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Ayurvedic approach for management of *Ankylosing Spondylitis:* A Case Report

Narendra Ramdas Kotwal* [1], **V.J. Tiwari** [2]

1. P.G. final year, Yerla Ayurvedic Medical College & Hospital, P.G.institute, Kharghar, Navi Mumbai.
2. Professor,

Panchkarma Department, Yerla Ayurvedic Medical College & Hospital, P.G. Institute, Kharghar, Navi Mumbai, Maharashtra, India

*Corresponding author:
narendrakotwal15@gmail.com,
Mob.: 8169948795

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Abstract: *Ankylosing spondylitis* is a member of more broadly defined disease axial *spondyloarthritis* affecting mainly the spine which often starts around the sacroiliac joint and appears gradually with peak onset between 20-30yrs of age. It affects 0.1 to 1.8 % of the population of which men are three times more prone to it than females.(1) It is characterized by musculoskeletal pain, stiffness and reduced mobility of spine. Vertebral osteoporosis is common & cardiovascular disease & renal impairment may complicate severe AS. Pathogenesis of AS is poorly understood though Human leukocyte antigen (HLA)B-27, inflammatory cellular infiltrates, cytokines & genetic and environmental factors are thought to have key roles. AS can be diagnosed through radiological changes, positive bio-marker (HLA) B-27, Elevated CRP. No satisfactory treatment is available on allopath with only NSAID's & steroids in their treatment box.

A case of 26yrs old male came to opd suffering from lumbar & cervical pain, bilateral shoulder restricted movement & reduced mobility of spine. The patient was considered to be suffering from *asthi pradoshaj vikaar* & was treated with *pathya palan*, balanced *aahar-vihar*, oral medicines for 3 months & panchkarma treatment of sarvang snehana & swedan for 8 days with *yogbasti kram* & then *panchtikta ksheer basti* for 8 days. The patient's condition was assessed for symptoms in relief & improved movements. After *Ayurvedic* treatment there was substantial improvement in lumbar pain & degree of movement also improved. This case study shows that the cases of AS can be successfully managed with *Ayurvedic* treatment.

Introduction:

Ankylosing spondylitis (AS) has been afflicting humankind since ancient ages. It was during the 1800s that the classical description of AS was made. Throughout the 1900s, further understanding about the disease was established, including its hereditary nature. The disease is recognised as part of the *spondyloarthropathy* group of rheumatic diseases. The name is derived from *greek* word '*ankylos'* means stiffening, '*spondylos'* means vertebrae & 'itis' mean inflammation.(1)

The primary sites of inflammation in AS are the sacroiliac joints. It primarily affects young adults, with a higher incidence in patients between 20 to 40 years old. It affects 0.1 to 1.8 % of the population in which men are three times more prone to it than females.

As the disease progresses it can result in total fusion of the axial skeleton, and can cause loss of smooth physical function and spinal mobility. Patients in which the disease has been inadequately treated or undiagnosed can develop a characteristic 'bamboo spine' where there is total spinal fusion. The hunched position following complete spinal fusion can have an effect on a person's gait. Increased spinal kyphosis will lead to a forward and downward shift in centre of mass. This shift has been shown to be compensated by increased knee flexion and ankle *dorsiflexion*. The gait of someone with *ankylosing spondylitis* often has a cautious pattern because they have decreased ability to absorb shock. The *chronicity* can also result in restrictive lung function, leading to respiratory failure. AS is not just limited to the spine; the peripheral joints can be affected, and organs such as the eyes, heart, and lungs can be involved. Patients can also complain of systemic symptoms such as fatigue or weight loss. There is a high risk of osteoporosis and vertebral fractures. Chronic pain and immobility can lead to patients experiencing depression and anxiety.

Pathogenesis of AS is poorly understood though Human leukocyte antigen (HLA)B-27(2), inflammatory cellular infiltrates, cytokines & genetic and environmental factors are thought to have key roles.

There is no cure for *ankylosing spondylitis*, symptomatic treatment may relieve the patient from pain & prevent worsening. Previous published case reports have correlated *ankylosing spondylitis* with '*amavata'*, '*asthimajjagata vata'* & successfully treated with *ayurvedic* intervention. Here, we are reporting one such case of *ankylosing spondylitis* diagnosed as '*asthi pradoshaj vikaar'* [3,4] according to *Ayurveda*.

AIM – To treat a case of *ankylosing spondylitis* by *ayurvedic* intervention using *Panchkarma* & oral medications.

OBJECTIVES –

1) Study in detail about *asthi pradoshaj vikaar* & *ankylosing spondylitis* & correlate.
2) To establish standard *ayurvedic* treatment

Materials & methods –

A case of *ankylosing spondylitis* was taken from OPD of our hospital. Detailed history was taken along with

examination & investigations were done. Patient was assessed mainly on subjective criteria before & after the treatment. Both shaman & *shodhan chikitsa* was given to the patient & follow-up was taken for 12 weeks.

Case description:

Patient history - A 26 year old male coming from Uttar Pradesh state, India, residing in Navi Mumbai consulted in *Panchkarma* OPD in YMT *Ayurvedic* Medical College with complaints of lower back & cervical pain (which was diffused & dull in nature) & stiffness with gradually progressive reduced forward bending, whole body pain after moderate exertion & bilateral shoulder pain with restricted movement. Patient had history of several episodes of lower back ache especially in cold days during night followed by spinal stiffness in the morning. The patient also had pain in bilateral shoulder with restricted movement of neck & forward bending since past 10 years & cervical pain & stiffening following it after 4 years. When the pain & stiffening worsened, he consulted a homeopathy physician & took oral treatment for 2 years. There was some relief but soon after the symptoms relapsed. He also took allopathic treatment which consisted of *Naprosyn* (NSAIDs), *Saaz* (DMARDs) & Folic acid which minimally helped the patient. When the patient arrived he also complained of disturbed sleep due to pain & functional disability.

Physical findings such as loss of spinal mobility, with restriction of flexion and extension of the lumbar spine and neck were found. Pain in the sacroiliac joint was elicited after applying pressure. The posture had undergone change such as loss of lumbar *lordosis*, thoracic *kyphosis* & stooped neck. There was no any extra-*articular* manifestation nor any cardiovascular discomfort, similarly restriction in expansion of the chest was not also found. The patient was not suffering from any systemic disorder or had any major illness in the past. He had history of accident twice, once fractured his forearm due to fall & other fall from bike with minimum injury to right lower limb. The previous report of HLA-b27 done by the patient was positive & x-ray of whole spine showed significant changes suggesting *ankylosing spondylitis*.

Treatment given-

On the 1st day, patient was given symptomatic treatment on OPD basis for 7 days. *Kaishore guggul* (250mg) in Bid dose & *Arogyavardhini vati* (250mg) in Bid were given & was advised to get admitted for *panchkarma*.

After 1 week, he came for follow-up & had good response with the medications. So he wsas admitted for further treatment & *panchakarma*. As per the classics firstly *shodhana* treatment was given, this included *sarvang abhyanga* with til tail & vashpa sweda (*dashmool kwath*) with *yogabasti karma* for 8 days. Thereafter, another 7 days of *panchtikta Ksheer basti* (120ml)[5] was given. *Shaman chikitsa* was further continued with *kaishore guggul* & *aarogyavardhini till* he was admitted in the hospital.

Procedure	Medicine	Duration	Dose
Sarvang abhyang	*Til tail*	15 days	100 ml/day
Sarvang vashpa sweda	*Dashmool kwath*	15 days	Till *sweda pravritti*
Anuvasan basti	*Til tail*	1st, 3rd, 5th,7th, 8th day	120 ml
Niruh basti	*Raasna errand kwath*	2nd, 4th, 6th day	960 ml
Balya basti	*Panchtikta ksheer basti*	9th to 15th day	120 ml
Shaman chikitsa	*1. aarogyavardhini vati* *2. kaishore guggul*	15 days 15 days	250 mg Bid 250 mg Bid

After discharge, patient was given mixture of

1. *Bruhatvatachintamani 2500mg*
2. *Muktapishti 2gm*
3. *Guduchi satva 2gm*
4. *Shring bhasma 10gm*
5. *Abhrak bhasma 2gm*

for over a period of 21days equal doses with madhu as anupana.

The patient was advised to follow diet in which meals are devoid of bakery products, oily stuff, dairy products, non-veg was advised. No concomitant allopathic was given during this whole treatment period. The patient was assessed on the basis of his improvement in mobility & quality of life.

Assessment criteria-

Objective criteria-

- *neri* bowstring & Neck rotation

Subjective criteria

Symptoms	Grade 0	Grade 1	Grade 2	Grade 3
Stambha	No stiffness	Relieved after movement	Persists for moderate time	Continuous
Shool	No pain	Mild pain on exertion	Moderate pain on exertion	Severe pain

Observation & result-

After 4 days of admission, the patient started responding to the treatment. The pain and stiffness of the spine during rotation began to decrease and after 15 days the pain was totally gone with stiffness persisting minimally during the evening & night hours but as day progression starts it reduced.

Symptoms	Before treatment	After treatment
Neri bowstring	16cm	7cm
Stambha	3	1
Shool	3	0
Neck rotation towards right	60^0	80^0
Neck rotation towards left	75^0	90^0

It was observed that after the *panchkarma of abhyanga, swedana & basti* procedure along with *ayurvedic* medicine, the patient had much relief and even after regular follow-ups the patient had no recurrence of above symptoms. The response of the patient was good. Spinal mobility, fatigue and pain were reduced after treatment. There was significant improvement in functional capacity and physical strength.

DISCUSSION-

Nidan panchak-

Hetu- sheet jal sevan, sheel anna, atichinta, vegadharan, adhyashan, tikta katu aahar

Poorva roop – alasya, pratah prusht stabdhata

Roop – stambh, shool,

Upshay – ushnata

Samprapti –

Hetu sevan

⇓

Vata vridhhi & prakop

⇓

asthisthana sanshray (ashray-ashrayi bhava)

⇓

Sthan parushta, rukshata, kharata

⇓

Asthi vruddhi

⇓

Stabhdata and shool

In *ankylosing spondylitis*, there is destruction of nearby *articular* tissues at the site of *entheseal fibrocartilage*. The new cartilage is replaced by bony growth through fusion causing stiffness & immobility. These growth inside the ligaments are known as *syndesmopytes* which are pathologically similar to *osteophytes*. This leads to bamboo spine formation which is a hallmark of AS. The formation of *syndesmophytes* indicates degeneration of that particular area. Similarly, in *Ayurveda, asthi pradoshaj vikaar* the '*adhyasthi'* described by *charak in sutrasthana* can be compared with the *syndesmophytes* growth along the spine. So the treatment was planned according to asthi *pradoshaj vikaar*. Thereby first we decided to correct the *prakop & gati* of all *vaayus* especially *vyan vayu* because of its *kritsnadehachari* property i.e. *vayu* spread all over body. So, *sarvang abhyanga* with *til tail* & *vashpa sweda* along with *shodhana basti (yogabasti kram*) was given for 8 days that corrected the *prakop* & gati was brought to normal. Along with that *malashudhhi* was also carried out due to which the stambh & shool reduced. After *shodhana*, degeneration was taken care of by giving *panchtikta ksheer basti* for 7 consecutive days which gave bala to the spine. After the *shodhana, shamana chiktsa* was given which included *bruhatvatachintamani, muktapishti, shring bhasma, guduchi satva & abhrak bhasma* (*Bruhatvata chintamani ras as rasayana, muktapishti* to prevent *dhatuksheenta, guduchi satva* as anti-inflammatory, abhrak bhasma acting *as tridosh shamak & shrung bhasma – asthi poshak*) which prevented further

degeneration & helped in its maintenance.

Conclusion-

We treated the patient after understanding out the proper *hetus*, preventing it & its *samprapti*. The combined ayurvedic treatment of mentioned oral drugs & *panchkarma* procedures were helpful in treating the patient of AS & thus prevent complications due to it. This approach may be taken into consideration for further treatment & research work for *Ankylosing spondylitis*.

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