

ANKYLOSING SPONDYLITIS – AYURVEDIC APPROACH – A CASE STUDY

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ABSTRACT

Ankylosing spondylitis is a chronic inflammatory disease of axial skeleton with variable involvement of peripheral joints and non articular structures, usually begins in second or third decades of life. This is a condition of *Asthamajjanugatha vyadhi* with involvement of aggravated *Vata Dosha* which causes *Astiparvabhaeda*, *Sandishoola*, *Mamsabalakshaya*, etc. associated with *Ama*. Hence Ankylosing spondylitis is effectively managed in Ayurveda by means of different kinds of therapies like *Rookshana* followed by *Snehana*, *Virechana*, *Vasthi*, and different kind of *Bahya sneha sweda prayogas* also with proper *Samana* *Oushadas*. In this case study, patient was treated with both *Samana* and *Shodhana* therapies. Patient felt symptomatically relieved. This case reveals the potential of Ayurveda in this kind of chronic disease and helps us to explore new dimensions of thesefields

Keywords: Ankylosing spondylitis, *Asthimajjanugatha vyadhi*, *Ama*, *Rookshna*, *Sneha*, *Vasthi*, *Virechana*

INTRODUCTION : Ankylosing spondylitis/Marie- Strumpell disease is a chronic progressive inflammatory disease which affects primarily sacroiliac joint and spine with male to female ratio is 3:1¹ The prevalence of Ankylosing Spondylitis globally is 0.1% to 1.4% while in India it is around 0.25%¹, in European population 0.23%, in Asia 0.16% and lesser common in African population.¹ Aetiology of AS is multifactorial based on endogenous and exogenous factors. Endogenous factors like HLA-B27 have a very strong influence on the disease. Exogenous factors like gastrointestinal (salmonella, shigella, yersinia) or urogenital (Chlamydia trachomatis)² also have definite relations with the disease. HLA B27 has a strong contribution in the prevalence of AS, Most patients with AS express HLA-B27 (90%), whereas the frequency of this gene in the general

population is less than 8%^{3, 4} The disease most commonly begins in 2nd and 3rd decades of life span and gradually progresses over several years until structural damage manifest clinically as sacroilitis, loss of spinal mobility, early morning stiffness, severe pain on the back which affect the quality of life. Disease starts with low back pain that comes and goes, pain and stiffness are worse at night, in morning or when you are less active and better with activity. Affected joints become swollen and inflamed and pain elicited first in sacroiliac joint overtime chronic inflammation in the attachment of tendons, ligaments, and joint capsules to bone altered the joint architecture with formation of syndesmophyte(bony fragments) and joint fusion as a result the vertebra become fused (bamboo spine) which compromises the flexibility of the spine leads to profound axial immobility

and kyphosis of thoracic spine affect the normal posture of the patient and it become hunched. There is also involvement of peripheral joints and articular structures. As the disease progresses, joints between ribs and breast bone become stiff and disturb the expansion of chest. In Ayurveda AS considered as *Asthimajjanugata Vata* associated with *Ama*, *Sopha* and *Vata* vitiation in *Sandhi*. This is conservatively managed by *Amapachana* and *Bahyaabhyantara snehana*⁵ and proper isometric exercises along with *pranayama*. AS considered as *Yapya* according to its *Lakshana* and genetic variances but managed conservatively and provide patients a better life.

CASE REPORT

42 year old male patient neither diabetic

nor hypertensive with complaints of low back ache, stiffness of spine and neck with restricted movements (neck – extension is not possible) associated radiating pain to the mid arm bilaterally since 1 year. The pain persist during the resting position and improved while activity and more in the early morning. 10 years back, patient developed these symptoms in its minor proportion and gradually increased which affected his day to day activities. 1 year back symptoms have aggravated which seriously affected his day to day activities.

Systemic examination

Locomotor system affected with restricted forward bending with pain where neck movements are also affected. On examination straightening or absent of lordosis of lumbar & cervical spine and kyphoscoliosis of thoracic spine present.

Table no 1- Range of Movements

Affected part	Range of movement
Cervical spine	Extension- 10 ⁰ , Flexion- 30 ⁰ , Rotation – painful - 50 ⁰ Lateral bending – 15 ⁰ (Rt), 10 ⁰ (Lt)
Lumbar spine	Flexion- 30 ⁰ , Extension- 10 ⁰ , Lat- bending- 10 ⁰
Hip	Flexion-100 ⁰ , Extension- 30 ⁰ , Adduction - 20 ⁰
Shoulder	Flexion- 140 ⁰ , Extension- 60 ⁰ , Abduction- 160 ⁰

Chest expansion – 2cm ,Finger to ground distance (FGD) – 35CM, SLRT- Negtive

Investigations: Table no 2: Heamatology:

ESR	45mm/hr
HLA B27	Positive
RA factor	Positive
S.creatinine	1.2 mg/dl
Uric acid	4.2 mg/dl

Table no: 3 Radiology:

X- Ray	Appearance
LS spine	Bamboo spine – fused
SI joint	AP bilateral fusion – L > R
Hip Joint	Calcified acetabulam
Pelvis	L5 transverse process fused with ileum
T spine	Kyphoscoliotic
Cspine	Calcified anterior longitudinal ligament, lordosis absent - straight

Diagnostic criteria and assessment:

Diagnosis of the patient underwent by the clinical features sucha as pain, stiffness and mobility of the joint, along with genomic involvement and radiological, heamatological findings.

The patient had kyphoscoliosis with restricted movements of lowback and neck, fatigue, disturbed sleep due to pain. These symptoms give a sight of *Asthimajagata vata* which posess *Asthibheda*(stabbing pain in the bones), *Parvabhedha*(pain in finger joints), *Sandhishoola*(joint pain), *Mamsakshaya* (depletion of muscular tissue), *Balakshaya* (decreased strength of body), *Aswapna* (sleeplessness), *Satataruk* (continous pain) as its *Lakshanas*.⁶ *Adhyasthi* (fusion of intervertebral disc)⁷ is the manifestation of *Asthipradosha vikara* and *Vinamatha* (Kyphoscoliosis)⁸ is the manifestation of *Majjavrutha vata*. Aggrevation of *vayu* in *sandhi* also increases the manifestation of pain as well as *Prasaraakunchana* of the

*sandhi*⁹. Prognosis of this condition is *Yapya*.

Therapeutic focus and assessment

Principle of treatment adopted here *Amapachana*, *Asthimajjanugata Vatahara*, *Shatahara*, *Shoolahara* and *Sandhivatahara* associated isometric exercises and *Pranayama*. According to *Acharya Vata* vitiated in *Asthimajja* managed by *Bahyaabhyantara Sneha*⁵ and *Vata* vitiated on *Sandhi* managed by *Sneha Daha* and *Upanaha*¹⁰ Here the treatment plans are Internal medication (Op level) and Ip level treatments were administered. The outcome was assessed by the range of movements of the patient with the spine and chest expansion.

Objectives:

- To maintain the mobility of affected joints
- Improve the neck movements especially extension & lateral rotation
- Improve quality of life of patient

Table no: 4 OPD level treatment: 1month

FOR 15 days – first visit

1. *Prasaranyadi Kashaya* + *Punarnavadi kashaya* *Kashaya* – 15ml *kashaya* + 45 ml lukewarm water – 12th hourly- before food
2. *Chandraprabha* tab – 1 -0-1
3. *Shaddharana choorna* -5gm – BD
4. *Yogaraja guggulu*- 1-0-1
5. *Dashamoola haritaki lehya* – 10 gm night.

After 15 days – *Ama* conditions subsided – continue same medications with

- 1- *Maharasnadi kashaya* – 15ml *kashaya* + 45 ml lukewarm water – 12th hourly- before food
- 2- *Yogaraja guggulu* – 1 -0-1
- 3- *Shaddharana choorna* – 5gm – 0- 5gm
- 4- *Balataila*- 101 A – 20 drops at night with milk
- 5- *Karpasasthyadi taila* + *murivenna oil* – E/A

Advised isometric stretching exercises and pranayama

Progress of treatment – pain and stiffness of the multiple joints subsided and range of movements slowly progressing. So planned for IP level procedures

IP level treatment – After 1 month of op

basis treatment

Internal medicines: same medicine in the second phase of treatment

Added- *chandraprabha vati* – 1-0-1

Advised – pranayama

Table no: 5 Panchakarma procedures

Procedure	No. of days	Remarks
<i>Choorna pinda sweda</i> with <i>kolakulathadi choorna</i>	5 days	Neck – no improvement
<i>Sramsana</i> with <i>gandarvahasta taila</i>	1 day	
<i>Abhyanga</i> with <i>sahacharadi taila</i> + <i>prasaranyadi taila</i>	7 days	Manual cervical traction FGD- 27cm
<i>Choorna pinda sweda</i> with <i>prabhanjana taila</i>	7 days	FGD-23 cm(1 ST day) FGD- 22cm (3 rd day) FGD- 17 cm (7 th day)
<i>Patrapotala sweda</i> with <i>prabhanjana vimardhana taila</i> + <i>murivenna</i>	5 days	FGD- 15 cm(4 th day)
<i>Yogavasthi</i> <i>Snehavasthi</i> – <i>sathahwadi taila</i> <i>Kashaya vasthi</i> with <i>Dashamoola kashaya</i>	8 days	FGD- 15 cm (3 rd day) Neck extension improved

Table no : 6 Condition of the patient at the time of discharge

LS spine	Cervical spine	Chest expansion
FGD- 12 cm Hyper extension – 30 ⁰ Lateral bending – 15 ⁰	Extension – 20 ⁰ Lateral bending – 30 ⁰ (Rt), 30 ⁰ (Lt) Rotation painless	3.5 cm

DISCUSSION :

As Ankylosing spondylitis is a chronic inflammatory progressive disease with its genic involvement, complete curing of the disease is very difficult but through different Ayurvedic procedures, formulations we can manage the disease conservatively. Here the first line of treatment focused was to normalise the deranged amatwa in patients followed by treatments which reduce the pathology and enhances the mobility of the joints ultimately give the patient comfort.

Discussion on OP level treatment;

On the first visit patient had experienced more stiffness on the neck region and forward bending was limited and the patient had a gradual development of the condition since 10 years. So here we administered *Prasaranyadi Kashaya* and *Punarnavadi Kashaya* combination with

Chandraprabha vati which together act as *Ama pachana*, *Sophahara*, *Sulahara*, which reduced the pain. *Mutrala* properties of both *Punarnava* and *Chandraprabha* diminish the *Apakwa shopha* resides in between joint and relieve the *Sthabdatha* of the joint. *Prasaranyadi kashaya* helps to reduce vitiated *Vata* especially in neck region which reflects the neck movements of the patient and reduce the painful stiffness. *Shaddharana* and *Yogaraja guggulu* promotes *Amapachana* by their *Deepana Pachana* properties and reduce *Asthi majtagata Vata* and *Kaphavrutha Vata* thus relieves *Vata* vitiation on *Sandhies*. Also both have *Srothoshodana* properties which enhance the proper functions of compromised *Srotheses* leads to the normal functions. Especially *Yogaraja guggulu* act as *Sthambhana* which alleviate stiffness of the lumbar and

cervical spine. *Dasamoola hareetaki lehya* is *Kapha Vata shamana, Srotoshodana, Amavata hara and Pravrudhha Sophahara* which enhances the proper function of impaired axial skeleton by its properties. 2nd level of op treatment were given when the the ama conditions subsided. *Sneha* and *Sweda* treatments were also adopted. Acharya charaka explained the principle of treatment of *Asthimajagata Vata* as *Bahyabhyantara Sneha*. In *Asthimajjanugata Vata* two main events are contributing to the pathogenesis of the disease they are *Kshaya* of the *Asthidhathu* and *Vata Prakopa*. According Vaghbata Acharya *Asthidathu* and *Vatadosha* are *Asraya – Asrayee Bandha*¹¹ in which *Kshaya* of *Vatadosha* leads to *Vridhhi* of *Asthidhathu* and vice versa. Acharyas mentioned the importance of *Sneha Sweda* and its effect on the body while describing *Vatavyadhi Chikitsa* it states that like a dried stick made flexible by applying *Sneha* and *Sweda* therapy, the body of *Vatarogi* is also flexible and free from stiffness by the use of *Sneha Sweda*.¹² From these observations here treatment adopted as Internally *Balataila* 101 A prescribed and externally combination of *Karpasasthyadi taila* and *Murivenna*. *Karpasasthyadi taila* have *Sarvavatavyadi hara* associated degenerative musculo neurological problems. *Murivenna* reassures by reducing the *Sopha* and *Sula* by its anti-inflammatory property and *Tridoshashamaka*.

Discussion on IP level treatments

Choornapinda sweda given for 3 days to get down the persistant *Amaja* condition by using *Kolakulathadi Choorna*. *Choorna* acting with the effect of *Dhanyamla* made proper *Niramaja* condition to the body because drugs are *Rooksha, Kaphavata Shamaka, Sramsana* with

Gandarvahastaeradataila give *Vatanulomana* and *Vata Kaphashamana* which give proper *Nirama Avastha* to the patient. In *Bahya sneha, Snigdha Choorna pinda Sweda* with *Prabhanjana Vimardhana Taila* enhances the mobility and relive the stiffness of the body by its *Vata kapha Shamana, Balya, Rujaghna*. In this case the patient got considerable improvement (FGD- reduced from 23-17cm). Followed by *Patrapotala sweda* with mixture of *Prabhanjana taila* and *Murivenna* add the result to be better by *Sulahara Sophahara* properties of *Murivenna*. Later *Yogavasthi* administered with *Shatahwadi Taila* as *Anuvasana & Dashamoola Kashaya* as *Niruha*. *Vasti* is a supreme position in treating *Vata* disorders and considered as *Ardha chikitsa* and *Agryya* for *Vatic* disorders. *Shatahwadi taila* as *Anuvasana* have the effect of *Vata Kapha Shamana, Srotosodhana*. *Dasamoola kashaya* is *Tridosha Shamaka, Balaya, Deepana, Shoolaprasamana, and Sophahara*. All together with *Prabhava* of *Vastikarma* patients got satisfactory results.

Effect of pranayama:

Pranayama helps in bringing the sympathetic and parasympathetic nervous system in to harmony by these we can influence the nervous system and regulate the bronchio- dilation by correcting the abnormal breathing patern and reducing muscle tone of respiratory muscles. Breathing practices overshadowed the affected ribs and costal cartilages in ankylosing spondylitis by these the patients quality of respiration improved.

CONCLUSION:

Ankylosing spondylitis is an inflammatory progressive disorder of the axial skeleton. This is one of the spondyloarthropathy affecting the daily routines of the patient.

Affected joint has stiffness and difficulty in their range of movements and associated with pain. According to Ayurveda principle it is considered as *Asthimajjagata vata* associated with *Ama* conditions. Eventhough it is a *Yapyaroga* we can conservatively manage and improve the quality of life of the patient and comfort the person to his daily activity. Ayurvedic managements like *Rookshana Chikitsa* followed by *Sneha Sweda chikitsa* gives good results in the patients. Different *Panchakarma* procedures like *Choornapinda sweda, Patrapotala sweda, Virechana* and *Vasthi* got remarkable progress of the patient. here the patients range of motion and chest expansion, flexibility of the movements and pain relived by these improve the patients quality of life and restrict further derangements.

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Image .1 Before treatment



Image .2 After treatment



Image 3.Laboratory Reports

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Name: Mr. Khadar Kunhi
Lab No: 19624
Opd/Ipcl: 2004615 /191034
Ref. by Dr: Sahl M

Reg Date: 12/12/19
Age/ sex: 42/M
Date: 20/12/19

HEMATOLOGY

ERYTHROCYTE SEDIMENTATION RATE (ESR)	RESULTS 45	NORMAL RANGE		UNITS mm/hr
		Male up to	10	
		Female up to		20

BIOCHEMISTRY

SERUM CREATININE	RESULTS 1.2	NORMAL RANGE		UNITS mg/dl
		Male –	0.8- 1.2	
SERUM URIC ACID	RESULTS 4.2	Male – 3.4- 7.0 Female – 2.4- 6.0		mg/dl


Authorized signature

Image 4.Laboratory Reports

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Date: 20/12/19

SEROLOGY

	RESULTS
R A factor	Positive
HILA B 27	Positive


Authorized signature