ORIGINAL RESEARCH PAPER

Ayurveda

KEY WORDS: Ankylosing spondylitis, GambhiraVatarakta, Modified New York Criteria BASDAI.

AN AYURVEDIC APPROACH IN TREATING ANKYLOSING SPONDOLYSIS AND DISCUSSION OF THE LITERATURE.

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ABSTRACT

[1]Ankylosing spondylitis (AS) is an inflammatory disorder of unknown cause that primarily affects the axial skeleton.Peripheral joints and extra articular structures are also frequently involved. NSAIDS are the first line of pharmacological therapy for AS. However many patients with AS have developed deformity in spite of NSAID therapy. Dramatic responses to anti TNF alpha were reported, but because of the expense and potentially serious side effects and unknown long term effects of these agents, its use should be restricted. Clinical presentation of AS can be correlated with Gambhira Vatarakta. Here is a single case study of AS. A 21-year-old male presented with knee joint (Rt) pain of one month duration. History revealed an inflammatory lowback pain since 3 months. Radiological imaging of lumbar spine showed grade 1 sacroiliitis. The patient was treated conservatively for 3 months. Treatments in this case were directed towards alleviating the symptoms and to arrest the pathogenesis by adopting classical Ayurvedic therapy. No modern medications were given during this treatment period .The diagnosis was done with the help of clinical findings and the Modified New York Criteria. The pre-post was assessed using BASDAI.

INTRODUCTION

The Spondyloarthritis are a group of disorders that share certain clinical features and genetic associations. AS is one among them and usually begins in the second or third decade. The male to female prevalence is between 2:1 and 3:1. The prevalence of AS is generally believed to be between 0.1% and 1.4% globally, while in India, around 0.25% population is estimated to be affected.The pathogenesis of AS is thought to be immune mediated. The dramatic response to TNF alpha indicates that this cytokine plays a central role in immunopathogenesis of AS. Sacroiliitis is often the earliest manifestation of AS. In the spine, there is inflammatory granulation tissue at the junction of annulus fibrosis and vertebral bone. The outer annular fibres are eventually replaced by bone, forming the beginning of a syndesmophyte, which then grows by continued endochondral ossification, ultimately bridging the vertebral bodies. Ascending progression of this process leads to the bamboo spine. Ankylosing spondylitis can be correlate with Gambhira vatarakta which is actually Avaranjanya Vatavyadhi. The term Adhyavata indicates the predominance of Vata in the pathogenesis of the disease. In acute phase symptoms of AS can be simulated with Saama vata condition.[2]As the disease progress, Gambhira Vatarakta symptoms such as Swayathu,Artiruk, Sandhi -Toda-Paka, Dhamani anguli sandhi sankocham, etc will manifest.

CASE REPORT

The 21 year old patient came to our OPD, Govt Ayurveda College Thiruvananthapuram presented with right knee joint pain and swelling. The patient was born to non-consanguineous parents. He was reasonably well before 3 months, then he gradually developed pain over lowback - localised pain, usually aggravating during periods of inactivity and during night hours (which woke him at night) and had spinal stiffness in the morning, gets relieved after mild physical activities. After few days, he experienced pain over right knee, associated with swelling and local rise of temperature (+). It often aggravated during morning hours (morning stiffness more than 1hour). Few days later, he developed pain over neck region which was progressive in nature, and all neck movements were restricted. He had difficulty in climbing stairs, walking and bending forward. No extra articular manifestations, no history of weight loss, sore throat or fever. No family history of similar complaints. He was not on any medications.

The patient had reduced appetite and constipated bowel. Bladder –Normal, Sleep - Reduced due to pain since 3 months.

On general and physical examination, Pulse rate 80/min regular normal volume, Heart rate 80/min regular, Respiratory rate 18/min, Blood pressure 110/70mmHg, S1 S2 normally heard, no added sounds. Height-170cm, Weight-56 kg, BMI-19.3 kg/m^2.

No pallor,Icterus,clubbing,cyanosis,lymphadenopathy Swelling(+)

Locomotory system examination

Inspection

No marked deformity / muscle wasting swelling ++ (rt knee)

Palpation

Grade 2 tenderness over L4, L5, S1, right and left sacroiliac joint.

Range of motion

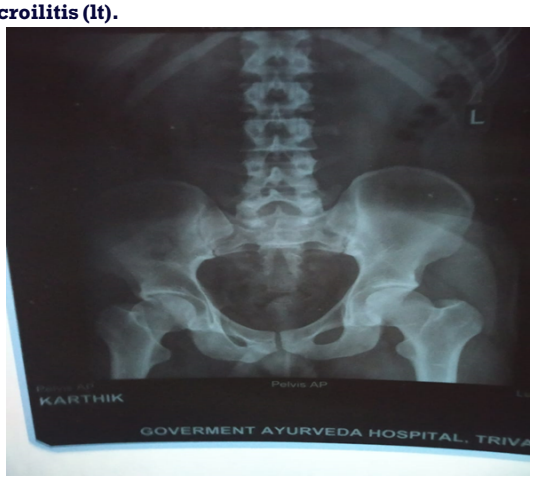
Cervical mobility: All movements restricted @ 35 degree. Occiput to wall distance - 4cm Tragus to wall distance -14 cm.

Thoracic mobility- Chest expansion 2cm.

Lumbar mobility- Flexion painful @40 degree, Extension and lateral flexion restricted due to pain. Schobers test positive (2cm).

Sacroiliac joint special tests- Pump handle (+) Gaenslen's (+) pelvic compression test(+)

[Table/Fig-1]: AP X -ray pelvis showing grade 1 sacroilitis (lt).



Investigations

On genetic test, HLAB27 was found to be positive (09/11/2019) and blood test showed raised inflammatory markers. ESR raised -84mm/hr, C- reactive protein 53.2mg/dl. Lab tests showed Hb -13.3 gm %(02/08/2019). X-ray of sacroiliac joint showed grade 1 Sacroilitiis.

Diagnosis of AS was made according to the modified New York criteria.

Table/Fig 2: 2016 New York revised criteria for too early diagnosis of Ankylosing Spondylitis (AS)

Clinical criteria

Inflammatory Low Back Pain

- **Definite** 2 points
- **Probable** 1 point

Positive family history of AS Up to 3 points
- Firstdegree 2 points
- Second degree 1 point
- More than one family member 1 point

Lumbar limitation of motion in all directions 2 points

Clinical sacroiliitis 1 point

Enthesitis and/or arthritis 1 point

Imaging criteria

Bilateral sacroiliitis (grade ≥ II) 3 points

Unilateral sacroiliitis (grade ≥ II) 2 points

HLA-B27 positivity 1 point

Patient score was 7

Bath Ankylosing Spondylitis Disease Activity Index

Question	Score	Before treatment
1. How would you describe the overall level of fatigue	1–10	4
2. How would you describe the overall level of neck, back or hip pain you have had?	1–10	8
3. How would you describe the overall level of pain and swelling you have had in joints other than the neck, back or hip?	1–10	7
4. How would you describe the overall level of discomfort you have had from any areas tender to touch or pressure?	1–10	7
5. How would you describe the overall levelof discomfort you have had from the time you wake up?	1–10	8
6. How long does your morning stiffness last from the time you wake up?	0 hr to2+ hrs	7

BASDAI score was 6.7

Treatment

The patient is vatakapha-prakruthi.

Doshas involved are Vata and Kapha. Dhatus involved are Rasam, Raktam, Asthi and Majja

Patient had Soola, Vibanda, *Alasya, Gaurava, Sopha* , and *Aruchi* .Treatment was planned to remove the *Ama* with Deepana *Pachana, followed by Kevala Vata Chikitsa.*

For Deepana pachana and Anulomana: Pachanamrutha kashayam 90ml, Vaiswanara choornam 5gm with Pachanamrutham for 5 days.

Appetite increased bowel became ease to evacuate.

Snehapanam with Indukanthaghrtm (starting dose-25ml, maximum dose -225ml)

Virechanam with Gandharvaerandam 30ml with milk.

Peyadi for 3 days

As samana Rasnerandady kashayam 90ml bd with Indukantha ghrtam 1 teaspoon for 14 days.

Done Sankaraswedam for 7 days.

Abhyngam with Satahwadi tailam for 7 days

Then Ksheeravasthi done (kashayam-Panchatikta kashayam, Ghrtam-Indukantaghrtam, Tailam- Sahacharadi tailam.

As Rasayanam Pippali Vardhamanam - starting dose 3gm along with milk and by increasing 3 gm daily upto 30gm and then decreasing with 3 gm to the initial dose in 19 days.

Assessment during and after medicines/procedures.

Medicines/procedures	Remarks
Deepana, Pachana and after Anulomana	Appetite improved, bowel easily evacuated VAS 8/10 swelling ++
Snehapanam	VAS 7/10 swelling +
Virechanam	VAS 5/10 swelling reduced
Abhyngam,Sankaraswe dam	VAS 5/10 swelling resolved ROM possible with pain
Ksheeravasthi	Full ROM possible without pain
Rasayanam	Full ROM possible without pain

Haematological parameters were re-investigated on 30/12/2019. ESR showed a change from 84mm/hr to 16mm/hr and CRP from 53.2mg/dl to 3.2 mg/dl. Hb-14.3gm%. Stiffness , pain and swelling were reduced after treatment. The baseline score of BASDAI was 6.7 and after 3 months of completion of treatment ,the score was reduced to 2.

DISCUSSION

Ankylosing spondylitis is a systemic rheumatic disease and is one of the Seronegative spondyloartropathies. These comprise a group of related inflammatory joint diseases, which show considerable overlap in their clinical features and a shared immunogenetic association with the HLAB 27 antigen. In a typical severe untreated case- the patients posture undergoes characteristic changes, with obliterated lumbar lordosis, buttock atrophy,and accentuated thoracic kyphosis. There may be forward stoop of the neck or flexion contractures at the hip,compensated by flexion at the knees.

The case was treated on the line of management of *Saamavata, after Nirama avastha vatavyadhi treatment adopted.* Sama Avastha was treated with Deepana-pachana , [4]Snehana , Svedana, and Mridu Virechana are the line of treatment for Nirama Vata Vyadhi. Here Snehapanam was with Indukantaghrtam. Indukantagrtam has Vedanahara and Sothahara properties. It is Deepana,Pachana and Srothosodhaka [4] It has got immunomodulatory effects. Rasayana therapy has been given a crucial place in Ayurvedic classics, which mainly aimed for the balance of the Dhatu metabolism. Action of Rasayana drugs is mainly based on the following properties like anti-oxidants, anti-ageing, anti-inflammatory and immune modulating action. *Vardhamana pippli prayoga* is useful in *Vata kaphaja condition* , *Pippali* has *Dipana, Pachana* and *Rasayana* properties, which is essentially required for the condition like AS.

CONCLUSION

Ankylosing Spondilitis is not mentioned as a separate entity in

the Ayurvedic classical texts. But considering the symptoms and the causes, the disease can be approached with the concept of Vatavyadhi with special reference to Gambhira vatarakta. After assessing the Doshas and Ama status, the protocol was designed. This approach may be taken into consideration for further treatment and studies have to be conducted in this regard, so that we can effectively use the Ayurvedic principles in conditions such as Spondylarthropathies. Patient is under follow up and there is no worsening of any symptoms and signs until now. This is an important finding considering the prognosis and unsatisfactory treatment in modern medicine.

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