

A SINGLE CASE STUDY ON AYURVEDIC MANAGEMENT OF POEMS SYNDROME

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Article Received on 08/09/2021

Article Revised on 28/09/2021

Article Accepted on 18/10/2021

ABSTRACT

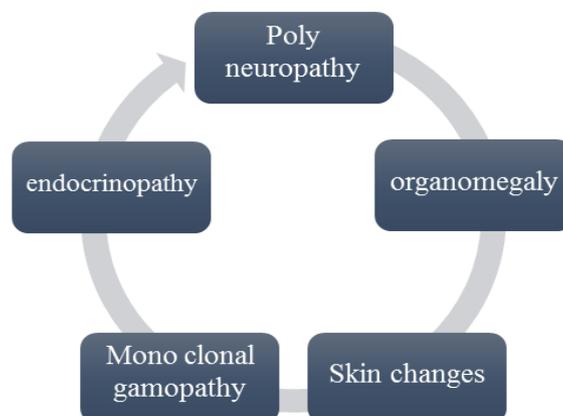
POEMS Syndrome is a rare chronic and disabling condition. POEMS stands for Polyneuropathy, organopathy, endocrinopathy, monoclonal gammopathy, skin changes. The causes of condition remain unknown. However chronic over production of proinflammatory cytokines appears to be a major contributor. Peripheral neuropathy is the most prominent symptom, causing weakness in the upper and lower limb. Early diagnosis is essential to start treatment before the clinical state of patient become compromised. The present paper discusses a case study of patient suffering from POEMS syndrome managed by Ayurvedic treatment through *panchakarma* (5 types of treatment modalities used in Ayurveda) and *shamana oushadhis* (palliative measures). A male patient aged 52 years C/O Reduced strength and wasting of muscle in bilateral lower limb associated with Tingling sensation and numbness below knee joint since 10 months approached OPD of SJIIM Hospital, Bangalore. The patient was treated with panchakarma treatment followed by *Shamana Oushadi*. POEMS syndrome is a chronic and disabling condition, which doesn't have a permanent solution. In this case the treatment protocol has given significant relief in signs & symptoms. There was reduction of clinical symptoms and further progression of the disease. The patient followed up for 1 year and during which the quality of life and expectancy was improved.

KEYWORDS: POEMS syndrome, *Panchakarma*, *Mustadi raja yapana basti*, *Vatarakta*.

INTRODUCTION

Polyneuropathy, organomegaly, endocrinopathy, M-protein, skin changes (POEMS) syndrome is a paraneoplastic syndrome due to an underlying plasma cell neoplasm. The major criteria for the syndrome are polyradiculoneuropathy, clonal plasma cell disorder (PCD), sclerotic bone lesions, elevated vascular endothelial growth factor, and the presence of Castleman disease. Minor features include organomegaly, endocrinopathy, characteristic skin changes,

papilledema, extravascular volume overload, and thrombocytosis. Diagnoses are often delayed because the syndrome is rare and can be mistaken for other neurologic disorders, most commonly chronic inflammatory demyelinating polyradiculoneuropathy. POEMS syndrome should be distinguished from the Castleman disease variant of POEMS syndrome, which has no clonal PCD and typically little to no peripheral neuropathy but has several of the minor diagnostic criteria for POEMS syndrome.^[1]



Poly neuropathy

- ❖ Bilateral symmetric disturbance, involves both sensory and motor nerves.
- ❖ Begins distally and has a progressive proximal speed.
- ❖ Both demyelination and axonal degeneration noted.
- ❖ Associated cranial or autonomic nerves are not involved.

Organomegaly

- ❖ The liver, lymph nodes, spleen are organs usually involved.
- ❖ Hepatomegaly is not associated with any defined histologic or pathophysiological changes.

Endocrinopathy

- ❖ Elevation of estrogen level, impotence and gynecomastia are among men.

Pathophysiology^[2]

- A clone or multiple clones of pre malignant or malignant plasma cells excessively produce and secrete into the blood stream.



- Increased vascular permeability leading to associated edema, increased endoneural pressure. Deposition of plasma derived materials



- Cytokines such as interleukin 1 beta, il6, tumor necrosis factor exposed to myelin tissue leads to demyelination of neurons

Case history**Pradahana vedana**

A 68-year-old male patient n/k/c/o diabetes mellitus and hypertension approached Government Ayurveda hospital with C/O, Reduced strength in bilateral lower limb, tingling sensation, numbness below knee joint, unsteadiness of gait, difficulty in getting up from squatting position, Wasting of muscle below the knee joint and Weight lose since 10month.

Case history

Patient had symptoms like numbness and tingling sensation in bilateral lower limb, difficult in gripping of foot wear, difficult in getting up from squatting position.

- ❖ Amenorrhea is common among women.
- ❖ Diabetes and glucose intolerance, hypothyroidism, hyper prolactinemia, hypo Parathyroidism also seen in patients.

Monoclonal gammopathy

- ❖ Most patients seen with osteo sclerotic myeloma or monoclonal Gammopathy of unknown significance.
- ❖ The M proteins frequently found are the immune globulin A, and B light Chains.

Skin changes

- ❖ Hyper pigmentation, skin thickening, Terry nails.
- ❖ Peripheral edema
- ❖ Hyperhidrosis
- ❖ Clubbing of nails
- ❖ Raynaud's phenomenon
- ❖ Angioma

For better management of these symptoms, he visited nearby hospital. They suggested ANCA, NCS, CSF protein and sugar test, USG abdomen, Bence Jones protein qualitative test, vitamin B12 test, serum protein electrophoresis test etc. On the basis of above examinations results the diagnosed it as poem syndrome and prescribed medications. During the evaluation DM also detected and patient started to take medication for it. At the same time he noticed weight loss, wasting of bilateral lower limb below knee joint. Neurogenic atrophy of peronei's brevis, multi focal axonopathy with demyelination of superficial peroneal nerve were also detected in muscle biopsy.

CHIKITSA VRUTTANTA (Previous treatment history)

Serial no	Medication
1	Inj. Optineuron
2	Cap. Pregabalin 75mg 0-0-1
3	Tab. Glim m2 1/2-0-1/2
4	Metformin 500 mg 1-0-1

Systemic examination**CNS EXAMINATION****HMF**

1. Conscious
2. Orientation to-time, place was intact
3. Memory -recent -not affected
4. remote memory - not affected
5. Intelligence - Intact
6. Speech disturbance - absent

2. Cranial Nerve Examination

No abnormalities found

3. Cortical

- a) Tactile localization (Topo gnosis) - Absent below knee joint
- b) Tactile discrimination - Absent below knee joint
- c) Stereognosis - Present
- d) Graphesthesia - Present

4. Coordination

- a) Finger nose test- negative

 Power

- ▶ Upper limb- 5/5

Lower limb- 1/5 below knee joint

Joint	Movement	Power
Shoulder joint	Abduction	5
Elbow joint	Flexion, extension	5
Wrist joint	Extension	5
Hip joint	Flexion	4
	Extension	4
Knee joint	Flexion	5
	Extension	5
Ankle joint	Dorsi flexion	1
	Plantar flexion	1
Great toe	Extension	1
Ankle joint	Eversion, inversion	1

Involuntary movements

- Right hand and leg -absent
- Left hand and leg -absent

Gait

1. Steppage gait
2. Foot is dragged and slapped on the floor unable to walk on heels.
3. Romberg s sign- patient can't stand without help of stick.
4. Tandem gait- poor

Investigationn

- CSF PROTIEN- 116 mg/dl
- CSF SUGAR- 90 mg/dl
- ULTRA SOUND SCANING OF ABDOMEN
 - Hepatosplenomegaly
 - Bilateral bosnaik type 1 cyst

NEW TEMPL MUSCLE BIOPSY- WITH EHC

- Muscle –neurogenic atrophy; peroneus brevis.

- b) Heel to shin test –negative
- c) Dysdiadochokinesis- no impairment

Motor system **Attitude of limbs**

- Upper limb: no abnormalities
- Lower limb: normal

 Muscle Bulk

- a) Upper limb

Arm	29 cm	29 cm
Forearm	25cm	25cm

- Lower limb

Thigh	39cm	39cm
Calf	28cm	28cm

 Tone

Upper limb - normotonic

Lower limb- Hypo tonic (below knee joint)

- Nerve-multifocal axonopathy with demyelination; superficial peroneal nerve
- Skin-superficial dermal vessel inflammation; skin biopsy.

SAMPRAPTHI GHATAKA (factors responsible for disease)

- ▶ *Dosha : vata*
- ▶ *dooshya : rakta, majja, mamsa, meda*
- ▶ *Agni : jataragni, dhatwagni*
- ▶ *Srotas : raktavaha, mamsa,medovaha, majjavaha*
- ▶ *Srotodusti : sanga, vimargagamana*
- ▶ *Udbhava stana : pakwashaya*
- ▶ *Vyakta stana : sarvanga*
- ▶ *Marga : madyama, bahya*
- ▶ *Sadyasadyata : yapy*

for the considering treatment for POEMS syndrome, we can corelate it with *Vatarakta* by comparing the pathogenesis and symptoms. according to dosha predominance treatment planed.

TREATMENT**1ST PHASE**

Treatment	Days	
<i>Sarvanga abyanga</i> with <i>pinda taila</i> followed with <i>yastimadhu ksheera parisheka</i>	7	Tingling sensation and numbness subsided by 20 %
<i>shodhanartha snehapana</i> with <i>moorchita gritha</i>	According to patient kosta	No observation found 4 days <i>snehapana</i> in <i>arohankrama matra</i> .
<i>Sarvanga abyanga</i> with <i>kshera Bala taila</i>	3 days	Reduction in tingling sensation and numbness by 50%
<i>Virechana</i> with <i>gandarvahastadi eranda taila</i>	After <i>poorva karma</i>	15 <i>virechana vegas</i> occur .without any complication
<i>Visrama kala</i>	7 days	Complete subsiding of tingling and numbness

Shamanoushadhis

- Asta varga kashayam 20ml-0-20ml

- Brihath chagaladi gritham 2ts -0-2ts before food
- Aswagandavaleha 2ts after food with milk

2ND PHASE

TREATMENT	NO OF DAYS	OBSERVATION
<i>Sarvanga abyanga</i> with <i>Masha tailam</i> followed with <i>shastika shali pinda Sweda</i>	7 days	Tingling sensation and numbness reduced by 80%.
<i>Mustadi raja yapana basti</i> in <i>Kala basti</i> pattern <i>anuvasana</i> with <i>vidaryadi gritham</i>	9 days	Generalised weakness reduced, improvement observed in gait, marked improvement observed strength in lower limb below knee joint.

Changes observed after treatment

After the completion of the procedures, there was significant improvement found in patient after *Panchkarma* procedures and administration of formulations.

- Tingling sensation and numbness over lower limbs markedly abolished.
- Improvement is seen in walking without any aid. Improvement is seen in ADL (Activities of Daily Living), marked improvement observed in reduced strength below knee joint.

DISCUSSION

Ayurveda deals with every aspect of human life. Ayurvedic principles are eternal but its application can be modified as per timely changes. Acharya Charaka mentioned that all diseases can not labelled with some name, unsaid disease can be studied by considering *Dosha*, *Dhathu*, and *Stana* of disease.^[4]

The cause of POEMS syndrome is not well understood. POEMS syndrome is a paraneoplastic disorder, which means that the signs and symptoms of the syndrome appear as a manifestation of the plasma cell disorder that the patient has (most patients are seen with osteosclerotic myeloma or monoclonal gammopathy of unknown significance); however, the mechanism by which this occurs is unknown. It is associated with a chronic overproduction of some substances known as pro-inflammatory cytokines (small molecules that act as messengers between cells to promote inflammation). These include interleukins (IL-1b, IL6) which are cytokines that help regulate immune responses, TNF α (Tumor Necrosis Factor alfa is a cytokine which is

involved in the inflammatory process) and vascular endothelial growth factor (VEGF – a powerful vasodilator that may cause leaky blood vessels) which seem to be important in this disorder.^[5]

For the treatment purpose we can correlate POEMS syndrome with *vatarakta* by comparing both pathogenesis. in *vata disorders* or *vata* dominant *samsargaja* or *sannipatika* disorders *drava sweda* is indicated. *Yasti madhu* and *pinda taila* is having property of *vatapittahara* action. In initial phase treatment was *Sarvanga abyanga* with *pinda taila* followed with *yastimadhu ksheera parisheka* for 7 days. symptoms like tingling sensation and numbness markedly improved after completion of treatment. As in *vata rakta chikitsa shodhana* has prime important. By considering patient *bala*, *mrudu shodhana* with *gandarava hastadi erandataila* was given after *shodanarta Sneha pana* with *moorchita tila taila*. After *virechana* 15 days gap was given for next phase treatment.

2nd phase treatment started with *brahmana line* of modalities. *Sarvanga abyanga* with *Masha tailam* followed with *shastika shali pinda Sweda* for 7 days, *Mustadi raja yapana basti* in *Kala basti* pattern *anuvasana* with *vidaryadi gritham* were included in 2nd phase treatment modalities. After the completion of the procedures, there was significant improvement found in patient. Symptoms like tingling sensation and numbness completely got reduced. There was significant improvement in regaining strength and normal gait.

POEMS syndrome is progressive disorder permanent cure is impossible in this condition. It was a humble trial

to improve patient's day to day activities and life span through panchakarma modalities.

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