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An open label clinical study to evaluate the efficacy of *Ayurvedic* intervention in chronic spine disorders

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Abstract

The spine is the central supporting structure of the torso; it routes and protects the spinal cord while providing for flexibility and shock absorption. In evaluating Chronic Spine Disorders, it is relevant to understand the prevalence of degenerative Spine pathologies. Spine degeneration affects both the mechanical properties and anatomic morphology of the vertebrae, discs, and surrounding tissues. Such changes progress with time and can affect the range of motion, loading patterns, and tolerance to traumatic events involving loads substantially greater than those applied during common activities. The sequelae of some degenerative pathologies may be misidentified as acute injuries if the underlying process was not previously identified.

The COVID- 19 Pandemic & subsequent lockdown restrictions have impacted people's ability to stay active and mobile. There has been rise in patients with spine-related problems as work from home has led to decrease in activity coupled with an already existing sedentary lifestyle.

In the past, a patient suffering from Disc problems may have been prescribed pain killers / medications, instructed to refrain from physical activities, referred for steroidal shots or injections, and when they did not see improvement, they were sent for Spinal Surgery. Frankly speaking only 5% of Spinal problems require Surgeries; the other 95% can be dealt with conservative & curative *Ayurvedic Panchkarma Chikitsa*.

Keywords: Spinal cord, chronic spine disorders, *ayurvedic panchkarma chikitsa*

Introduction

Some common spine disorders

- Lower back ache/Neck pain
- Muscle spasm of neck/ Lower back
- Cervical/Lumbar Spondylosis (Degenerative disc disease)
- Spondylolisthesis
- PIVD- Protruded intervertebral disc
- Sciatica
- Spinal canal stenosis
- Cervical radiculopathy
- Spinal myelopathy
- Osteoporosis of spine
- Compression fracture of vertebrae
- Spine curvature disorders like scoliosis, kyphosis, lordosis etc.
- Ankylosing spondylitis

Spine disorders through ayurvedic point of view

*Nidana*¹ (causes)

With the review of Ayurvedic literature, specific etiological factors described separately for *Vata vyadhis* are applicable for Chronic Spine Disorders. So, all factors vitiating Vata Dosha in body are root cause of Chronic Spine Disorders. Causes described for *Vata vyadhi* in various Ayurvedic texts are classified systematically as below:

- Aharajanya Factors:** These include all factors related to diet, its consumption, and quality of food materials which provoke *Vata Dosha* which led to Spine Disorders.
- Viharajanya Factors:** These include behavioral and postural factors which provoke *Vata Dosha*.
- Mansik Factors:** These include factors affecting mind which in turn provoke *Vata Dosha*.
- Abhigataj Factors:** This includes trauma which provokes *Vata Dosha*.
- Anya Factors:** These include all other factors like seasonal variation, which provoke *Vata Dosha*.

Samprapti² (Pathophysiology)

Samprapti of *Vata vyadhi* is of two main types:

- Samanya samprapti:** Due to intake of *Vata prakopaka Ahara- Vihara*, *Vata dosha* gets vitiated and fills the *Rikta* (empty) *strotasa* (*Asthivaha/ Majjavaha/ Mamsavaha/ Medovaha*) where *Snehadi guna* are absent, producing the disease.
- Vishesh samprapti:** It is further of two types:
 - Dhatukshayajanya:** As the *shleshaka bhava* decreases in the body, it also decreases in the spine (joints) in quantity as well as quality due to which *Sandhishaitihilya* occurs. *Ashrayashrayi sambandha* also leads to *Asthi dhatu kshaya* leading to *khavaigunya* in the joints of spine.
 - Margavrodhajanya:** *Margavrodha* of *vata dosha* by *kapha, mala, ama, meda* etc. occurs due to which *Vata* gets vitiated and starts circulating in the body, which travels and settles in the place of *khavaigunayukta* joint of spine (neck or back). After *Sthanasamshraya* it produces the disease.

Samprapti ghatak

Dosha	Vata pradhan Kapha
Dushya (Dhatu)	Asthi, Majja, Mamsa, Meda
Updhatu	Snayu, Sira, Kandra
Agni	Jatharagni, Dhatvagni
Strotasa	Asthivaha, Majjavaha, Mamsavaha, Medovaha
Strotodushti	Sanga and Vimargagaman
Samuthana	Pakvashaya
Sancharsthan	Rasayani/Shakha
Rog Marga	Madhyama
Sthanasamshraya	Greeva/ Kati Pradesh
Vyakta sthana	Greeva-Prishtha/ Kati-Trika-Prishtha Vamsha Gata Pradesh
Adhishthana	Asthi, Sandhi
Swabhava	Chirkari

Lakshana³ (symptoms)

- Ruja, Toda, Stambha, Suptata, Chimchimayana, Gaurava, Prasaran Aakunchan janya vedana, Mamsa Shaithilya, Kriya Hani, Spandan, Shiroshoola, Bhrama, Aruchi, Tandra, Agnimandya, Pindikodveshtana, Staimitya*

Diagnostic criteria for spine disorders

- History taking (through disease specific questionnaire for cervical spine and Lumbar spine and Oswestry Low Back Disability Index, Neck disability index).
- Clinical Examination
- Investigations (X-ray, CT scan, MRI, routine blood investigations etc.)

Exclusion criteria

- Acute Spine Disorders
- Pott's Disease
- Tumors
- Hematoma
- Abscess
- Spinal Myelopathy
- Patients below 18 years and above 80 years of age
- Patients unfit for *shodhana* therapies
- Patients having disability index score 35-50 – (Complete Disability) were excluded

Inclusion criteria

- Patients diagnosed with Chronic Spine Disorders (except mentioned in exclusion criteria)
- Patients fit for *shodhana* therapy and *shamana aushadhi*

Management of chronic spine disorders

That which can cure *Roga* completely without causing any complication or it will not provoke further vitiation of *Dosha* is called as *Chikitsa*. It is clearly said as per *Ayurveda* treatment is something which will cure the disease completely without any complication and does not give rise to any other disease.

Treatment plan

- Nidana Parivarjana* (Avoiding the cause/ Dont's)
 - Aaharaj* (Diet)
 - Viharaj* (Lifestyle)
 - Mansik* (Psychological)
- Shodhana Chikitsa* (Bio-purification)
- Shamana Chikitsa* (Oral treatment)
- Pathya sevana* (*Aharaj-Viharaj-Mansik*) or *Dincharya* regimen (Advised Diet-Lifestyle/ Do's & Daily routine)
- Supportive Therapy
 - Yogasana*
 - Physiotherapy and Exercises

Nidana Parivarjana includes avoiding causative factors (diet and lifestyle) of Spine disorders like *vata vardhak aahara*, postural abnormality and psychological factors like stress, anxiety etc.

In *Shodhana Chikitsa*, initially *Deepana* (Improving digestive fire) and *Aampachana* (Digestion of toxins) is described followed by *Snehana*^[4] (both internal and external oleation) and *Swedana*^[5] (inducing sweating). Thereafter, *Mridu Shodhana* (*Mridu Virechana*^[6]-Purgation), *Anuvasana*^[7] /*Matra and Asthapanana*^[8] *Basti* (Medicated enemas), *Nasya*^[9] (Nasal instillation of medicated oil) is described. For relief of pain and spasm *Agnikarma*^[10] (Cauterization), *Raktamokshana*¹¹ (Bloodletting), and *Viddha Karma* (Dry pricking of specific points) are also described.

In *Shamana Chikitsa*, *Vatashamaka*, *Vata-Kaphashamaka* and *Vatanulomana Aushadhis* (medicines) are used in Chronic Spine Disorders as per severity and chronicity of the disease and *Dosha* involvement.

In *Pathya Sevana* (*Aaharaj-Viharaj-Mansik*), *Vatashamaka aahara* and *vihara* are advised along with *Dincharya* regimen to prevent recurrence and other lifestyle disorders.

In Supportive therapy -*Yoga, Pranayama, Physiotherapy*

and Strengthening exercises of Neck and Back muscles are done.

Categories for treatment purpose

Patients were categorized under 3 categories for treatment purpose according to disability index as follows:

Shows Disability Index Score and Disability Level

Categories	Disability Index Score	Disability Level
Category 1	0-4; 5-14	No or Mild
Category 2	15-24	Moderate
Category 3	25-34	Severe

Note: Patients having disability index score 35-50 – (Complete Disability) were excluded

Treatment plan (as per categories)

Categories	Shodhana Chikitsa	Shamana Chikitsa	Other T/t
Category 1: Muscle spasm only, no bony involvement	<ul style="list-style-type: none"> ▪ <i>Snehana</i> (with <i>Mahvishgarbha Taila</i>) ▪ <i>Swedana</i> (<i>Churna Pinda Sweda</i>) ▪ <i>Niruha Basti</i> (with <i>Erandmooladi Kwath</i>) ▪ <i>Matra Basti</i> (with <i>Mahanarayan Taila</i>) ▪ <i>Nasya</i> (with <i>Dhanwantram 101 Taila</i>) 	<ul style="list-style-type: none"> ▪ <i>Vishtinduk Vati</i> ^[12] (62.5-125mg) ▪ <i>Yograj Guggulu</i> ^[13] (500mg-1gm) ▪ <i>Rasnasaptak Kshaya</i> ^[14] (15-30ml) ▪ <i>Praval Pishti</i> ^[15] (125-250mg) 	<ul style="list-style-type: none"> ▪ <i>Nidana parivarjana</i> ▪ <i>Dincharya</i> Regimen ▪ <i>Pathya sevan</i> (<i>Aaharaj-Viharaj-Mansik</i>)
Category 2: Muscle spasm, early degenerative changes	<ul style="list-style-type: none"> ▪ <i>Snehana</i> (with <i>Karpasthyadi Taila</i>) ▪ <i>Swedana</i> (<i>Patra Pinda Sweda</i>) ▪ <i>Niruha Basti</i> (with <i>Erandmooladi Kwatha</i>) ▪ <i>Matra Basti</i> (with <i>Sahacharadi Taila</i>) ▪ <i>Nasya</i> (with <i>Dhanwantram 101 Taila</i>) 	<ul style="list-style-type: none"> ▪ <i>Mahayograj Guggulu</i> ^[16] (250-500mg) ▪ <i>Rasraj rasa</i> ^[17] (125-250mg) ▪ <i>Dashmoola Arishta</i> ^[18] (15-20ml) ▪ <i>Shankh Bhasma</i> ^[19] (125-250 mg) 	<ul style="list-style-type: none"> ▪ <i>Nidana parivarjana</i> ▪ <i>Dincharya</i> Regimen ▪ <i>Pathya sevan</i> (<i>Aaharaj-Vihara-Mansik</i>)
Category 3: Progressive degenerative changes with nerve compression	<ul style="list-style-type: none"> ▪ <i>Snehana</i> (with <i>Mahanarayan Taila</i>) ▪ <i>Swedana</i> (<i>Nadi Swedana</i>) ▪ <i>Niruha Basti</i> (with <i>Dashmooladi Kwatha</i>) ▪ <i>Matra basti</i> (with <i>Ksheerbala Taila</i>) ▪ <i>Nasya</i> (with <i>Ksheerbala 101 Taila</i>) 	<ul style="list-style-type: none"> ▪ <i>Mahavata Vidhwansan rasa</i> ^[20] (62.5-125 mg) ▪ <i>Ekanaveer rasa</i> ^[21] (125-375mg) ▪ <i>Maharasnadi Kshaya</i> ^[22] (15-30 ml) ▪ <i>Cap. Ksheerbala 101</i> (6-18 drops) ▪ <i>Swarna Bhasma</i> ^[23] (15-30mg) 	<ul style="list-style-type: none"> ▪ <i>Nidanaj parivarjana</i> ▪ <i>Dincharya</i> Regimen ▪ <i>Pathya sevan</i> (<i>Aaharaj-Viharaj-Mansik</i>)

Note:

1. *Rasaushadhis* were grinded together and divided into 42 doses and given twice a day.
2. *Anupana* for *shamana aushadhi* was *koshna jala*
3. *Lepana*, *Avgahana*, *Agnikarma* and *Raktamokshana* done according to condition of the patients in all 3 categories.

Dincharya regimen of chronic spine disorder patients at sdach

5:30 AM: Wake up time

6:00 AM: *Dant Dhawan*, *Jivha nirlekhan*, *Kaval*, *Gandush*, *Pratimarsha Nasya*, *Dhoompana*.

7:00AM: *Yogasana* (as per category)

8:00AM: *Niruha Basti* (as per category)

8:30 AM: Breakfast

9:30AM: *Shaman Aushadhi* (as per category)

11:00 AM to 2:00 PM: *Snehan Swedan* (as per category)

2:00 PM: Lunch

3:00 PM: *Shaman Aushadhi* (as per category)

3:00PM to 3:30 PM: *Vishram Kala*

3:30 to 4:30 PM: Physiotherapy and Exercises (as per category)

4:30PM to 5:30 PM: *Parisheka* (on affected region)

5:30PM: Evening Snacks

6:00PM to 6:30PM: Walk in herbal garden

6:30PM to 7:30PM: Meditation and music therapy

7:30 PM to 8:00PM: Dinner

8:00 PM to 8:30PM: *Matra Basti* (as per category)

8:30 to 9:00PM: *Shaman aushadhi* (as per category), *Karnapurana* and *Padabhyanga*

9:00PM: Bed time.

Note:

1. *Dincharya* was followed as per category 1/2/3, and flexibility in *dincharya* was adopted as per age group.
2. This daily regimen was followed for first seven days after that *Basti* was stopped.
3. For next seven days, rest of the regimen was continued as such.
4. After that, for next seven days *pratimarsha nasya* was replaced by *Marsh nasya*.
5. *Shaman aushadhi* was continued for 21 days

Pathya sevana (*Aaharaj – Viharaj-mansik*)

Aharaj

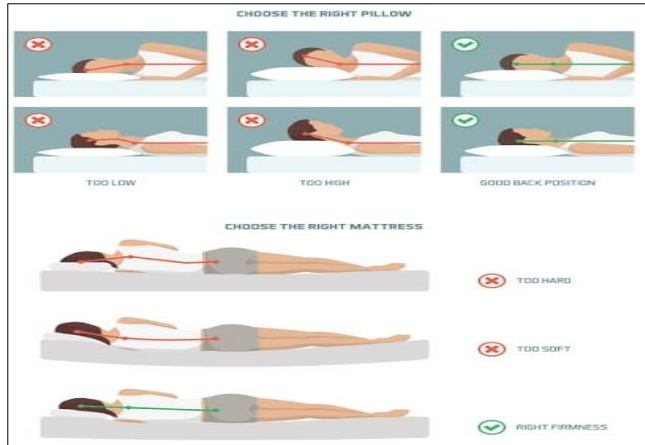
- Petite Yellow Lentiles (*Dhuli moong*), Green gram (*Chhilka moong*), Wheat, *Raagi*, Red rice, Bottle gourd (*Ghiya*), Round gourd (*Tinda*), Bitter gourd (*Karela*), Sponge gourd (*Tori*), Pointed gourd (*Parval*), Spinach,

Fenugreek (*Methi*), Turnip (*Shalgam*), Ginger, Garlic etc.

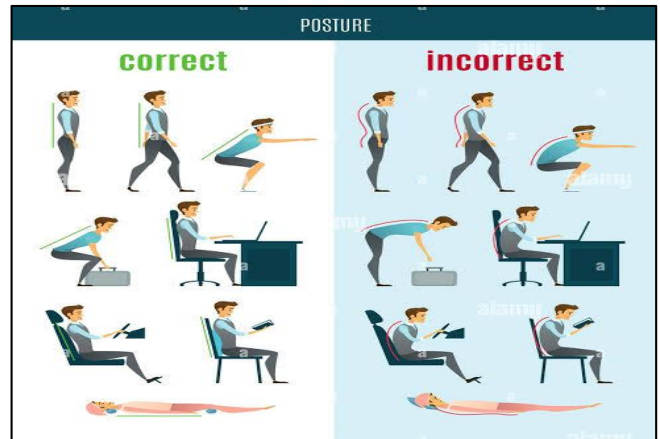
- Milk, *Mamsa Rasa* (Meat Soup), Coconut Water etc.
- Apple, Pomegranate, Papaya, Chikoo, Resins, Dates etc.

Viharaj

- Correct Firmness of mattress



- Round Pillow below knees for back ache patients while sleeping
- Correct Posture (keeping the spine straight) while sitting, standing, and walking.



- Light walk (*Shatpawali*)
- Mild to moderate exercises (*Sukshma Vyayama*)
- Muscle strengthening exercises (*Vyayama*)
- Sleeping (9-10PM) and waking up (5-6AM) early (*Brahm muhurat ujagare*)

Mansik

- Sound Sleep of 8 to 10 hrs
- Meditation (like *shavasana*, *yognidra*, *dhyana* etc.)
- *Pranayama* (*Anuloma -viloma*, *Bhramari* etc.)
- Music therapy (listening to soothing music like *OM* chanting, *Gayatri mantra*)
- Being in company of wise and positive people (*Satsang*, spending time with people having positive attitude and mindset)

Supportive therapy

A. *Yogasana*

Category 1	Category 2	Category 3
<ul style="list-style-type: none"> ▪ <i>Yogic Breathing</i> ▪ <i>Sukshma vyayama</i> ▪ Shoulder movement ▪ Neck forward and backward ▪ Arms rotation ▪ Arms flexion and extension ▪ Waist rotation ▪ Feet extension and flexion ▪ Feet rotation and stretch ▪ <i>Pawanmuktasana</i> (without neck elevation) ▪ <i>Tadasana</i> ▪ <i>Ardhachakrasana</i> ▪ Cat and cow pose ▪ <i>Makarasna</i> ▪ <i>Setubandhasana</i>(Full) ▪ <i>Veeerbhadrasana</i> ▪ <i>Suryanamaskar</i> 	<ul style="list-style-type: none"> ▪ <i>Yogic Breathing</i> ▪ <i>Sukshma vyayama</i> ▪ Shoulder movement ▪ Neck forward and backward ▪ Arms rotation (light) ▪ Arms stretch upward and forward ▪ Feet extension and flexion ▪ Feet rotation and stretch ▪ <i>Titaliasana</i> ▪ <i>Tadasana</i> ▪ Joewalk ▪ <i>Markatasana</i> ▪ Full <i>shalbhasana</i> ▪ <i>Setubandhasana</i>(half) ▪ <i>Pawanmuktasana</i> (without neck elevation) ▪ Full <i>bhujanga</i> 	<ul style="list-style-type: none"> ▪ <i>Yogic breathing</i> ▪ <i>Sukshma vyayama</i> ▪ Shoulder movement ▪ Neck backward ▪ Wall climbing (with fingers) ▪ Feet extension and flexion ▪ Feet rotation and stretch ▪ <i>Tadasana</i> (on chair) ▪ <i>Shavasana</i> ▪ <i>Makrasana</i> ▪ <i>Markatasana</i> ▪ Half <i>bhujanga asana</i> ▪ Half <i>shalbhasana</i>

B. Physiotherapy & exercises

Categories	Region	Electrotherapy/Other Rx	Exercise therapy
Category 1	Neck	<ul style="list-style-type: none"> ▪ Short wave diathermy (SWD) ▪ Hot pack ▪ Ultrasonic Massage (USM) ▪ TENS/IFT 	<ul style="list-style-type: none"> ▪ Trapezius stretches ▪ SCM Stretch ▪ Shoulder shrugs ▪ Neck isometrics ▪ Pectoral stretch
	Low Back	<ul style="list-style-type: none"> ▪ Hot pack/ Cryotherapy ▪ Ultrasonic massage (USM) ▪ Short Wave Diathermy (SWD) 	<ul style="list-style-type: none"> ▪ Rhomboid stretch ▪ Scapular stabilization exercise ▪ Pectoral stretch ▪ Pull/push exercises for mid back
Category 2	Neck	<ul style="list-style-type: none"> ▪ Short wave diathermy (SWD) ▪ Hot pack ▪ Ultrasonic Massage (USM) 	<ul style="list-style-type: none"> ▪ Trapezius stretches ▪ SCM Stretch ▪ Shoulder shrugs

		<ul style="list-style-type: none"> ▪ TENS/IFT 	<ul style="list-style-type: none"> ▪ Neck isometrics ▪ Pectoral stretch
	Low Back	<ul style="list-style-type: none"> ▪ Cryo/Hot pack ▪ Ultrasonic massage (USM) ▪ Short wave diathermy (SWD) 	<ul style="list-style-type: none"> ▪ Back isometrics ▪ Knee to chest ▪ Knee to chest(B/l) ▪ SLR ▪ Extension exercises
Category 3	Neck	<ul style="list-style-type: none"> ▪ Cryotherapy/Hot pack ▪ MFR (Manual fascia Release) ▪ TENS/IFT ▪ Ultrasonic massage ▪ Cupping therapy ▪ ICT 	<ul style="list-style-type: none"> ▪ Trapezius stretches ▪ SCM Stretch ▪ Shoulder shrugs ▪ Neck isometrics ▪ Nerve glides ▪ Nerve stretch ▪ Scapular stabilization ▪ Exercises ▪ Pectoral stretch
	Low Back	<ul style="list-style-type: none"> ▪ SWD ▪ Cryotherapy/Hot pack ▪ TENS/IFT ▪ Cupping therapy ▪ MFR ▪ ILT 	<ul style="list-style-type: none"> ▪ Back isometrics ▪ Nerve stretch ▪ Piriformis stretches ▪ Bridging ▪ SLR ▪ Knee to chest exercises

Discussion

In the recent times, there is an increasing incidence of lifestyle disorders affecting even the younger people. Despite increasing health awareness, more than half of the people in major cities like Chandigarh, Delhi, Mumbai, Pune, Bangalore, Hyderabad, Kolkata, Ahmedabad, Chennai etc. suffer from lifestyle disorders. The changed living habits due to increasing job requirement, sedentary lifestyle and competitive living are the main culprits coming in the way of golden rules of good living. People who fall victims to this new phenomenon get trapped with high stress and are prone to Spine disorders at a younger age.

Worldwide Spine disorders have a considerable impact in terms of disability and working efficiency, and represent a relevant burden for healthcare systems due to the expensive and complex medical support required by patients, in addition to economic consequences deriving from loss in productivity. This condition is a leading cause of disability especially among younger people, with a high impact on years lived with disability. Marked variations in incidence and prevalence across countries are present, with differences by sex, occupation socio-economic background. This variability can be partly explained by geographical and cultural conditions, as well as relevant infrastructural inequalities, but it also reflects the presence of diverse criteria used to identify and classify patients.

Given the preventable nature of lifestyle disorders like Spine Disorders, public health experts should monitor trends in Spine Disorders and identify groups at increased risk, to implement targeted prevention policies. Furthermore, given the burden of disability related to Spine disorders, the type of healthcare support provided to patients should be examined to determine the characteristics that are associated with better outcomes.

Management of Chronic Spine disorders with Holistic Approach

- *Ayurveda* treats the body as a whole, not only the affected part where, deformation is visible.
- *Ayurveda* has cure according to the severity of the disease. In other systems, there is no much distinction of treatment based on the severity other than dosage.
- Though some treatments in *Ayurveda* are not easy to follow, there are a lot of remedies mentioned which can be practiced easily and are cost effective.

- Basically, the treatment comprises of the following 4 parts:

1. **“Avoiding the Cause” (*Nidana Parivarjana*):** It is the primary step in treatment. As we know Chronic Spine Disorders are a result of unhealthy habits, first and foremost thing is avoiding those habits to prevent it in future and to reduce the disease progression. So, we had given maximum importance for that and consider it as the prime step.
2. **“Bio-purification” (*Shodhana & Shamana*):** It is the next step where we help in purification of the body. Here various departments of *Ayurveda* deal with correcting the equilibrium of the body. *Panchakarma* and *Kayachikitsa* department in *Ayurveda* help in correcting the *dosha* imbalance of the body along with restoring the normalcy of *agni* (digestion and metabolism) and *dhatu*s (tissues) along with its regeneration. Here we focus on resolving the pathophysiology of the disease.

Vata dosha possesses *guna* such as *ruksha*, *khar*, *parush*, *sheeta* so when it gets aggravated it leads to degenerative joint disorders as it increases dryness, brittleness of the tissues making them fragile. So, to curb *vata* dosha, in *Ayurveda* *snehana*, *swedana*, *basti*, *navan nasya*, *vata shamak* and *vata anulomak aushadhis* have been advised which have *gunas* opposite to *vata* such as *snigdha*, *mridu*, *ushna* etc.

Bahya snehana-swedana provide nourishment and lubrication to the structures of spine i.e., *Snayu* (ligaments), *Sandhi* (joints), *Sira* (blood vessels) and *Marma* points, relieve the heaviness, stiffness, spasm, and pain locally. It also increases joint mobility, reduces stress and fatigue.

Basti is said to be one of the highly effective treatment modalities for *Vataja* diseases. The drugs administered through *Basti* remain in the rectum and colon (*Pakwashaya*) and later absorbed into the body, thereby pacifying the *vata* dosha at its place of origin and nourishing the bones, muscles, and nerves of the whole body.

Nasya helps in providing nourishment to brain, all sense organs and tissues of neck region thereby nourishing all the nerves and pacifying the *vata* dosha.

Shamana aushadhis used here are *deepaniya*, *pachaniya*, *vata shamak*, and *vatanulomak*, due to which they act as analgesic, anti-inflammatory, anti-spasmodic, anti-arthritic,

and relieve stiffness and improve metabolism thereby digesting the harmful toxins. They are also *balya*, *brimhaniya* and *rasayana* due to which they act as nerve tonic, helps in healing degenerative tissues and tissue rejuvenation, muscle and bone lubrication and strengthening, proving to be useful in Musculo-skeletal disorders and Nervous-system disorders.

Category 1 treatment specifically help in reducing muscle spasm, stiffness, and inflammation. Category 2 treatment helps in reducing pain and swelling and checking early degeneration. Category 3 treatment specially help in reduces radiating pain, inflammation of nerves and strengthens them and are more effective in chronic degenerative conditions.

3. **“Holistic Lifestyle” (Pathya sevana- Aaharaj-Viharaj-Mansik and Dincharya):** It is the next phase where we provide a clear master plan for a holistic way of living. That will help the subject to live a disease-free long life and slow down the disease progression. This is the basic aim of *Ayurveda*:

- **Swasthaya swasthya rakshanam:** To prolong life and promote perfect health (add years to life and life to years).
- **Aturasya vikara prashamanam cha:** To completely eradicate the disease and dysfunction of the body.

4. **“Rehabilitative Treatment” (Supportive Treatment)** Here we focus on physical and mental rehabilitation of the patient which helps in increasing endurance and strength, and avoiding complications and recurrence of the disease. *Yogasana*, meditation, physiotherapy and proper exercises are beneficial for creating a healthy body as well as mind.

This concept of giving as much importance to 'maintenance' of health than treatment has earned a place even in WHO (World Health Organization) as the 'only' appropriate definition of health amongst all medical sciences.

Observations

- Total 9221 patients of different Chronic Spine Disorders were seen in last 5 years in OPD of *Kayachikitsa* and *Panchakarma* departments of SDACH, Chandigarh. Following disease wise prevalence and improvement rate was seen in these patients.

Disease wise Prevalence rate seen in Chronic Spine Disorder patients at SDACH in last 5 years

Shows Chronic Spine Disorders and Prevalence Rate

Chronic Spine Disorders	Prevalence Rate
Low Back Pain	16.7%
Neck Pain	14.3%
Lumbago	4.5%
Cervical Spondylosis	18%
Spondylosis Lumbar	16%
Spondylolisthesis	1.5%
PIVD	10%
Sciatica	8.2%
Cervical Radiculopathy	5%
Compression Fractures	0.3%
Curvature disorders	1%
Spinal Stenosis	4%
Ankylosing Spondylitis	0.5%

Category wise Prevalence rate seen in Chronic Spine Disorder patients at SDACH in last 5 years

Shows Category and Prevalence Rate

Category	Prevalence Rate
Category 1	54.33%
Category 2	25.89%
Category 3	19.78%

Results

Disease wise Improvement rate seen in all Chronic Spine Disorder patients at SDACH in last 5 years

Shows Chronic Spine Disorders and Improvement Rate

Chronic Spine Disorders	Improvement Rate
Low Back Pain	66.4%
Neck Pain	69.2%
Lumbago	68%
Cervical Spondylosis	65.4%
Spondylosis Lumbar	60.7%
Spondylolisthesis	19.6%
PIVD	45%
Sciatica	43%
Cervical Radiculopathy	44.3%
Compression Fractures	25%
Curvature disorders	30%
Spinal Stenosis	21.7%
Ankylosing Spondylitis	45%

Category wise Improvement rate seen in all Chronic Spine Disorder patients at SDACH in last 5 years

Shows Category and Improvement Rate

Category	Improvement Rate
Category 1	81.23%
Category 2	73.63%
Category 3	61.45%

Shows Improvement Scale and Percentage

Improvement Scale	Percentage
No Improvement	Below 24.9%
Mild Improvement	25-49.9%
Moderate Improvement	50-74.9%
Marked Improvement	Above 75%

Conclusion

- Spine Disorder is a condition involving the vertebrae, discs, supportive structures (muscles, ligaments) of spine. It most commonly presents as Neck/ Back pain, which remains as one of the leading causes of disability and rising health care cost.
- Usually, difficulty in the diagnosis and management of Chronic Spine Disorders occurs because of the ignorance, unawareness about seriousness of the condition, or lack of scientific clinical trial data to support clinical decisions.
- The effects of Spine Disorders depend on the chronicity and the severity of the disease. Now a days almost every individual is suffering from spine disorders, may it be housewife, student, teacher, businessman, serviceman, tailor, laborer etc. due to their abnormal body postures and late working hours.
- So, for the proper care and management of Chronic Spine Disorders a holistic approach is required for its

management which can be done by *Ayurveda* along with support of some modern techniques like Physiotherapy.

- Combination of *Panchkarma, Ayurvedic Shamana aushadhi, Nidana parivarjana, Aahara-Vihara Yojna, Dincharya* along with *Yogasana*, Physiotherapy and Exercises offer complete solution for Chronic Spine Disorders in terms of prevention as well as cure becoming need of the hour.

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