



Case Study

## AYURVEDA MANAGEMENT OF SARVANGAVATA WITH SPECIAL REFERENCE TO FRIEDRICH ATAXIA

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### ABSTRACT


The collective meaning of *Vatavyadhi* indicates the specific disorder occurring due to *Vata Dosha*. Wherever, *Vata Dosha* get vitiated it first enters in all *Srotas* of the body and then creates different types of *Vata Vyadhi* describe in Classical Ayurvedic text. *Sarvangavata* is one of the most common disorders among *Vata Nanatmaja Vikara*. The global prevalence of Friedrich's Ataxia incidence seen in 1 among 50,000. **Objective:** The aim of this study was to access the efficacy of *Panchakarma* modalities in Friedrich Ataxia condition. **Material and Method:** A 20 year old male patient who is K/C/O- Diabetes Mellitus (Type 1) since 1 year (insulin dependent) stopped since 2 months and N/K/C of Hypertension and IHD came to hospital with complain of reduced strength in bilateral upper and lower limb since 3years and associated with difficulty in walking and slurred speech since 2 years which was diagnosed with *Sarvangavata* and was treated with *Sarvanga Abhyanga* with *Mahanarayana Taila* followed by *Dashamoola Qwatha Seka* for 5 days, *Virechanakarma* for 13 days, *Sarvanga Abhyanga* with *Mahanarayana Taila* followed by *Nadi Sweda* for 7 days, *Mustadi Yapana Basti* for 10 days, physiotherapy and *Shamana Yoga's*. **Result:** After completion of one and half month of total treatment, the patient as found marked improvement gait, muscle tone and gain in strength in bilateral upper and lower limb. **Conclusion:** *Sarvangavata* can occur due to *Beejopgataja*, *Dhatuksaya* and *Abhigataja* where *Vataja Lakshana* were predominantly seen in this type of case and can be manage with different types of *Sweda* like *Dashamoola Kayaseka*, *Virechana*, *Mustadi Yapana Basti*, physiotherapy. Different *Panchakarma* modalities helped the patient markedly improvement for doing his routine activities.

### INTRODUCTION

Friedreich's ataxia (FRDA or FA) is an autosomal-recessive genetic disease and common inherited ataxia, having its onset around puberty which is chronic progressive in nature, that causes difficulty in walking, loss of coordination in the arms and legs, and impaired speech that worsens over time. Both parents must have the dominant trait for a 25% chance of an offspring possessing the disease. This disease characteristically manifest in siblings.

It has the incidence seen in 1 among 50,000<sup>[2]</sup>. Symptoms generally start between 5 to 20 years of age. Many develop hypertrophic cardiomyopathy<sup>[3]</sup>. As the disease progresses, future complication of other parts are seen like blurring of vision, sensoryneural hearing loss, scoliosis. In this condition there will be mutations in the FXN gene in 9<sup>th</sup> chromosome. In FRDA, cells produce less frataxin. In some condition degenerative changes seen in both spinal cord and myline sheath. Symptoms typically start between the ages of 5 and 15, but in late-onset FRDA, they may occur after age 25 years. The symptoms are broad, but consistently involve gait- high stepping, speech difficulty and reduced strength in bilateral lower limb<sup>[4]</sup>.

Early-onset- Non-neurological symptoms such as scoliosis, cardiomyopathy such as enlargement of the heart, symmetrical hypertrophy, heart murmurs, atrial fibrillation, tachycardia, hypertrophic

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cardiomyopathy, Pes cavus and conduction defects and diabetes are more frequent amongst the early-onset cases. Other later stage symptoms - can include, cerebellar effects such as nystagmus, loss of coordination. The progressive loss of coordination and muscle strength leads to the full-time use of a wheelchair. Most young people diagnosed with FRDA require mobility aids such as a walker, or wheelchair by early 20s. The disease is progressive, with increasing stumbling gait and frequent falling<sup>[5]</sup>. According to Ayurveda, in FRDA, Frataxin may be correlated with *Prana vata* function, which controls *Prayatna* (action potential) of *Udana* and in turn *Gati* included by *Vyana vata* becomes impaired. Due to decrease *Prayatna* (action potential), there is less *Urkarma* (ATP potential). Decrease *Bala* (cellular metabolism) and there is *Ama Dravya* produced at cellular level. This *Ama* leads to *Strorodha* (cellular obstruction) and *Vimargagamana* of Fe (iron) which then reacts with oxygen to produce free radicals (*Ama visha*) and destroy the cell. At the end *Vata Prakopa* occurs and manifests the features of FRDA. On keen observation, *Prana* as *Avaraka* (which obstructs) and *Udana* and *Vyana* as *Avarya* (which is getting obstructed) participate in pathogenesis. *Avarana* initiates pathogenesis followed by *Dhatukshaya* and *Vata Vyadhi*. Frataxin is protein, which can be similar to that of *Mamsa Poshakamsha* in *Rasa Dhatu*, and iron as *Rakta Poshaka Bhava*.

From this it can be said that in FRDA, *Avarka* is *Prana Vata*, *Avarya* are *Udana* and *Vyana Vata*, *Dosa* is *Vata*, *Dushyas* are *Rasa*, *Rakta* and *Mamsa*, *Asthi Dhatus*. It can be concluded that FRDA is a type *Vata Vyadhi* caused by *Prana Avruta Vyana*, *Udana Vata Dosha* get vitated it first enters in all *Srotas* of the body and creates different types of *Vata Vyadhi* describe in Classical Ayurvedic text<sup>[1]</sup>.

As all the four limb where effected so can be consistent to Sarvangavata. Firstly, presence of *Srothoavarodhaso* to remove *Avarana Dashamoola Kayaseka* is conducted and then *Vatahara chikitsa* were followed. Treatment were *Abhyanga* of body (massage of whole body with medicated oil) followed by *Swedana* with *Nadi Sweda*, *Virechana* with *Trivrit Leha*, *Mustadi Yapana Basti*, physiotherapy and *Shamana Yoga's*. *Panchakarma* modalities performed for one and half month and later followed up for oral medications after 15 days.

## MATERIAL AND METHOD

### Case Description

- Age: 20yrs
- Gender: Male
- Occupation: Student
- Marital status: Unmarried

- Socio-economic status: Middle class
- Address: Tumkur

### Chief Complaints

C/O of reduced strength in bilateral upper and lower limb since 3 years.

### Associated Complaints

Associated with difficulty in walking and slurred speech since 2 years

### History of present illness

A male patient aged 20 years who is K/C/O Type 1 Diabetic Mellitus and N/K/C of Hypertension and IHD was born with normal milestone and who was apparently normal 3 years ago. He gradually noticed weakness in bilateral upper and lower limb, since 3 years and so for this he with his family members visited to Allopathic hospital their they advised medication for 1 month but he didn't noticed any changes and he discontinued the treatment, further on he noticed difficulty while walking especially in while climbing the stairs since 2 years, he also noticed slurred speech and discontinued his education. Now, from last 15 days he is facing difficulty in walking, so for further management he admitted to Government Ayurveda Medical College, Bengaluru.

### Past history

K/C/O- Diabetes Mellitus (Type 1) since 1 year (insulin dependent) stopped since 2 months, now on medication

H/O- Fall 6 years ago (loss of consciousness and swelling over right frontal region)

### Family History

Parents- Consaginous marriage

Elder sister has similar complaint

### Personal history

*Aahara*: Mixed

*Appetite*: Good

*Bowel*: Passes bowel once in a day

*Micturition*: Normal 4-5 times/day

*Sleep*: Disturbed

*Habits*: Nothing specific

### *Nidana panchaka*<sup>[6]</sup>

*Hetu-Aharaja*- *Ruksha*, *Tikshna*, *Katu Rasa pradhana sevana*

*Viharaja*- *Abhighata*, *Ratrijagarana*

*Mansika*- *Bhaya*, *Ati-chinta*, *Krodha*

*Purvarupa*- *Avyakta*

*Rupa*- Weakness B/L upper and lower limb, difficulty in walking and slurred speech

*Upashaya*- Nothing specific

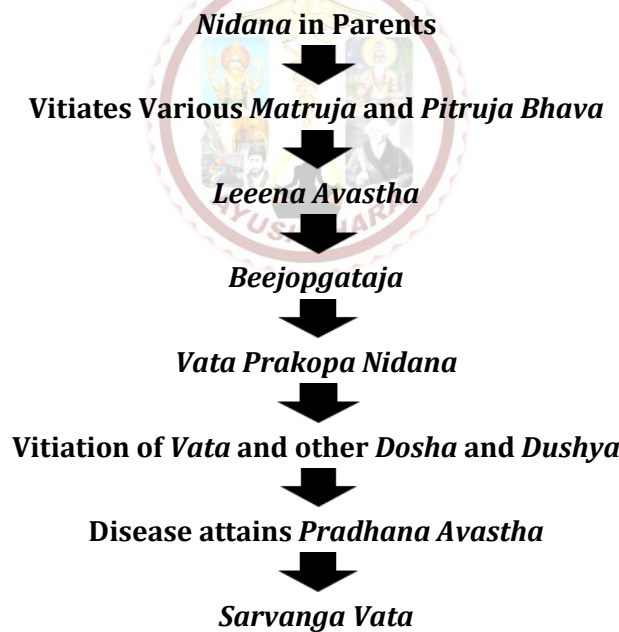
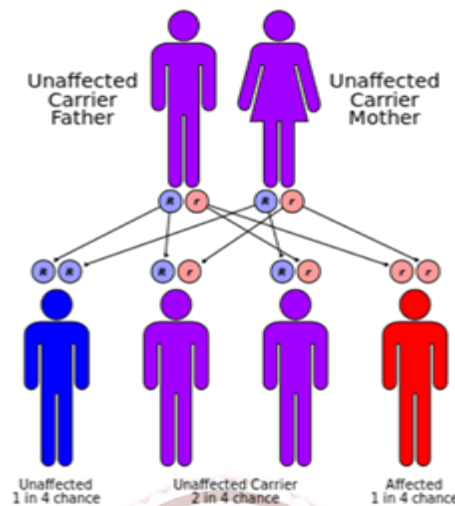
*Anupashaya*- Nothing specific

**Samprapti Ghataka**

Dosha - Vata Kapha  
 Vata - Vyana and Udana, Kapha- Sleshmaka  
 Dushya - Dhatu- Rasa, Raktha, Mamsa, Meda, Asthi  
 Upadhatu - Snayu  
 Agni - Jatharagni and Dhatwagni  
 Ama - Jataraagni, Dhatwangni  
 Srothas-Rasavaha, Rakthavaha, Mamsavaha, Asthivaha  
 Srothodusthi - Sanga and Vimaragagamana

Udbhava sthana - Pakwashaya  
 Sanchara Sthana - Sarvashareera  
 Vayaktha Sthana - Adhoshaka  
 Adisthana - Sarvashareera  
 Vyadhi Swabhava - Chirakari  
 Rogamarga - Madhyama  
 Svabhava - Asadhya

**Samprapti Chakra**



**Investigation**

On 25/07/23  
 FBS- 230mg/dl  
 PPBS- 280mg/dl

**Impression**

ECG - Left Ventricular Hypertrophy

**Examination**

**General examination**

General appearance- Moderately ill Pallor - Absent

Gait- High stepping Icterus - Absent  
 Sleep- Disturbed Clubbing - Absent  
 Built- Undernourished Cyanosis - Absent  
 Height- 5.4 feet Lymphadenopathy - Absent  
 Weight- 48 kg Oedema - Absent  
 BMI- 17.8  
 Bp-130/70 mm/hg  
 Pulse-74 beats/min.

**Systemic Examination**

- **CVS:** S1, S2 heard, no murmur
- **GIT:** Inspection- Umbilicus- Inverted

Scar, Swelling- Absent

Palpation - P/A: Both superficial and deep palpation- Soft and non-tender.

- **R.S:** B/L Symmetrical, normal vesicular breath  
Sound- Heard and no added sounds.
- **CNS:** Higher Mental Function-Intact

Conscious and well oriented with Person, time and Place			
Sensory system - Touch, Pain, Pressure- Intact			
Motor system Limb attitude	Right and Left upper Limb- Pseudohypertrophy Right and Left lower Limb – Muscle wasting (Calf region)		
Muscle power		Right	Left
	Upper limb	4/5	4/5
	Lower limb	3/5	3/5
Reflexes	Biceps	Areflexia +	Areflexia +
	Triceps	Areflexia +	Areflexia +
	Knee	Areflexia +	Areflexia +
	Ankle	Areflexia +	Areflexia +
Muscle tone	Plantar Upper limb Lower limb	Extensor Normotonic Normotonic	Extensor Mild spastic Mild spastic
Co-ordination test	Proprioception	Negative	
	Dysdiadokinesis	Negative	
	FingerNose Test	Negative	
	Romberg's test	Negative	
	Heel to knee	Negative	

**Musculoskeleton Examination**

Inspection Gait - High stepping gait Curvature of spine - Scoliosis Visible scar - Absent Swelling - Absent Muscle wasting - B/L Calf Muscle	Palpation Curvature of spine - Scoliosis Swelling - Absent Tenderness - absent Pes cavus- present Muscle wasting - B/L calf muscle
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**Chikitsa Sutra** [7]

केवलं निरुपस्तम्भमादौ स्नेहैरुपाचरेत्॥७५॥  
वायुं सर्पिर्वसातैलमज्जपानैर्नरं ततः।  
स्नेहक्लान्तं समाश्रास्य पयोभिः स्नेहयेत् पुनः॥७६॥  
यूषैर्ग्राम्याम्बुजानूपरसैर्वा स्नेहसंयुतैः।  
पायसैः कृशरैः साम्ललवणैरनुवासनैः॥७७॥  
नावनैस्तर्पणैश्चात्रैः सुस्निग्धं स्वेदयेत्ततः। Ch.chi- 28

Treatment protocol adopted- *Panchakarma* procedures along with oral medications were administered

Treatment given	From date	To date
<i>Sarvanga Abhyanga</i> with <i>Mahanarayana Taila</i> followed by <i>Dashamoola Kayaseka</i> 5 days	26/07/2023	30/07/2023
<i>Deepana</i> and <i>Pachana</i> with <i>Agnitundi Vati</i> -1TID 3 days	28/07/2023	30/07/2023
<i>Snehapana</i> with <i>Panchatitaka Grita</i> in <i>Arohanakrama</i> 4 days	31/07/2023	03/08/2023
<i>Visharamakala</i> 3 days		
<i>Virechana</i> with <i>Trivit Leha</i> - 80grams 1 day	04/08/2023	06/08/2023
No's of <i>Vega's</i> - 16 <i>Vega's</i>	On 07/08/2023	-
<i>Samsarjanakrama</i> 5 days	08/08/2023	12/08/2023
<i>Sarvanga Abhyanga</i> with <i>Mahanarayana Taila</i> followed by <i>Nadi Sweda</i> 7 days	13/08/2023	19/08/2023
<i>Basti</i> - <i>Kala Basti</i> Pattern 10 days	20/08/2023	29/08/2023
<i>Niruha Basti</i> - <i>Mustadi Yapana Basti</i> 6 days	<i>Niruha</i>	Average retention time:
<i>Anuvasana Basti</i> - <i>Guggulu Tiktaka Grita</i> - 50ml 10 days	<i>Anuvasana</i>	8-10min 08 hours
Physiotherapy range of motion Weight bear Strengthen exercises	09/08/1013	19/08/2023

Shamana Yoga's	Dose
<i>Lavana Baskara Churna</i>	3gms BD B/F with warm water
<i>Lasunadi Vati</i>	1 Tab TID B/F
<i>Shilajitvadi Vati</i>	1 Tab TID A/F

## RESULT

	Before treatment	During treatment	After treatment
Gait	High stepping	High stepping	Slightly improved
Muscle tone	Mild spastic of Lt. both Limb	Persist	Markedly reduced
Muscle power	B/L Lower Limb- 3/5	3/5	4/5
Weakness	B/L Upper and Lower Limb	Persist	Strength got slightly improved
Lab Report- FBS, PPBS	FBS- 230 mg/dl PPBS- 280 mg/dl On- 25/07/23	-	FBS- 120 mg/dl PPBS- 180 mg/dl On- 30/08/23

## DISCUSSION

### Snehana

*Sarvanga Abhyanga* with *Mahanarayana Taila*

*Abhyanga* helps in pacifies the *Dosha*, *Brumhana*, *Shulahara*, *Nidrakara*, *Jara Shrama Vatahara*, *Dusthi Prasada*, *Pustayu*, *Drudhakara*, *Balyakara*.

*Mahanarayana Taila*- Used in *Vatahara Vyadhis*, *Brumhana* benefit: *Vata* and *Pittahara*.

### Swedana

#### A. *Dashamoola Kayaseka*<sup>[8]</sup>

*Dashamoola*- *Kapha-Vata Nashaka* (which act has anti-inflammatory and anti-oxidant action).

*Seka* helps to resolves *Stambha*, *Gourava* etc.

Increases blood circulation, relief the pain, muscle relaxation.

**B. *Nadi Sweda***: Reduces stiffness, heaviness, pain, improves blood circulation, removes *Avarana*.

#### ***Virechana karma***<sup>[9]</sup>

*Virechana* is ideal and best treatment for *Pitta* and other two *Doshas*.

It is less tedious procedure and less possibility of complications and it could be done easily.

This procedure in which the orally administered drug acts on internally situated *Dosha*, specifically on *Pitta Dosha* and expel out of the body through *Adhobhaga* and act as both *Apatarpana* and



*Santarpana Chikitsa*. (As.Sa.Su.Indu commentary 1/39, Cha.Ka 1/4.)

**Trivritaveleha**<sup>[10]</sup>- Trivrit (*Operculina turpethum*) was considered as *Agra Dravya* among Ayurvedic classics apart from *Sukha Virechana Karma* it has many therapeutic uses and various *Yogas* (medicinal preparations) were mentioned in classical books like *Charaka Samhitha*, *Sushruta Samhitha*, *Astanga Hridaya*, *Sarangadhara Samhitha*, *Nighantus* etc<sup>[11]</sup>.

**Mustadi Yapana Basti (Rajayapana Basti)**<sup>[12]</sup>

As, *Basti* is the 1<sup>st</sup> line of treatment for *Vata Dosha* disorders.

As, the name suggest *Rajayapana Basti* is superior among all the *Basti*.

*As.Sa.Ka 5 - Rasayana*

*Ca.Si -12 - Rasayana and Sadyobalajanana*

*Su.Ci-38/106-111- Balya, Vrishya, Cakshushya, Rasayana.*

*Kala Basti* pattern - Average retention time of - *Niruha Basti* - 8-10mins.

*Anuvasana Basti* - 08 hours.

**Anuvasana Basti with Guggulu Tiktaka Grita**<sup>[13]</sup>

*Anuvasana Basti* is one among *Sneha Basti*, it is termed so because the *Basti* administered predominantly containing *Sneha* which does not cause harm even if it retains for 24hrs and can be administered daily. (Acc -Su.chi- 35/18, As.Sa.Su 28/7)

The dose of the *Anuvasana Basti* is half of the dose of *Sneha Basti* or  $\frac{1}{4}$  th of *Niruha Basti* for particular age.

It can be given at any time in all the season and no restriction in diet.

It promotes strength, causes to easily to elimination of *Malas* and *Mutra* from the body and cures the *Vata Vyadhi*.

*Guggulutiktaka Ghrita*, which act as *Tridoshahara* properties and which can be used both as *Shamanaga* and *Shodanaanga Snehapana* and also be used in *Basti* which helps the *Dhatu Poshana* and *Rasayana*.

### Physiotherapy

Weight bear- by implementation of walking gait or crutches.

Range of motion- Passive and active exercises.

Strengthen exercises- resulting in less pain, free movement and improved function

### CONCLUSION

*Sarvangavata* can occur due to *Beejogataja*, *Dhatuksaya* and *Abhigataja* where *Vataja Lakshana* were predominantly seen in this type of case and can be manage with different types of *Panchakarma* modilities where carried out. To combat the disease in

minimum duration we have used multi treatment approach to get synergistic effect. *Virechana* and *Basti* is the main line of treatment in *Pitta* and *Vata Vyadhi* condition respectively, that removes the toxin and helps to reach the drug in cellular level. Future imbalance in *Vata Dosha* causes vitiation of *Pitta* and *Kapha Dosha* if not treated. *Sarvanga Abhyanga* and *Kaya Seka* is also best line of treatment in *Vata Vyadhi*. *Mustadi Yapana Basti* is selected in treating *Tridoshaja* condition and it has therapeutic effect like *Brihmana* and *Rasayana* properties. It gives significant results in subjective and objective parameters indicates quality of life of patient improved, presently patient doing well for his daily activities The prognosis of the disease depends on the duration of the disease and its chronicity. Physiotherapy can also be incorporated with the Ayurvedic treatments for further improvement. By proper analysis of treatment we can conclude that *Sarvangavata* can be markedly managed and gives satisfactory result without any complications. Therefore, in Friedrich ataxia like condition this can prove to the greater modality of treatment as in this condition there is *Gambhir Dhatu* involvement.

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