Ayurvedic understanding of Central Pontine Myelinolysis - A Case Report

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ABSTRACT

A 56 year old male patient was admitted to S.D.M Ayurveda Hospital, Hassan, Karnataka with the confirmed diagnosis of Central Pontine Myelinolysis (CPM) on 11/12/17. The chief complaints were weakness of both hands and legs, stiffness in both hands and legs, pain in both shoulder joints, slurred speech, difficulty in walking with gait changes. H/O chronic alcoholism. MRI brain showed pontine and basal ganglia diffusion restriction - Acute Pontine Myelinolysis. The serum electrolyte showed serum sodium level as 128 mmol/litre. This disease can be understood as Samana Avruta Vyana in hyponatremic encephalopathy stage and the stage of myelinolysis can be understood as Sarvanga Vata with Kapha Avruta Udana and Vyana. After clinical evaluation, Avarana Chikitsa was started followed by Kevala Vatika Chikitsa and significant improvement was seen. Significant result was observed in subjective and objective parameters after the treatment. The patient was discharged with oral medications for 1 month.

Key words: Central Pontine Myelinolysis, Samana Avruta Vyana, Sarvanga Vata, Avarana Chikitsa.

INTRODUCTION

Central Pontine Myelinolysis is a concentrated, frequently symmetric, non inflammatory demyelination within the central basis pontis. First stage is hyponatremic encephalopathy followed by the stage of myelinolysis.[1]

In Ayurveda it can be understood in two stages. The stage of hyponatremic encephalopathy can be understood as Samana Avruta Vyana. Stage of myelinolysis can be understood as Sarvanga Vata with Kapha Avruta Avastha. Here Kapha creates Avarana for Vyana Vata and Udana Vata resulting in Lakshanas like Vak Graha, Swara Graha, Dourbalya, Guruta and Gati Sanga. Hence the treatment principle will be primarily Avaranahara followed by Kevala Vatika Chikitsa.

UNIQUENESS OF THE CASE

1. Neurological presentation due to metabolic cause.
2. Stage wise explanation of the disease and treatment in Ayurveda.

CASE HISTORY

1. A 56 year old gentleman who is not a k/c/o DM and HTN was well before for 10 months. On 07/3/2017, in the evening at around 4 PM suddenly he started to have episodes of vomiting. As per the patient’s words the vomitus was greenish black in color. At around 12 AM at night he had a fall from the bed. No h/o of any head injury. There after he started experiencing drowsiness and irrelevant speech.
2. On 08/03/17 morning, after waking up, he started to have slurred speech with confused words and incontinence of urine. The drowsiness was persisting. He was able to walk with support. At 7 AM he was taken to a modern hospital from his house. He had travelled for around 2 km in auto. After reaching the hospital, he was first taken to Casualty where he had been catheterized. CT of the head was taken and in that no abnormality was seen.

3. On 11/03/17, he was discharged from the same hospital and was taken to another allopathic hospital for further treatment. At the time of discharge urinary incontinence and vomiting was completely absent. Difficulty in walking, slurred speech, drowsiness and confusion was persisting. He was admitted in ICU for two days. He was given with modern interventions, details of which are unknown. After these intervention he started experiencing loss of strength on both the hands and legs and severe breathing difficulty.

4. On 19/03/17, he was discharged from the hospital at around 3 pm and was referred to another super speciality Hospital in Bangalore. At the time of discharge he was having weakness of all the four limbs, slurred speech, difficulty in breathing and emotional upset. After admitting there, tracheostomy was done initially due to his breathing difficulty. He was under RT feeding also. He was there for 10 days.

5. On 7/4/17, he was discharged from the same hospital. At the time of discharge, his level of consciousness improved and breathing difficulty reduced. But weakness of four limbs and slurred speech was persisting.

6. On 15/04/17 he was again admitted there for the same complaints. He was given modern medications for 20 days. At the time of discharge i.e. on 06/05/17, the endotracheal tube and RT tube was removed, weakness of the limbs was reduced and there was slight improvement in the speech. He was able to walk without support, but with difficulty.

7. On 11/12/17, he was admitted in SDM Ayurveda Hospital with the complaints of weakness of both hands and legs, stiffness of both hands and legs, pain in both shoulder joints, slurred speech and difficulty in walking without support.
On examination,

**Table 1: Muscle power before treatment.**

<table>
<thead>
<tr>
<th>Side</th>
<th>Upper Limb</th>
<th>Lower Limb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>2/5</td>
<td>3/5</td>
</tr>
<tr>
<td>Right</td>
<td>2/5</td>
<td>3/5</td>
</tr>
</tbody>
</table>

**Table 2: Muscle reflex before treatment.**

<table>
<thead>
<tr>
<th>Reflex</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankle Jerk</td>
<td>1+</td>
<td>1+</td>
</tr>
<tr>
<td>Knee Jerk</td>
<td>3+</td>
<td>3+</td>
</tr>
<tr>
<td>Supinator Jerk</td>
<td>2+</td>
<td>2+</td>
</tr>
<tr>
<td>Triceps Jerk</td>
<td>3+</td>
<td>3+</td>
</tr>
<tr>
<td>Biceps Jerk</td>
<td>3+</td>
<td>3+</td>
</tr>
<tr>
<td>Babinsky’s Sign</td>
<td>Positive</td>
<td>Negative</td>
</tr>
</tbody>
</table>

Muscle tone - Hypertonic on both hands and legs

GCS Scoring - E₄, M₆, V₅ - 15/15

**TREATMENT GIVEN**

**External treatment**

1. *Sarvanga Udvarthanam* followed by *Bashpa Swedam*
2. *Sarvanga Abhyanga* with *Mahanarayana Tailam* followed by *Nadi Swedam*

3. *Kala Basthi*

   Anuvasa Basthi - *Manjishtadi Taila* 60 ml

   *Niruha Basthi* -
   - Honey 60 ml
   - *Saindhava Lavana* - 12 gm
   - *Sneham* - *Manjishtaditailam* - 60 ml
   - *Kalkam* - *Rasna* - 15 gm
   - *Shatapushpa* - 15 gm
   - *Kwatham* - *Manjishtadi Kwatham* - 300 ml

**Internal medications**

1. *Ashtavargam Kashayam* - 10 ml TID B/F
2. *Tab. Vatari Guggulu* - 1 TID A/F
3. *Lashuna Ksheera Pakam* - 50 ml TID A/F
4. *Gandharvahastadi Eranda Tailam* - 10 ml HS A/F

**OUTCOME OF THE TREATMENT**

**Patient assessed outcomes**

1. Weakness of both hands and legs reduced.
2. Stiffness of both hands and legs reduced.
3. Pain in both shoulder joints were absent.
4. Able to walk freely without support.
5. Slurred speech was persisting.

**Clinician assessed outcomes**

1. Muscle power of upper limbs improved from grade 2/5 to 3/5.
2. Muscle power of lower limbs improved from grade 3/5 to 4/5.
3. Muscle Tone of upper and lower limbs - Normal

**DISCUSSION**

Central Pontine Myelinolysis involves the unsystematic dissolution of the sheaths of myelinated fibers within the centre of base of the pons sparing the neurons.
The predisposing factors include alcoholism, malnutrition or liver disease. The triggering factor is the rapid and incorrect management of hyponatremia.

In this case the first stage i.e. hyponatremic encephalopathy can be understood as Samana Avruta Vyana with Lakshanas like Murcha, Tandra, Pralepa and Anga Sada. Here the Nidana can be identified as Abhojana as the patient was having malnutrition due to chronic alcoholism.

The second stage i.e. the stage of myelinolysis can be understood as Sarvanga Vata with Kaptha Avruta Udana and Vyana. The Lakshanas present in this stage are Vak Graha, Dourbalya, Gati Sanga and Sandhi Ruja. The Nidana for this condition can be understood as Vishama Upachara i.e. the rapid and incorrect management of hyponatremia. In this stage, Kaptha Avarana Chikitsa was adopted with Sarvanga Udwartana followed by Bashpasweda and internally Vatariguggulu and Lashuna containing medications like Ashtavarga Kashayam and Lashuna Ksheerapakam was adopted. After removing the Avarana, Kevala Vata Vyadhi Chikitsa was adopted by Sarvanga Abhyanga with Mahanarayana Tailam. Mahanarayana Taila contains Jeevaniya Gana Dravyas which are Vatahara, Brumhana and Balya. Kala Basthi was administered with Manjishtadi Taila as Anuvasa and Manjishtadi Kwatha Basthi as Niruha. The purpose behind the selection of Manjishtadi Taila and Kwatha was to provide Raktaprasadana and Bala to the Sira, Snayu and Kandara. Gandharvahastadi Eranda Tailam was administered with the purpose of Vata Anulomana. Hence in this case Samanya Avarana Hara Chikitsa was adopted followed by Kevala Vata Vyadhi Chikitsa.

CONCLUSION

Pontine Myelinolysis can be understood as Avarana in two stages. The first stage is Samana Avruta Vyana and the second stage is Sarvanga Vata with Kaptha Avruta Udana and Vyana. In first stage, Anyonya Avarana Chikitsa can be adopted. In the second stage, Samanya Avarana Chikitsa can be adopted followed by Kevala Vata Vyadhi Chikitsa. The prognosis of the disease depends on the Dosha Bala, Vyadhi Bala and Kala Prakarsha.

REFERENCES

1. Harrison, Harrison's Principles of Internal Medicine, part12, section 3, chapter 330, Neurologic critical care, 19th edition; p.1782

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