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Case Report

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Ayurvedic approach in the management of paksavadha W.S.R. Paraplegia - a case study

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ABSTRACT

Purpose

Spinal cord injury (SCI) have been one among the most devastating trauma man can suffer. The worst victims of SCI are those suffering with paraplegia associated with autonomic dysfunction. Disruption of communication of nerve impulses anywhere along the pathway from the brain to the muscles can impair control of muscle movement and cause muscle weakness and loss of coordination. The prevalence of acute traumatic is estimated to be per million in India with 10,000 new cases per year. Main aetiology behind them are Motor vehicle accident (44.5%), Falls (18.1%) and Violence (16.6%). The elements that worsen the vitiation of *Vata dosha* are essentially: *Abhighatha* (External Injury), *Chayapachayajanya vyadhis* (metabolic disorders). So it is need of hour to search or establish a specific systematic, intensive, coordinated team approach for its management. Ayurveda offers us good treatment protocol on the basis of principles related with pathophysiology of the disease and gives ray of hope to such patients. As this type trauma which leads to paraplegia can be correlated with *Paksahvadha* which is included in *Sarvanghagata* and *Vatavyadhi avruta vata, Pangu roga* in *Ayurveda*.

Method

A 2 year and 2 month, male patient presenting with was no lumber pain but he was complaining of weakness and heaviness in both lower limbs, inability to stand with or without support was brought to R.G.G.P.G.A. Hospital Paprola. In this article, attempt has been made to review the Ayurvedic classics text and related literatures to understand the disease with emphasis on its samprapti on the basis of Kriyakala and we can assume vitiation of *vata dosha*. *Vata shaman* including *snehanan*, *swedana* (*Shastik shali pinda sweda*, *Nadi sweda*) and *vata shodhana* (*vastikarma*) as well as use of *Medhya* drugs are best applicable in the management of paraplegia.

Result

Management done by using principles can effectively manage critical conditions such as Paraplegia by improving patients quality of life. Although the treatment was not able to bring a complete independence of functions in the case it certainly had reduced the level of dependence as was observable with the improved MBI score & SCIM-III score.

Conclusion

As the treatment was able to make improvements in existing conditions, this approach should be taken into consideration while making any further trial to treat similar or new conditions with the help of Ayurveda .

Keywords- *Pakshavadha*, Paraplegia, *Vata shamana*, *Medhya drugs*.

INTRODUCTION

Paralysis is the loss of muscle movement in the body. Our sense of movement is controlled by communication between the sensory nerves (which are part of the peripheral nervous system) and the central nervous system (comprised of the brain and spinal cord). Disruption of communication of nerve impulses anywhere along the pathway from the brain to the muscles can impair control of muscle movement and cause muscle weakness and loss of coordination. Muscle weakness can progress to paralysis, loss of the ability to move the muscles. Spinal cord injury (SCI) have been one among the most devastating trauma man can suffer. The victims those suffering with quadriplegia or paraplegia associated with autonomic dysfunction. The prevalence of acute traumatic spinal cord injury (SCI) is estimated to be per million in India with 10,000 new cases per year. Main aetiology behind them is Motor vehicle accident (44.5%), Falls (18.1%) and Violence (16.6%)¹. As long-term survival is the rule in most cases of paraplegia are prominently the young ones in their most productive age, the personal and social impacts of such trauma are extremely deleterious. So it is need of hour to search or establish a specific systematic, intensive, coordinated team approach for its management. Ayurveda offers us good treatment protocol on the basis of principles related with pathophysiology of the disease and gives ray of hope to such patients The elements that worsen the vitiation of *Vata dosha* are essentially: *Abhighatha* (External Injury), *Chayapachayajanya vyadhis* (metabolic disorders). So it is need of hour to search or establish a specific systematic, intensive, coordinated team approach for its management. Ayurveda offers us good treatment protocol on the basis of principles related with pathophysiology of the disease and gives ray of hope to such patients. As this type trauma which leads to paraplegia can be correlated with *Pakshavadha*² which is included in *Sarvanghagata* and *Vatavyadhi avruta vata*³, *Pangu roga* [4] in *Ayurveda*.

CASE REPORT

A 2 years and 2 month, male child patient came to us with the chief complaints of –

- 1) *Daurbalya* (*weakness*)
- 2) *Guruta* (*heaviness in both lower limbs*)
- 3) *Panghutava* (*unable to stand with or without support*)

Patient had these above complaints from last 2 months.

HISTORY OF PERSENT ILLNESS

A 2years and 2 month old previously healthy male got fell from bicycle on (Sept11, 2017 afternoon). After fall he got stand up by his own and complaining severe pain in lumber region and informed by calling his nearby person. He was attended by local PHC by clinician at that time and analgesic injection was given to him (prescription not available). Pain was subsided. But on next day morning i.e., on September 12, 2017 there was no lumber pain but he was complaining of weakness and heaviness in both lower limbs, inability to stand with or without support. There is no alteration in urination and bowel habit, afterwards they visited at S.R.hospital Amritsar and advised X-ray, MRI of lumbo-sacral spines. Finding of X-Ray, MRI of spine showed normal report. They have given him electromyography therapy but condition deteriorates day by day. As orthopedic surgeon told him that strength in lower limbs will regain after 8-9months. But after 1 and half month, patient did not get any relief so he visited to R.G.G.P.G.A.C. Paprola *Kaumarbhritya* deptt. OPD on date 23/12/17 with continuously ambulating in mothers arm and having weakness and heaviness in both lower limbs, inability to stand with or without support. Then patient got admitted in *Kaumarbhritya* ward on same date 23/12/16 for further *Ayurvedic* management.

ON EXAMINATION

- 1) General condition- Good
- 2) Pulse Rate - 78/min
- 3) B.P - 94/60mm of Hg
- 4) Weight -17 kg
- 5) Height - 116 cm
- 6) R/S - 22/min. No added sounds
- 7) CVS- S1S2 normal, no abnormal sound
- 8) CNS - well looking, conscious, oriented ,

SAMPRAPTI GHATAK'S [5]

1. Dosha : Vata Pradhana tridosha
2. Dooshya : Rasa, Rakta, Mamsa, Medha, Nadi samsthana
3. Srotodushti : Sanga, Ati- pravrutti
4. Adhistana : Sharrirardha
5. Swavahava : Ashukari/chirkari
6. Agni dusti : Vishamagni
7. Sadhyaasadhya:Krishasadhya/Asadhya

Table No. - 1

Neurological Examinations		
S.No.		
1.	Gait	Paraplegic gait
2.	Muscle tone	Flaccid
3.	Muscle power	Muscle power grade II in left lower limb and grade III in right lower limb.
4.	Reflexes	Planter reflexes shows Dorsiflexion of the greater toe. Knee reflexes show exaggerated reflexes in Left side and normal on right side
5.	Co-ordination	There is impaired co-ordination in movement of both lower limb
** Romberg's test is positive		

Investigations

- 1) CBC (Hb gm%, TLC,DLC,ESR)
 - 2) Urine analysis
 - 3) CT - scan
- Patient doesn't have any concomitant illness.

TREATMENT PLAN

Table No. - 2

Treatment Plan – Panchakarma Chikitsa		
S.No.	Panchakarma Procedures	Duration of procedure
1.	Udvertana with Kulatha + Yava (in yavakuta form)	3 days
2.	Sarvanga Snehana with Sahacharadi oil	20days
3.	ShastiShaliPindaSweda (with Dashmoola, Bala, Ashwagandha KsheerPaka)	7 days
4.	Bruhanam vasti	10 days
5.	Kati vasti/ Dhara sweda with Dashmoola oil	7 days

Table No. - 3

Treatment Plan – Shamana Chikitsa		
S.No.	Shamana Procedures	Dose with anupana
1.	Hingwastaka choorna Or Agnitundi vati	1 gm B.i.d. with ghrita ½ with luke warm water
2.	Ashwagandha arista, Balaarista, Arvindasva	5ml b.i.d. with lukewarm water
3.	Navrattan yoga	1 od
4.	Syp. Mentat	5ml b.i.d.

Assessment of patient

Neurological findings were assessed before and after the *Ayurvedic* therapy.

Table No. - 4

Assessment of patient			
Before treatment		After treatment	
SUBJECTIVE			
Weakness in both lower limbs	4+	Weakness in both lower limbs	2+
Heaviness in both lower extremities	4+	Heaviness in both lower extremities	1+
Unable to stand without/with support		Able to stand without support for a while and can walk with support	
OBJECTIVE			
MBI SCORE	31 (score which reflects severe dependence due to dependency in mobility and dependent in self-care)	MBI SCORE	91 (score which reflects slight dependence due to independent in transfers and able to walk or use crutches independently)
Gait	Paraplegic gait	Gait	Stepage gait
Muscle tone	4+	Muscle tone	1+
Muscle power	grade III	Muscle power	grade IV

DISCUSSION

As there is no specific line of treatment for *Sarvangavata*, general line of treatment for *Vatavyadhi* was adopted to treat this condition. It can be correlated with *pangu vayadhi* or *Pakshavadha* and treatment principles for both were applied to manage this patient. This entity can be correlated with, *vata* and its management should be administration of *Sneha* as externally (e.g. *Abhyanga*) as well as internally such as *Snehapana* such as *Bruhamana* or *Shamana*, *Sneha basti* [6] these are excellent to correct *Vata dosha* vitiated by trauma, pacifies *vata* without increasing *kapha* due to its *snigdha* and *ruksha guna*.

An informed consent was taken from patient for this case study. Results obtained in this case demonstrate that management of stabilized SCI with procedures and intervention may offer a good approach to manage neurological deficits. After 1 month of *Ayurvedic* therapy administered by us, the patient was found to have a substantial recovery of neurological deficits.

A 10 item MBI [7] has a range of scores 0-100 where 0 denotes a complete dependence and 100 denotes a complete independence. It is important to note here that a 100 score at MBI reflects the independence of patient in cases of Paraplegia. Any shift in the net score favoring toward the higher scores is indicative of decreasing dependence and increasing independence as it was observed in this

case. Before starting treatment this score was 31 which in turn s increases up 91 which indicate recovery towards independency. An interview with patient and his family members their satisfaction with the outcome achieved in 1& half months of therapy with an expectation to obtain more if the therapy is further continued.

CONCLUSION

This case report is to express the utility of *Ayurveda* as a composite intervention for the purpose of clinical practice and research. As the treatment was able to make improvements in existing conditions, this approach should be taken into consideration while making any further trial to treat similar or new conditions with the help of *Ayurveda*. Management done by using *Ayurvedic* principles can effectively manage critical conditions such as Paraplegia by improving patient's quality of life. Although the treatment was not able to bring a complete independence of functions in the case it certainly had reduced the level of dependence as was observable with the improved MBI score. As the treatment was able to make improvements in existing conditions, this approach should be taken into consideration while making any further trial to treat similar or new conditions with the help of *Ayurveda*.

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