghruta (75gms).7/2/19
- ❖ Better than before.

Chikitsa:- For 15 days,

- ❖ Brahmi Vati (suvarna) 125 mg BID after food
- ❖ Bruhat vaat chintamani 125 Mg BID after food
- ❖ Cap. Punarjatu (Pavman pharmaceuticals, Vijayapur)1 BID after food.
- ❖ Saraswatarishta - 4tsp bi d After food with water.
- ❖ Dhanvantram (101) apply and massage on lid & forehead 2times a day.
- ❖ Cap. Castrolax 2 tablets before dinner.

14/02/19 to 21/02/2019

- ❖ Tarpan with Jivanatyadi ghrutam for 15mins.
- ❖ Viddha karma done at *bhrumadhya*, *bhrupuchchhanta*, *upanasika* on 14th Feb, 16th Feb, 19thFeb, 21st Feb.

19/2/19 -Chikitsa:-For 15 days

- ❖ Suvarna Malini Vasant 125 mg 1 BID After food
- ❖ Vasant kusumakar 125 mg 1 bid after food.
- ❖ Cap. Punarjatu 1 BID after food.
- ❖ Saraswatarishta - 4tsp bid After food with water.
- ❖ Dhanvantram (101) apply and massage on lid & forehead 2times a day.
- ❖ Cap. Castrolax 2 tablets before dinner.

28/02/19 Taken for 5 days.

- ❖ Tarpan with shatavhadi ghruta for 15mins only Rt eye.
- ❖ Shalishashtika (Njvarakizhi) for Rt eye with Ksheerapaka of Rasna, Devdaru, Yastimadhu for 15mis.

- ❖ Netra parisheka- Rt eye with Ksheerapaka of Rasna, Devdaru, Yastimadhu for 15mins.
- ❖ Basti with Rasna, Nimba, Kiratatikta, Patol, Devadaru- Kashaya 300ml + Sarshapa kalka (10gms) + Saraswata Ghruta (75gms).
- ❖ Talam- Rasna, kushtha, Devdaru, Ksheerabala taila for 60mins.

Dated:- 7/3/19

O/E:- RE- ptosis present

RE- medial rectus

Diplopia better.

Chikitsa: for 15 days

- ❖ Bruhat vaat chintamani 125 mg 1 BID after food
- ❖ Ekangavira 125 MG 2 BID After food
- ❖ Suvarna Malini Vasant 125 MG BID after food
- ❖ Panchamruta loha guggulu 250 MG 2 BID after food
- ❖ Mahalakshmi vilas 125 mg 2 BID after food
- ❖ Dhanvantara tailam (101) apply on lid and massage.
- ❖ Maharasnadi kashay 3tsp bid before food with water.
- ❖ Castrolax 2 tablets before dinner

Dated:- 20/4/19

- ❖ No diplopia.
- ❖ Krura koshta.

Chikitsa:-For 30 days.

- ❖ Meha Rasayana (Ayurveda rasayani) 250 mg 1 tab HS with water.
- ❖ Lakshmi Vilas 125mg 2 tab HS with water.
- ❖ Vasulax (Vasu pharmaceuticals) 2 before dinner.
- ❖ Cleverina (in house preparation) 1 drop morning & evening in each nostril.

DISCUSSION

Cranial mononeuropathies are rare and most frequently occur in older individuals with long-standing, poorly controlled type 2 diabetes with vascular and neuropathic complications. Symptoms of oculomotor nerve palsy consist of an abrupt onset of debilitating severe diplopia and a decrease of visual acuity. Physical examination shows paralysis of adduction, elevation, depression, and ptosis. Pupil abnormalities can occur, and heavy ocular pain is reported. Diabetic oculomotor nerve palsies usually occur without other cranial nerve palsies. The nerve injury is thought to be caused by either nerve ischemia or infarction of the nuclei in the mesencephalon. In patients with diabetic oculomotor nerve palsy, infarction occurs in the core of the nerve, sparing the superomedial-concentrated pupillomotor fibers and thereby pupils function, in contrast to palsies due to other diagnoses. Differential diagnoses include infectious diseases, aneurysms, inflammatory disorders, tumors, trauma, and surgery. Management is supportive, including optimal glycaemic control as well as minimization of other risk factors for ischemia, including control of blood pressure and lipid levels.

In case number one because of excessive *kleda* present due to diabetes mellitus and having *raktadushtikara* environment as seen by liver cirrhosis, continued *achakshushya hetus* like computer use and *rasa - meda dhatu dushti hetus* like *akalashana*, *snayus* in eye are affected as *snayus* are formed from *medo dhatu*. Also *vyaana kopa* due to *akalaaashana* led to *kriyahaani*.

The treatment was directed to reduce *kleda* in *shiras* (head) as the first step. Along with that it was imperative to give *bala* to *snayus* and remove excessive *Vaata dushti* in eye. *Takra dhara* with *musta amalaki* is used as it is *abhishyandaghna*^[6] and hence *kledaghna* reducing obstruction to *srotansi* in head. *Netra- Parisheka* with *Yastimadhu*, *darvi*, *rasna*, *kashaya* was useful as local *chakshushya*, *abhishyandaghna* and *vaataghna* therapy. *Bidalak* with *Yastimadhu*, *Rasna*, *Darvi* helped to reduce local *abhishyanda*. *Nasya* with *anu taila* 6 drops in each nostril, *Tarpana* with *TZ ghruta* also directed to reduce *Vaata* and increase *snayu bala*. Once the palsy was corrected, the drug *suvarna malini vasant* was given to increase *dhatu bala* and *agni bala*, to act as *rasayana*.

In case number two, Looking at his hectic, stressful and erratic lifestyle coupled with history of frequent *vaatavyadhis* the treatment is directed towards pacifying *saarvaehik vaatadosha* and hence *basti* which is useful for *prameha*, *abhishyanda* was chosen along with local *vaatashamaka* therapies.

Even the drugs were chosen which potent *Vaata shaamaka*. *Panchamruta louha gu* is a drug from *Bhaishyaja Ratnavali* used for *mastishka apachaya janya vyadhi*. *Laxmi vilasa rasa* is used in *jeerna pakshaghaata* and hence used there as a *Rasayana*.

CONCLUSION

In patients with diabetic cranial nerve palsy, infarction occurs in the core of the nerve. The patients should be individually assessed and according to *hetu bala*, the drugs potency should be chosen. The time taken by the patient for complete recovery is 3 months on an average. Good metabolic control is the prerequisite.

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