Ayurvedic Management of Ankylosing Spondylitis w.s.r to Amavata: A Case Study

Sachin G. Tike¹*, Prashant Baghel², Suvarna S. Jadhav³, and Neha Sat Paul⁴

¹Department of Panchakarma, Govt. Ayurved College, Osmanabad, Maharashtra, India
²Kriya Sharir Department, Govt. Ayurved College, Osmanabad, Maharashtra, India
³Ayurveda Practitioner, at Maharashtra, India
⁴Shalya Tantra Department, Govt. Ayurved College, Osmanabad, Maharashtra, India

Abstract
Ankylosing spondylitis (AS) is a predilection for the sacro-iliac joints and spine. It is characterized by progressive stiffening and fusion of axial skeleton so, known as Spondyloarthopathies (SpA), which shows a strong association with the genetic marker HLA-B27. Till today, there is no satisfactory management of the disorder is available in modern medical science. From the Ayurvedic perspective, the disease can fall under the ‘Amavata’. Various Panchakarma procedures like ‘Vaitaranbasti’ (enema with medicated cow’s urine), Agnikarma(treatment with cauterization) combined by Shaman Chikitsa (conservative treatment) with Rasaraj rasa, Shudarshanachurna and Shunthichurna etc. have been found effective in reducing the progression of the disease. Patient’s condition was assessed for the symptoms of Amavata and line of treatment was followed accordingly. The drugs and procedure mentioned in AmavataChikitsa were followed for AS, and showed significant results. This article presents a single case report in which AS may be successfully managed with Ayurvedic treatment.

Keywords
Ankylosing spondylitis, Aamvata, Vaitaranbasti, Aampachana, Agnikarma
INTRODUCTION
Ankylosing spondylitis (AS) belongs to the group of rheumatic diseases. Chronic inflammation within sacro-iliac joints and spine causes pain and stiffness in and around the spine. Gradually, the chronic spine inflammation can lead to complete fusion of vertebrae, a process referred to as Ankylosis. It leads to loss of mobility of the spine and condition is known as “Bamboo-spine”. The disease has a peak onset in the second and third decades with male: female ratio of about 3:1. The overall prevalence is around 0.5 % in the most communities, but is much greater in the Pinna and Haida Indians, who have a high prevalence of HLA-B27. Ankylosing spondylitis affects all age groups including children (juvenile AS). In modern science long term use of non-steroidal anti-inflammatory drugs (NSAIDs) and disease modifying anti-rheumatic drugs (DMARD) and corticosteroids may improve the signs and symptoms of Ankylosing Spondylitis including spinal mobility. According to Ayurveda, Ankylosing spondylitis is caused by aggravated ‘Vata’. The imbalance of ‘Vata’ dosha causes a type of arthritis of spine due to Agnimandya (Digestive insufficiency). Harmful radicals like Aama (formed by improper digestion) vitiate Vatadosha, which affects Asthidhatu (bones). We present here a case that was successfully treated by the line of Ayurvedic treatment of Aamvata.

CASE REPORT
A male patient of 34 years old, teacher by profession at dist. Beed (Maharashtra, India). OPD registration no. 37307 came in OPD no. 13 of Panchakarma department in Govt. Ayurvedic college & hospital Osmanabad, Maharashtra for a complaint of gradually progressive pain and swelling at both knee and ankle joints and deformity of spine and hip joint since last 9 years.

PAST HISTORY:
None of family member has history of AS. For a long time case was taking NSAID’s and corticosteroids for pain relief. He was taken to an orthopedic specialist who diagnosed as having AS. He was managed accordingly with Allopathic medicines but he didn’t get any relief.

EXAMINATIONS:
Patient was admitted in male Panchakarma ward with IPD registration no. 2127

SYSTEMIC EXAMINATION:

VITALS-

- Pulse - 80 beats/min.
- Blood Pressure - 110/70 mm of Hg
• Temperature - 99.4°F (Orally at 9 AM)
• Respiratory rate- 20/min
• CVS- S1S2 normal, no added sound
• CNS- Conscious and well oriented
• RS- Air entry bilaterally equal and clear
• P/A- Soft and non-tender

**BLOOD INVESTIGATIONS: (Dated: 30-09-2016)**

• Hb- 11.5 gm%
• ESR- 48 /min at the end of 1st hour
• BSL- (Random )-89 mg/dl
• RA factor- Negative
• Serum creatinine- 0.8 mg /dl
• HBsAg ( hepatitis B surface antigen )- Non –reactive
• Uric acid - 5.3 mg /dl
• ASO- 40.40 IU/ml
• HIV antibodies 1 & 2 – Non-reactive
• HLA-B27-POSITIVE

**METHODOLOGY:**

The patient had continuous joints pain (knee, ankle and sacro-iliac), swelling over knee joint, fever, anorexia, limping, fatigue, and severely disturbed sleep. These symptoms can be compared with Aamvata³. Initially the patient was administered treatment for his fever as the fever was one of the main presentations, so Mahasudarshanchurna- 3 gm. twice daily, Chitrakadi vati-500mg twice daily were administered, after subsiding of fever Deepana-pachana (Ayurvedic appetizers) and proper Snehana (oleation), Swedana (fomentation) therapy was started. After observing Niramavastha (subsiding of Ama), Mriduvirechana (mild purgation) with Erandataila (castor oil) 20 ml was given at night for a few days. After Mriduvirechanathe patient was treated with Vaitaranabasti (enema with medicated cow’s urine) for 12 days, along with combinations of oral Ayurvedic drugs.-Rasaraj rasa-100mg twice a day, Bhallatakatalafor local application on affected joints, Rasnasaptakkwatha- 20 ml twice a day, Shunthichurna 1 gram along with Amrutadichurna -3 grams twice a day for 2 months. Alternatively leech applications, Agnikarma were also done. After completion of the treatment, the patient was discharged on 30-12-2016. At the time of discharge he was advised to continue the oral treatment for next one month. The patient was advised to take these medicines and Panchkarma procedures around 2 month. No concomitant allopathic
medication was given during this whole treatment period.

**TABLE:**

**Table 1** “Oral medications”

<table>
<thead>
<tr>
<th>FORMULATION</th>
<th>DOSE</th>
<th>DURATION</th>
<th>ANUPANA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Rasaraj Rasa</td>
<td>100 mg twice a day</td>
<td>2 months</td>
<td>Honey</td>
</tr>
<tr>
<td>2.Sudarshan churna</td>
<td>3 gm. twice a day</td>
<td>45 days</td>
<td>Water</td>
</tr>
<tr>
<td>3.Chitrakadi vati</td>
<td>500mg twice a day</td>
<td>1 month</td>
<td>Luke warm water</td>
</tr>
<tr>
<td>4.Rasana saptakkwath</td>
<td>20 ml twice a day</td>
<td>2 month</td>
<td>Water</td>
</tr>
<tr>
<td>5.Shunthi churna with</td>
<td>4 gm. twice a day</td>
<td>1 month</td>
<td>Luke warm water</td>
</tr>
<tr>
<td>Amrutadichurna</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 2**: “Panchakarma procedures”:

<table>
<thead>
<tr>
<th>PROCEDURE</th>
<th>METHOD</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Vaitaran basti</td>
<td>Tamarind water(40 ml) + jaggery water (40 ml) + cow’s urine (75-150 ml) + castor oil (30 ml)</td>
<td>Total 9 bastiin 12 days</td>
</tr>
<tr>
<td>2.Anuvasana basti</td>
<td>Chinchalavan oil (60 ml) i.e Tamarind + salt in medicated oil</td>
<td>Total 3 basti in 12 days</td>
</tr>
<tr>
<td>3.Bhallataka taila</td>
<td>Applied locally on affected joints</td>
<td>21 days</td>
</tr>
<tr>
<td>4.Jalaukavacharan</td>
<td>Applied 2-3 leaches in every 7 days on knee and ankle joint</td>
<td>2 months</td>
</tr>
<tr>
<td>5. Agnikarma(Treatment with cauterization)</td>
<td>Bindu(Dotted) patterned with Panchadhatushalaka on ankle and elbow joint in every 7 days.</td>
<td>21 days</td>
</tr>
</tbody>
</table>

**FOLLOW-UP AND OUTCOMES**

Haematological parameters were re-investigated on 16-12-2016. At this time Hb-12.6 gm.%. ESR-8 mm at the end of 1st hour. The excellent responses were noted on various parameters in this case in given Table 3 and Table 4. Spinal mobility, stiffness, fatigue, pain, ESR were reduced after treatment. The major factor in Ankylosing spondylitis HLA-B27 was changed into negative. Investigations were done on 18-12-2016. There was an improvement in functional capacity and global condition of the patient. Subjective and objective changes in the patient are being given in the table-

**SUBJECTIVE CRITERIA**-

Comparison of case of Ankylosingspondylitis before treatment and after treatment is given in Table 3.

**OBJECTIVE CRITERIA**-

The significant changes were seen in acute phase reactants (erythrocyte sedimentation...
rate) and inflammatory marker (HLA-B27).

These changes are described in Table 4.

**Table 3 – “Subjective Criteria”**

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>INSTRUMENT</th>
<th>BT</th>
<th>AT</th>
<th>RELIEF PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional</td>
<td>BASFI</td>
<td>8.1</td>
<td>2.4</td>
<td>70.4</td>
</tr>
<tr>
<td>Fatigue</td>
<td>BASDAI</td>
<td>7</td>
<td>2.6</td>
<td>72.86</td>
</tr>
<tr>
<td>Pain</td>
<td>NRS</td>
<td>8</td>
<td>3</td>
<td>72.5</td>
</tr>
</tbody>
</table>

- BASFI - Bath Ankylosing Spondylitis Functional Index
- BASDAI - Bath Ankylosing Spondylitis Disease Activity Index
- NRS - Numerical Rating Scale (0-10)
- BT - Before treatment
- AT - after treatment

**Table 4 – “Objective criteria”**

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>INSTRUMENT</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acute Phase Reactants</td>
<td>ESR</td>
<td>48 mm at the end of hour</td>
<td>8 mm at the end of 1st hour</td>
</tr>
<tr>
<td>2. Inflammatory Marker</td>
<td>HLA-B27</td>
<td>Positive</td>
<td>Negative</td>
</tr>
</tbody>
</table>

- ESR - Erythrocyte Sedimentation Rate
- HLA-B27 - Human Leukocyte Antigen B27

**DISCUSSION**

The case was treated on the line of treatment of Amavata. Amapachana (subsiding Aama) was the primary goal of the treatment. Langhanam, Deepanam, Pachanam, and Mriduvirechana are indicated in the management of Amavata. Foods and drugs Tikta (bitter) in taste and Laghu (light) in property are indicated in this disease. After Amapachana, Mriduvirechana with castor oil was given to the patient. Then oral medications were started like Rasaraj rasa, Sudarshanachurna, Chitrakadivati, Shunthichurna, Amrutadichurna, Rasnasaptakkwatha.

Rasaraj Rasahas Balya (anabolic) and Vajikara (aphrodisiac) properties and is indicated in paralysis, and in diseases due to Vata roga, like Dhanustambha (stiffness of spine), Apatanaka (spasm of muscles and tetanus like condition) etc. The stiffness of spine and spasm of muscles were the main complaints of the case. Thus, this drug was quite effective. Sudarshanchurna has Jwraghna (anti-pyretic) property whereas, Chitrakadivati has property of Amapachana and is indicated in Agnimandya (digestive insufficiency). So, Sudarshanchurna along with Chitrakadivati were prescribed. For reducing inflammation, stiffness and pain over the joints, Rasnasaptakkwatha was given as it
has Vedanashamak (Analgesic) and Shothaghna (anti-inflammatory) properties\textsuperscript{12}. Shunthichurna along with Amrutadichurna was given with Luke warm water. Shunthi is a potent analgesic with various Rheumatic conditions, subsides Vata-kaphadosha and ignites the digestive power due to Ushnaveerya (hot potency)\textsuperscript{13} and is a potent analgesic with various Rheumatic conditions. Amrutadichurna as indicated in Aamavata\textsuperscript{14} was used with Ushnajala as it subside Vatakaphadosha, and acts as Srotoshodhaka, appetizer, Jwaragna. Bhallatakatailawas used locally over the affected joints (sacro-iliac, knee and ankle joints) as there were excessive stiffness, pain, swelling, and Sama (aama phase) condition due to vitiated Kapha-dosha the ushna and teekshnaguna of Bhallatakatailaw\textsuperscript{16}, are potent suppressors of Kaphadosha and Aama.

Along with oral medications Panchakarma procedures like Vaitaranabasti, Agni karma, and Jaluukavcharanawere done. Vaitaranabasti is a combination of the drugs like cow’s urine, jaggery, Tamarind, Rock salt\textsuperscript{17} having Ushna–Teekshna, Shothghna (anti-inflammatory) and Aamahara (suppression of Aamadosha) properties. Anuvasanabasti with chinchalavaoil (tamarind and rock salt, mixed in medicated oil) were used due to shothaghna (anti-inflammatory) as well as balya (anabolic) properties. Jaluukavcharana (leech therapy) suppresses the Pitta dosha, which reduces inflammation and local temperature\textsuperscript{18}. Jaluaka (leech) was helpful to alleviate the disease from the elbow joint, ankle joint as there were much stiffness and pain. So restrictions of the joints were there. Agni karma was done with Panchdhatushalaka in Bindu pattern (dotted). Agnikarma with Shalaka (with iron & copper) is indicated in Mansagatavikara (muscle diseases)\textsuperscript{19}, so stiffness and pains were reduced through Agni karma.

These drugs and procedures have the properties to treat the manifestations of Ankylosing spondylitis surely as pain, stiffness, inflammation, scoliosis, kyphosis, and fatigue and weight loss. At present the patient is under examinations and observations as well as oral medications. The quality of life of the case has improved. There is no worsening of any sign or symptom till 09-03-2017. This is important finding considering the bad prognosis and unsatisfactory treatment in modern sciences.
CONCLUSION

The patient was diagnosed on the basis of Ayurvedic concept of *Dosha-Anshanshakalpana* where *Agnimandya* was the core concept lying. Line of treatment mentioned in *Amavatchikitsawas* followed in Ankylosing Spondylitis case and got significant results without using any allopathic medication as supportive therapy. The Ayurvedic treatment with combination of drugs and *Panchakarma* procedures proved satisfactory in AS. This approach of proper Ayurvedic diagnostic criteria (*Dosh - anshanshakalpana*) would be surely helpful for further treatment and research work.
REFERENCES
7. Prof. Ramanath Dwivedy, Chakradatta of Chakrapanidatta by Dr. Indradeva Tripathi, Varanasi; 2005; Athamavatchikitsa (25/1) p. 166
8. Prof. Ramanath Dwivedy, Chakradatta of Chakrapanidatta by Dr. Indradeva Tripathi, Varanasi; 2005; Athamavatchikitsa (25/6) p. 166
14. Prof. Ramanath Dwivedy, Chakradatta of Chakrapanidatta by Dr. Indradeva Tripathi, Varanasi; 2005; Athamavatchikitsa (25/14) p. 167
17. Prof.RamanathDwivedy, Chakradatta of Chakrapanidatta by Dr.IndradevaTripathi, Varanasi; 2005; Niroohadhidhikara (73/32) p. 455
18. Dr.Anantram Sharma. SushrutSamhita, Vol. 1, Varanasi; ChaukhambaSubharatiPrakashan; 2012. (Sutrastrhana 13/4) Page no. 95