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A CLINICAL APPROACH TO MAMSAGATA VATA (MUSCULAR DYSTROPHY) THROUGH PANCHAKARMA – A CASE STUDY

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ABSTRACT

Mamsagata Vata is a condition where Vyana Vayu is occluded by Kapha, then there will be heaviness all over the body, pain in all the joints and bones, and excessive loss of mobility. Muscular dystrophies are inherited myopathies characterized by progressive muscle weakness and degeneration with subsequent replacement by fibrous and fatty tissue. A 21 years male patient diagnosed with Muscular dystrophy by muscle biopsy – Routine/Enzyme Histochemistry (EHC), presented to S.V. Ayurveda Hospital, Tirupati, with complaints of difficulty in walking and climbing of upstairs since 5 years. Associated with numbness in both lower limbs since 3 years. Ayurvedic treatment protocol planned with a course of Mridu Abhyanga and Svedana, Matra vasti, Mustadi raja yapana vasti for a period of 18 days. The results were being assessed on strength and functional measurement for patient with Muscular dystrophy, the brooke & vignos scales.

KEYWORDS: Mamsagata Vata, Muscular Dystrophy, Abhyanga, Svedana, Matra vasti, Mustadi Yapana vasti.

INTRODUCTION

Mamsagata Vata is aggravation of Vayu in the muscles, which gives heaviness of the body, excessive pain in the body as if the person had been beaten with a staff or with fist – cuffs, excessive fatigue. The Muscular Dystrophy is a group of inherited progressive diseaseinvolving weakness in muscles along with loss of muscle mass. These disease are basically genetically inherited although they follow different pattern (X – linked, recessive or dominant disorder, spontaneous mutation). There are different set mutations for each type of

dystrophy. But basically there is disturbance in production of dystrophin protein which is essential for building and repairing of muscle tissue. A women who has the abnormal gene is called a carrier. However, mutation of the dystrophin gene and nutritional defects at the prenatal stage are also possible in about 33% of people affected by Duchenne Muscular Dystrophy (DMD). The main cause of MD is the muscle tissues cytoskelrtal impairment to properly create the functional proteins dystrophin & dystrophin associated protein complex. MD occurs in both sexes and in all ages, but the most common variety usually occurs in young boys. People who have a family history of MD are at higher risk of developing the disease or passing it on to their children. The main sign of MD is progressive muscle weakness it leads to poor balance, progressive inability to walk, shortening of muscles or tendons around joints, scoliosis, calf muscles deformity, respiratory difficulty, cardiomyopathy, muscle spasm, swallowing problems and Gower's sign.

CASE REPORT

Patient was born to non-consanguineous couple, normal vaginal term delivery (9^{th} month), cried after birth, delayed milestones, given all vaccines regularly. He will started walking at the age of 5 years. During his 10^{th} class his parents was observed slowly, difficulty in walking and climbing of upstairs. Then immediately he consulted allopathic SVIMS hospital at Tirupati. They advise muscle biopsy and diagnosed as a Muscular dystrophy. They admitted 12 days on regular medications, but he didn't found any relief. After that he consulted NIMHANS hospital at Bangalore, he underwent treatment, but he didn't found any relief. For better treatment he came to S.V. Ayurveda hospital at Tirupati.

PERSONAL HISTORY

- Diet : Mixed
- Appetite : Good
- Micturation : 10 times a day
- Bowel : 3 times a day
- Sleep : Adequate
- Addictions : Nil

GENERAL EXAMINATION

- Pallor : Absent
- Icterus :Absent

- Cyanosis : Absent
- Clubbing : Absent
- Lymphadenopathy : No Lymphadenopathy
- Edema : Absent
- Built : Moderate
- Gait : Waddling gait
- Gower's sign : Present

VITALS

- Pulse Rate : 72 BPM
- Blood pressure : 110/70 mm of Hg
- Respiratory rate : 16 Breaths/min
- Temperature : 98.6` F

SYSTEMIC EXAMINATION

Respiratory system: shape of the chest – B/L symmetrical, no added sounds heard.

Gastro intestinal system: soft, No tenderness, No abdominal distention.

Cardio vascular system: S1,S2 was normal, no murmur was heard.

Musculoskeletal system

- ✓ Postural Abnormality: Spinal deformities like Scoliosis.
- ✓ Gait: Waddling gait
- ✓ Joint deformity: contractures (limited range of motion due to tight muscles and tendons), joint swelling.
- ✓ Muscle strength: weakness especially proximal muscles (shoulders, hips, and thighs).

CNS

Higher mental function examination: speech – Intact, cranial and sensory system were intact, Coordination examination: finger nose test – difficulty to perform, heel – shin test – can not be performed.

SENSORY SYSTEM EXAMINATION

- Pain : Intact
- Touch : Intact
- Temperature : Intact

- Pressure : Intact

MOTOR SYSTEM EXAMINATION

Muscle Tone

Limb	Right side	Left side
Upper limb	Normal	Normal
Lower limb	Hypotonic	Hypotonic

Muscle Bulk

	Right side	Left side
Mid arm circumference	28 cms	28 cms
Mid thigh circumference	40 cms	40 cms
Mid calf circumference	31 cms	32 cms

Muscle Power

Limb	Right side	Left side
Upper limb	5/5	5/5
Lower limb	2/5	2/5

Deep Tendon reflexes

Jerks	Right	Left
Biceps jerk (C5 – C6)	Grade 2	Grade 2
Triceps jerk (C6 C7)	Grade 2	Grade 2
Knee jerk (L2 – L4)	Absent	Absent
Ankle jerk (L5 – S1)	Absent	Absent
Ankle clonus	Absent	Absent

INVESTIGATIONS

Blood for

Hb % : 14.8 gms/%

Tc : 10,000 cells/cmm

Dc : N – 62%, L – 33%, E – 5%

ESR : 20 mm/1hr

RBS : 96 mg/dl

CPK levels : 1492 U/L

Urine for

Albumin – Nil

Sugar – Nil

M/E – 1- 2 Pc/HPF

1 – 2 Ep/HPF

MRI of Brain: (24/05/2017)

- Thickened cortex in bilateral frontal lobes

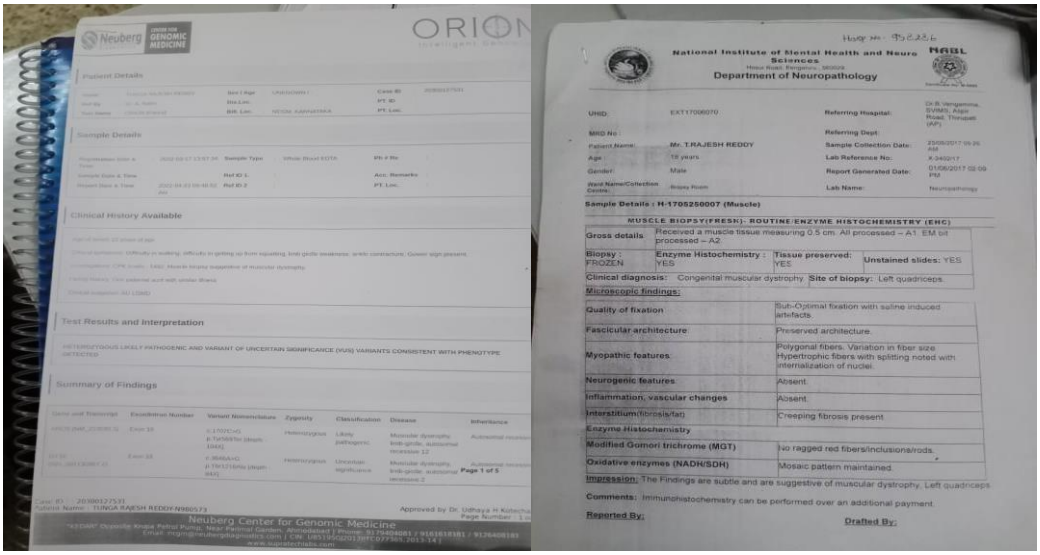
EnMG Report: (1/5/2017)

PROCEDURE: The motor conduction studies are performed on bilateral median, ulnar, common peroneal and posterior tibial nerves. The sesory conduction studies are performed on bilateral median, ulnar nerves.

Conclusion: The bilateral median, ulnar, common peroneal and posterior tibial motor conductions are with normal limits including F – Wave

The bilateral median, ulnar sensory conductions are within normal limits.

Muscle biopsy – Routine/Enzyme Histochemistry (EHC)



CLINICAL FINDINGS

- Awkward arms and shoulders
- Curved back (scoliosis)
- Protruding belly
- Kneens are bent
- Thick lower leg calf muscles
- Poor balance; falls often
- Waddling gait present

- Gower's sign positive

Treatment protocol

1. Abhyangam and Nadi swedan for 3 days.
2. Matra vasti with Bala tailam for 7 days.
3. Mustadi yapana vasti in yoga vasti format

Treatment advised

1. Yogaraja guggulu 1 Tab TID
2. Aswagandha churnum ½ tsp BD with milk
3. Bala mula qwatha churnum 10ml BD
4. Dasamularista 20ml BD with luke warm water
5. Vatavidwamsini ras 1 Tab BD
6. Bhaskar lavana churnum ½ tsp with butter milk
7. Nirgundi tailm E/A

INGREDIENTS

- Abhyangam - Nirgundi tailam
- Nadiswedana - Nirgundi patra, Arka patra, Shigru patra, Karanja patra.

Matra vasti

- Satapushpa churnam - 3 gms
- Saindhava lavanam - 6 gms
- Bala Tailam - 60 ml

Mustadi yapana vasti in Yoga vasti format

- Madhu - 100 gms
- Saindhava lavanam - 12 gms
- Bala Tailam (40 ml)
- Mustadi yapana vasti kalka churnum - 30 gms
- Mustadi yapana vasti kwatham - 250 ml
- Mamsa rasa - 100 ml

Table No: 1 Matra vasti with Bala Tailam.

Day of treatment	Date	Vasti retention time
1st day	27/6/2022	40 min
2nd day	28/6/2022	55 min
3rd day	29/6/2022	45 min
4th day	30/6/2022	1 hour
5th day	1/7/2022	1 ½ hour
6th day	2/7/2022	1 hour
7th day	3/7/2022	2 hour

Table No. 2: Mustadi Yapana vasti in yoga vasti format.

Day of treatment	Date	Vasti retention time
1st day (Anuvasana)	4/7/2022	1 ½ hour
2nd day (Asthapana)	5/7/2022	10 min
3rd day (Anuvasana)	6/7/2022	2 hour
4th day (Asthapana)	7/7/2022	20 min
5th day (Anuvasana)	8/7/2022	3 hour
6th day (Asthapana)	9/7/2022	15 min
7th day (Anuvasana)	10/7/2022	2 ½ hour
8th day (Anuvasana)	11/7/2022	3 hour

Parameters

STRENGTH AND FUNCTIONAL MEASUREMENTS FOR PATIENT WITH MUSCULAR DYSTROPHY

THE BROOKE AND VIGNOS SCALES

	Before treatment		After treatment	
	RIGHT	**LEFT**	**RIGHT**	**LEFT**
UPPER LIMB				
Shoulders				
• Flexion	1	0	-2	-2
• Extension	0	0	0	+3
• Adduction	1	0	1	+1
• Abduction	1	0	1	-2
• Medial rotation	1	3	1	-2
• Lateral rotation	1	3	1	-2
Elbow				
• Flexion	0	-2	-2	-3
• Extension	0	0	-3	-3
• Pronation	-4	-4	-4	-4
• Supination	-4	-4	-4	-4
Wrist				
• Flexion	-2	-2	+4	5
• Extension	-2	-2	-4	5
• Inversion	-4	-4	5	5
• Eversion	-4	-4	5	5

Metacarpals - Adduction	5	5	5	5
Phalangeal joint-Abduction	5	5	5	5
Inter phalangeal joints				
• Flexion	5	5	5	5
• Extension	5	5	5	5
Thumb				
• Flexion	-4	+4	5	5
• Extension	-4	+4	5	5
• Adduction	-4	+4	5	5
• Abduction	-4	+4	5	5
• Circumduction	3	+4	5	5
Thoracolumbar				
• Flexion	5	-4	5	+4
• Extension	5	+4	5	+4
• Lateral rotation	+1	+1	+1	-2
LOWER LIMB				
Hip				
• Flexion	-4	-4	-4	+4
• Extension	-2	-2	-2	-2
• Adduction	1	1	2	-4
• Abduction	1	1	2	+4
• Internal rotation	-2	-2	+4	+4
• External rotation	1	1	+4	+4
Knee				
• Flexion	-4	+4	-4	+4
• Extension	2	3	3	-4
Ankle				
• Dorsiflexion	-4	-2	+4	+4
• Plantar flexion	-4	-2	+4	+4
• Inversion	-4	-2	+4	+4
• Eversion	-4	-2	+4	+4
Big toe				
• Dorsiflexion	-4	-4	+4	+4
• Plantar flexion	-4	-4	+4	+4

DISCUSSION

In parameters, Strength and Functional Measurements was taken as Assessment criteria to check efficacy of treatment. There is marked improvement in strength and functional measurement scale. Abyanga and Swedana helped in reducing the aggravated vata. Matra vasti with Bala Tailam improves the symptoms of Mamsa gata Vata by countering the vitiated vata. Mustadi yapana Vasti effectively improved the symptoms of Mamsa gata Vata by virtue of its vata hara and muscle strength properties. The internal medications Yogaraja guggulu 1tab BD, Vatavidwansini rasa 1 tab BD and Bala mula kwatha churnam 10ml BD,

effectively managed the vitiated vata. Dashamoola arista 20ml BD with luke warm water, Ashwagandha churnam ½ tsp BD with milk, helped in increasing muscle strength as well as improving the sleep and anxiety Bhaskarlavana churnam ½ tsp BD with buttermilk improves the digestive fire, any abdominal distention and manage the constipation.

CONCLUSION

The moderate improvement was noticed in the patient of mamsa gata vata [muscular dystrophy] by the significant improvement of strength and functional measurements, with the application of above stated therapeutic protocol, i.e, Abyanga – Swedana, Matra vasti and Mustadi yapana basti. Thus we can say that with Ayurveda – Panchakarma therepies we can convincingly improve the quality of life in the patient of Mamsa gata Vata [Muscular dystrophy].

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