

AYURVEDIC TREATMENT MODALITY IN THE MANAGEMENT OF FRIEDREICH'S ATAXIA – A SINGLE CASE STUDY

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**ABSTRACT**

Friedreich's ataxia (also called FA) is a rare inherited disease that causes progressive nervous system damage and movement problems. Although rare, Friedreich's ataxia is the most common form of hereditary ataxia in the United States, affecting about 1 in every 50,000 people. Both male and female children can inherit the disorder. As with many degenerative diseases of the nervous system, there is currently no cure or effective treatment for Friedreich's ataxia. With limited options available in modern medicine, *the Ayurvedic* principle of diagnosis and treatment may be useful. A 19-year-old male patient visited *Panchakarma* OPD with a known case of Friedreich's ataxia from 4 years, with difficulty in walking and standing, vertigo, slurred speech, etc. The patient was taking oral allopathic treatment. According to the principles of *Ayurveda* he was diagnosed as a case of *Vatavyadhi*. He was under *Ayurvedic* management like *Virechana*, *Yapan Basti*, *Shashthishali Pindasweda*, *Nasya*, etc for 3 months continuously. After 3 months, relief in symptoms was seen in the patient.

Keywords: *Abhyanga*, Friedreich's ataxia, *Nasya*, *Shashthishali Pindasweda*, *Vatavyadhi*, *Virechana*,

INTRODUCTION

Friedreich's ataxia (FRDA or FA) is an autosomal recessive genetic disease that causes difficulty walking, a loss of sensation in the arms and legs, and impaired speech that worsens over time. Symptoms generally start between 5 and 20 years of age. Many develop hypertrophic cardiomyopathy and require a mobility aid such as a cane, walker, or wheelchair in their teens. As the disease progresses, some affected people lose their sight and hearing. Other complications may include scoliosis and diabetes mellitus. The condition is caused by mutations in the FXN gene on chromosome 9, which makes a protein called frataxin. In FRDA, cells produce less frataxin. Degeneration of nerve tissue in the spinal cord causes ataxia. The spinal cord becomes thinner, and nerve cells lose some myelin sheath. FRDA affects one in 50,000 people in the United States and is the most common inherited ataxia. The condition is named after German physician Nikolaus Friedreich, who first described it in the 1860s.

CASE STUDY

Patient aged 19 years with a complaint of difficulty in independent walking and slurred speech seeing those four years, student by occupation was visited OPD of *Panchakarma* branch of GAAC on 18/12/20. The patient complains that while walking he feels that he has a tendency to fall, which makes him take support of a wall or person because it brings about a lack of control over gait. As the times advanced the above-stated situations gotten worsen. Now the patient is not able to walk independently nor capable of standstill for a few minutes. The patient had a history of decreased IQ and slurred speech since childhood. The patient was diagnosed with a case of FRDA and subject to an allopath medication tab. quogress (antioxidant) OD on 7/10/2016. The patient approached the *Pancakarma* branch at GAAC looking for treatment for the above-mentioned complaints. The patient became diagnosed with *Vatavyadhi* in OPD, and the *Vatika* line of treatment was adopted.

Systemic examination

CNS

Gait: Ataxiac gait was noticed and there was an increased distance between 2 feet while walking (i.e., >2 feet).

Swing movement positive while standing straight. Higher motor function was normal. Reflexes and sensory function were normal. The patient was unable to perform finger- a finger test, nose-finger test, fast alternating hand movements, heel-shin slide.

Musculoskeletal system: The bulk, tone, and power of the muscles were normal.

CVS: S1S2 heard (no added sound heard)

RS: B/L NVBS heard.

P/A: Soft and non-tender. Micturition and bowel were normal.

Dashavidha Pariksha

The patient has *Vata Pitta Prakriti* and *Dushya* involved are *Ashthi*, *Māmsa* (*Dharana* of *Deha*), *Aggravating Vāta Doṣa*, *Vyana Vāta*, and *Udana Vāta*. The patient has *Mandagni*, *Krura Koshtha*, *Madhyama Satva*, *Madhyama Satmya*, and *Madhyama Samhanana*. The patient has qualities of *Rakta*, *Majja*, *Shukra Sara*.

Diagnostic Assessment

The case was formerly diagnosed as FRDA and for assessing the ataxia - SARA scale¹ was selected. Another modern investigation was carried out like nerve conduction test, MRI brain, and spine that everyone was normal. A routine investigation was done. The case was diagnosed purely based on *Ayurveda* parameters i.e., *Dosha Vruddhi Lakshana*, *Bala*, *Vaya*, *Agni*, etc. and similarly, the *Ayurveda* line of treatment was followed.

Intervention

Treatment was deliberate into phases. Firstly, *Sodhana Chikitsa* was carried out using *Gogṛuta* as *Snehapana* for 7 days (the total amount of *Sneha Matra* on the last day was 160 ml). Followed *Virechana* was done using *Trivruth Choorna* and *Triphala Kwath*. Secondly, after *Samsarjana Karma* patient was subjected to *Nasya*, *Sarvanga Abhanga* and *Shastika Shali Pinda Sweda*, and *Mustadiyapana*

Karma Basti was suggested. Orally *Gokshuradi Guggulu* of 250 mg 2BD, *Agnitundi Vati* of 250 mg 2BD, *Sutsekhar Rasa* of 250 mg 2BD was recommended in the course of the treatment.

A detailed case study and follow up are given in Table :1

Table 1: Treatment protocol

18/12/2020	Visited <i>Panchakarma</i> OPD and was admitted to <i>Panchakarma</i> IPD GAAC, Ahemdabad.
18/12/2020	<i>Trikatu Choorna</i> 3gm tid was given till 23/12/2020
24/12/2020	<i>Snehapana</i> was started with <i>Goghru</i>
30/12/2020	<i>Sneha Siddha Lakshana</i> found. (<i>Sneha Matra</i> on the last day 160ml)
03/01/2021	<i>Virechana</i> with <i>Trivrut Choorna</i> and <i>Triphala Kwath</i> was given.
04/01/2021	The patient was advised <i>Samsarjana Karma</i> .
08/01/2021	Patient was advised <i>Sarvanga Abhyanga</i> and <i>Shastikashali Pinda Sweda</i> . Oral Medication like <i>Gokshuradi Guggulu</i> of 250 mg 2BD, <i>Agnitundi Vati</i> of 250 mg 2BD, <i>Sutsekhar Rasa</i> of 250 mg 2BD (throughout the treatment)
08/01/2021	<i>Mustadiyapana Karma Basti</i> was planned.
07/01/2021	<i>Nasya</i> with <i>Ksheerabala Taila</i> was planned for 15 Days.

Although initially evolved for the use in dominantly inherited ataxias, which can be normally ataxias of the cerebellar type, SARA also can be used effectively to evaluate afferent ataxia, that's the predominant form in FRDA.²

Assessment improvement of the patient was assessed using the SARA scale before beginning the treatment and after the completion of the treatment. Markedly improvement was seen after the treatment as shown in Table 2.

Table 2: Scoring pattern of Friedreich's ataxia

SN	Examination	Score (Before intervention)	Score (After intervention)
1.	Gait	3	2
2.	Stance	3	2
3.	Sitting	2	1
4.	Speech disturbance	3	1
5.	Finger chase	3	1
6.	Nose finger test	3	1
7.	Fast alternating hand Movement	2	1
8.	Heel- shin slide	3	1

DISCUSSION

Understanding FRDA through *Ayurveda*. In *Ayurveda* naming of every *Vikara* isn't always possible, in one of these cases the tools provide for knowledge of the *Vikara* according to the classic are based on the vitiation of *Doṣa*, *Dushya*, *Samuthana*, and *Adhithana*.³ In the above case *Lakṣaṇa* i.e., *Gamana Kruchrata* and *Vaksanga* suggest the improper functioning of *Udana Vāta*⁴ and *Vyana Vāta*.⁵ Hence, looking at the above signs and symptoms such as

Gamanakruchrata and *Vaksanga* suggests *Vatajavikara*. FRDA is hereditary in origin, and the nature of the disease FRDA is the progressive degenerative circumstance it can be considered into *Yapya Roga*. *Vata dosha* is responsible for the normal function of the body, hence looking at the above symptoms indicates *Vatajavikara*. *Vata* is responsible for the degeneration of the structure of the nervous system, be-

cause of its *Ruksha Guna*. Here, *Vata Dosha Vikruti* is one main factor in FRDA *Samprapti*.

Go-Ghrita: *Abhyantra Snehapana* was done with *Go-Ghrita* in *Samhitas Acharya's* mentions the properties of *Go-Ghrita* as " *Gavyam Sarpigunottarama*⁶" *Sarvasnehaottamum*⁷. *Ghrita* acts as a good solvent for many metabolic waste products, and it enters the cells easily because the cell wall is made up of phospholipids and does *Utkleshna* of *Doshas* which is required for proper *Shodhana*.

Virechana is a medicated purgation therapy which removes *Pitta* toxins that are accumulated in the body. The *Virechana Dravya* spreads throughout the body at the cellular level due to its pharmacological properties.⁸ *Virechana* with *Trivruta* was done to remove both *Pakva* and *Apakva Mala*, it is best in *Virechana Dravya* and *Virechana* was adopted because it is indicated in *Vātajā* disorders. *Abhyanga* does the property of *Snigdhatā* of the body. *Abhyanga* produces *Srotovishodhan* and *Vatahara*⁹ *Abhyanga* does the property of *Snigdhatā* of the body. The benefits of *Abhyanga* are *Jarahara* (slows down ageing process), *Sramahara* (decreases fatigue caused by physical work), *Vatahara* (prevents disorders caused by *Vata Dosha*), *Drushtiprasadakara* (improves eyesight, eye diseases caused ageing), *Pushtikara* (nourishes *Sarva Dhatu*), *Ayushya* (functions of vital organs are improved and life span is promoted), *Swapnakara* (useful to overcome sleeplessness)¹⁰

Shashthishali Pinda Sweda: There has been seen significant improvement in nerve conductivity and muscle strength and bulking. Sweat therapy helps in eliminating the toxins from the body. This gives the body and mind a sense of lightness. The synchronized strokes used in the therapy provide rhythm to the brain waves and work as a stimulator. This gives the brain a sense of calmness and helps in reducing imbalances like stress, anxiety, insomnia, depression, and emotional imbalances. After undergoing this therapy, the patient may experience better sleep and improved nervous activity.¹¹ *Mustadi-Yapana Basti* additionally referred to as *Rajayapana Basti* is superior among all the *Basti* and is that the best *Rasayana*

action. It will increase *Bala*, *Mamsa*, *Sadyo Bala Janana* and *Rasayana*. *Mamsa Vriddhi* will be understood by *Samanya-Vishesa Siddhanta*. So, it offers *Balya* to the patient and stops more *Prakopa* of *Vata-dosha*. *Sneha Nasya* was done with *Ksheera Bala Taila*, mainly given in *Vata* type of disorders. It is beneficial to cure difficulty in speech, nervousness, anxiety, fear, dizziness, and emptiness.¹² Negative thoughts can be banished by undergoing this treatment. *Gokshuradi Guggulu* balances the *Doshas* by removing *Kapha* and calming the *Vata* and *Pitta* in the body.¹³ *Guggulu* has been shown property of antioxidant¹⁴ also indicates in *Vataroga*.¹⁵ *Sutsekharā Rasa* has *Aam Pachak* (detoxifier), neuroprotective and antioxidant properties. Its main action is on *Pitta* and *Vata Dosha* and can be used in all diseases with aggravation of *Pitta* and *Vata* that are related to following organs like Heart and blood vessels, Brain and nerves¹⁶ *Agnitundi Vati* also strengthens the nervous system and muscular coordination, It alleviates *Vata* and pain and because of its sharpness, it stimulates and strengthens nerves. *Amadosha-hara*, *Anulomna*, *Deepan*, *Kapha-Vata har*, *Pachana*, *Ruchikarak*

CONCLUSION

After 2.5 months of *Ayurvedic* treatment protocol, significant relief in symptoms was seen in the patient with Friedreich's ataxia. As the condition of the patient improved, the patient does not require any other medications for this disease condition. Proper combinations of drugs have helped to give maximum results to the patient in a minimum period. Hence it is high time to improvise our treatment plans and help to answer complicated situations such as friedreich ataxi.

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