Ayurvedic Management of Ankylosing Spondylitis - A Case Report

Dr. Vibhu Powar,1 Dr. Totad Muttappa,2 Dr. Vasantha B,3 Dr. Girish KJ,4 Dr. Rachana MS5

1,5 First Year Post Graduate Scholar, 2 Associate Professor, 3 Assistant Professor, 4 Professor, Department of Kayachikitsa, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, INDIA.

ABSTRACT

Introduction: Ankylosing Spondylitis (AS) is a sero negative chronic inflammatory arthritis of unknown cause that primarily affects the axial skeleton which usually begins in the second or third decade of life with a male to female ratio of 3:1. The prevalence rate of AS in India is 0.03%. It is clinically correlated to Danda Apatanaka in Ayurveda. It is caused due to the vitiated Vata and Kapha Dosha which enters the Dhamani and causes stiffness of the body. Due to its known complications and its tendency to hamper the quality of life, there is a need for an effective Ayurvedic intervention. This report is based on a case of Ankylosing Spondylitis which presented with pricking pain over nape of the neck and low back associated with stiffness and restricted movements, swelling over nape of neck right shoulder and right side of face, associated with restricted movements of right upper limb.

Methods: This case was diagnosed as Danda Apatanaka and was treated with Basti Karma, Abhyanga along with oral medications. Assessment was done before and after treatment using relevant scales.

Result: After 2 weeks of treatment pain and swelling over the nape of neck, right shoulder and face resolved completely, pain and stiffness of low back reduced, pain in right upper limb reduced and patient was able to perform normal movements. Stiffness of neck still persisted.

Conclusion: Ankylosing spondylitis can be effectively managed by Ayurvedic treatment modalities after proper assessment of the involved Dosha and Dhatus.

Key words: Ankylosing spondylitis (AS), Ayurveda, Basti karma, Danda Apatanaka, Maha Sneha.

INTRODUCTION

Ankylosing spondylitis is a chronic inflammatory arthritis of the axial skeleton with various skeletal and extra skeletal manifestation. It shows a strong association with the antigen HLA-B27. Around 90% of the people suffering with AS carry the histocompatibility antigen HLA-B27. It usually starts in the second and third decade of life with a male to female ratio of 3:1[1] and prevalence rate of 0.03% in India.[2] The characteristic features of AS includes insidious onset of low back pain with marked stiffness. Initially the disease affects the lumbo-sacral spine which gradually ascends upto the cervical spine leading to ankylosed spine, spinal rigidity, secondary osteoporosis causing increased risks of spinal fractures. The early physical signs of AS includes restricted movements of the lumbar spine in all directions, restricted chest expansion due to involvement of thoracic spines and costo-vertebral joints. The pathology in the spine includes the formation of syndesmophyte along the annulus fibrosus which bridges the adjacent vertebral bodies, the ascending progression of this process leads to the formation of bamboo spine. The above features are correlated to Danda Apatanaka[3] in Ayurveda in
which there is vitiation of Vata and Kapha Dosha which in turn gets lodged in the Dhamani causing stiffness (Stabdhata) of the body similar to that of Danda (bamboo). Hence the treatment principle will be initially Vata-Kaphahara followed by Samanya Vata Vyadhi Chikitsa.

Vital data
- Age: 46 years
- Sex: Male
- Religion: Hindu
- Education: Graduate
- Occupation: Sales Marketing
- Marital status: Married
- Socio-economic status: Upper Middle class

Presenting concerns

Table 1: Complaints with duration

<table>
<thead>
<tr>
<th>SN</th>
<th>Complaints</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Stiffness of back from hip to neck</td>
<td>3 years</td>
</tr>
<tr>
<td>2.</td>
<td>Restricted forward and sideward bending</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Pain in right arm with restricted movements</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Pricking pain and swelling over nape of the neck</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Swelling over right shoulder and right side of face</td>
<td></td>
</tr>
</tbody>
</table>

Past history
- Low back ache (2004-2012) - Treated conservatively with steroids, NSAIDs, homeopathy and folk medications.
- Not a known case of Hypertension or diabetes mellitus.
- No h/o fall or trauma.

Clinical findings

Gait: Antalgic gait

Inspection

Cervical spine, Upper limb and face
- Protrated cervical spine - forward head posture.
- Swelling present over nape of neck, right shoulder and right side of face.
- No Scar marks.

Lumbar spine
- Loss of lumbar lordosis
- Swelling - absent
- No scar marks

Palpation

Cervical spine
Tenderness over C3-C4, C4-C5, C5-C6 vertebrae

Lumbar spine
Tenderness over L3-L4, L4-L5, L5-S1

Range of movements:

<table>
<thead>
<tr>
<th>Cervical spine</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>0 Degree</td>
<td>0 Degree</td>
</tr>
<tr>
<td>Flexion</td>
<td>0 Degree</td>
<td>0 Degree</td>
</tr>
<tr>
<td>Lateral bending</td>
<td>0 Degree</td>
<td>0 Degree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lumbar Spine</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward bending</td>
<td>0 Degree</td>
<td>90 Degree</td>
</tr>
<tr>
<td>Backward extension</td>
<td>0 Degree</td>
<td>25 Degree</td>
</tr>
<tr>
<td>Lateral bending</td>
<td>0 Degree</td>
<td>10 Degree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shoulder joint</th>
<th>BT</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abduction</td>
<td>Right - restricted, unable to lift. Left - 170 degree,</td>
<td>Right - 170 degree Left - 170 degree</td>
</tr>
<tr>
<td>Adduction</td>
<td>Right - 10 degree Left - 30 degree</td>
<td>Right - 30 degree Left - 30 degree</td>
</tr>
</tbody>
</table>
Internal rotation
- Right - restricted
  - Left - 90 degree
- Right - 80 degree
  - Left - 90 degree

External rotation
- Right - restricted
  - Left - 90 degree
- Right - 70 degree
  - Left - 90 degree

Hip joint
 BT  AT
Flexion
- Right - 100 degree
  - Left - 100 degree
- Right - 100 degree
  - Left - 100 degree

Extension
- Right - 15 degree
  - Left - 15 degree
- Right - 15 degree
  - Left - 15 degree

External rotation
- Right - 50 degree
  - Left - 45 degree
- Right - 50 degree
  - Left - 45 degree

Internal rotation
- Right - 40 degree
  - Left - 40 degree
- Right - 40 degree
  - Left - 40 degree

SLR  Negative b/l
Bragards  Negative b/l
Fabers  Negative b/l
Lateral flexion test  Positive b/l
Gaenslens test  Negative b/l
Pelvic compression test  Negative b/l
Fleche test  Positive
Schobers- Positive

Viharaja Nidana
- Ati Sheeta Vata (works at air conditioned environment)
- Ati Yana (travelling long distances - 150-180 kms/day on bike)
- Ati Bhara Vahana (Lifting heavy objects)
- Prajagara (sleeps after midnight 12 or 1 am)
- Chinta (stress at work place)

Poorvaroopa: Avyakta

Roopa
- Stiffness of back from hip to neck
- Restricted forward and sideward bending
- Pain in right upper limb with restricted movements
- Pricking pain and swelling over nape of the neck
- Swelling over right shoulder and right side of face

Samprapti

Nidana Sevana (Vata and Kapha Prakopaka Nidanas) → Prakopa of Vata and Kapha Dosha → Prasara in Sarva Sharira through Dhamani → Sthana Samshraya in Asthi and Majja → causes Shotha, Shoola, Stabdha of Greeva, Kati, Amsa Pradesha → makes the spine stiff like a bamboo (Danda) → Dandaapatanaka

Investigations
- MRI - Cervical and Lumbo Sacral Spine (07/05/15)
- Exaggerated normal cervical lordosis.
- Calcification of anterior and posterior longitudinal ligament noted with associated squaring of visualized vertebrae.
- Marginal syndesmophytes are seen in between the vertebrae
- Bamboo spine appearance of spine was found.
- Features are suggestive of Ankylosing Spondylitis.
**Diagnosis:** Danda Apatanaka

**TREATMENT**

**Table 2: Treatment procedures and oral medications with dosage and duration**

<table>
<thead>
<tr>
<th>SN</th>
<th>Treatment</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2nd day</td>
</tr>
<tr>
<td>5.</td>
<td>Sadyovirechana with Gandharva Hastadi Taila 70 ml + Amrita sara 50ml</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Sarvanga Abhyanga with Pariseka Taila + Bhaspa Sweda</td>
<td>10 days</td>
</tr>
<tr>
<td>7.</td>
<td>Greeva Basti with Dhanwantaram + Nirgundi Taila</td>
<td>10 days</td>
</tr>
<tr>
<td>8.</td>
<td>Sthanika Abhyanga over Greeva with Pancha Tikta Guggulu Ghrita</td>
<td>10 days</td>
</tr>
<tr>
<td>9.</td>
<td>Mustadi Yapana Basti in Kala Basti schedule</td>
<td>6 Niruha Basti and 9 Anuvasana Basti</td>
</tr>
</tbody>
</table>

**Niruha Basti** - Mustadi Yapana Basti Kwatha - 450ml
- Ksheerabala taila- 60 ml
- Saindhava- 8 gm
- Honey- 40 ml
- Mamsa rasa- 100 ml
- Shatapushpa kalka- 30 gm

**Anuvasana Basti**
- Ksheerabala Taila - 30ml
- Sukumara Ghrita - 30ml
- Vasa - 15 ml
- Majja - 15ml
Assessment

**BASFI** - Bath Ankylosing spondylitis functional index is a scale to determine the degree of functional limitation.

**NRS** - Numeric rating scale is used to assess the intensity of pain and stiffness.

**BASDAI** - Bath Ankylosing spondylitis disease activity index is a scale to assess the disease activity.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Instrument</th>
<th>BT</th>
<th>AT</th>
<th>% relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>BASFI</td>
<td>7</td>
<td>3.1</td>
<td>55.71</td>
</tr>
<tr>
<td>Pain</td>
<td>NRS</td>
<td>9</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Stiffness</td>
<td>NRS</td>
<td>7</td>
<td>2</td>
<td>71.42</td>
</tr>
<tr>
<td>Fatigue</td>
<td>BASDAI</td>
<td>7.4</td>
<td>2</td>
<td>72.97</td>
</tr>
<tr>
<td>Affected peripheral joint</td>
<td>Peripheral joint count</td>
<td>3</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

**DISCUSSION**

The medicines prescribed above are mainly indicated in *Vata Vyadhis* in the classics. Initially, for *Dipana* and *Amapachana, Dhanwantaram Vati* and *Shaddharana Yoga* was given, Anuloma DS was advised for *Vata Anulomanam*. Later *Sadyovirechana* was given with *Gandharvahastadi Taila* and *Amrita Sara* for *Kostha Suddhi*. *Mustadi Yapana Basti* was planned in modified *Kaala Basti* schedule as it is *Sadyo Bala Vardhaka, Mamsa Vardhaka* and acts as a *Rasayana*. For *Anuvasanam Basti Maha Sneha* was used as it is best for *Sandhi Asthi Ruja* and helps in strengthening the *Asthi* and *Majja Dhatu*. *Abhyanga* was done with *Pariseta Taila*, as it is *Vata Shamaka, Balya and Shrama Hara*. It was followed by *Bhaspa Sweda* with *Dashamooola Kwatha*, which is *Vata Kapha Shamaka, Shotha Hara*, reduces *Shoola and Sthabdata*. *Greeva Basti* was done with *Dhanwantara* and *Nirgundi Taila* which are *Shoola Hara* and *Asthi Dhatu Poshaka*.

**CONCLUSION**

*Dipana, Pachana, Vata-Kapha Shamana, Asthi-Majja Shodhana* and *Poshana* are the main treatment modalities in this case. Hence Ankylosing spondylitis can be effectively managed by Ayurvedic treatment modalities based on proper assessment of the involved *Dosha and Dhatus*.

**REFERENCES**

