Prathamesh P. Shetye,¹* Yogesh S. Borase,¹ Ashok D. Pawar,² Prasad P. Khatu.²

1. * M.D. Sangyaharan, Assistant Professor, Shalyatantra Department, MES Ayurveda Mahavidyalaya, Chiplun, Maharashtra, India
1. M.S. Shalyatantra, Professor & H.O.D., Shalyatantra Department, MES Ayurveda Mahavidyalaya, Chiplun, Maharashtra, India
2. M.S. Shalyatantra, Associate Professor, Shalyatantra Department, MES Ayurveda Mahavidyalaya, Chiplun, Maharashtra, India
2. M.S. Shalyatantra, Assistant Professor, Shalyatantra Department, MES Ayurveda Mahavidyalaya, Chiplun, Maharashtra, India

Received on: 23/06/2020; Revised on: 08/07/2020; Accepted on: 10/07/2020

ABSTRACT
Today's lifestyle is very fast as well as it is very mechanical also. In this busy life, physical and mental stress of the workload is very common thing. This physical stress of the workload and fast lifestyle with improper dietary nourishment manifest so many disorders especially Vatavyadhi (Disorders due to vitiation of Vata) like Avabahuk. In this study we have studied the procedure of Agnikarma and its efficacy in Avabahuk. The Vata dusthi due to various reasons is main causative factor of the Vatavyadhi (disorders due to variation of Vata) like Avabahuk. Prakupita (vitiattion) Vata Dosha does Sthanasansraya (get localised) at the site of the shoulder joint giving rise to Avabahuk. Lakshanas (symptoms) of Avabahuk are very similar to the disease Frozen Shoulder. Sushruta mentioned that, Agnikarma Chikitsa (treatment) is done in Asthi, Sandhi and Snayus disorders (bone, joints and muscles disorders). Avabahuk there is Vata dosha dushti janya vyadhdi at the site of Ansa Sandhi (shoulder Joint). Therefore, are selected Agnikarma chikitsa (treatment) for the pain management in Avabahuk. Present study was Open labbled single sample clinical trial carried out in 30 patients. Patients of Avabahuk (Frozen shoulder) were treated with Agnikarma chikitsa done by Tamra Shalaka. Significant effects of Agnikarma chikitsa were observed (Wilcoxon Signed Ranks test, p<0.005). No adverse effects were noted.

Keywords: Avabahuk, Frozen Shoulder, Agnikarma, Tamra Shalaka.

1. INTRODUCTION
Ayurvedic Chikitsa Paddhati (line of treatment) is universally accepted science. Therefore, references described in the Ayurveda are considered as the most authentic and scientific. That is why individuals who expecting healthy life should have to follow the guidelines described in the Ayurveda. The main causative factors of the Vatavyadhi (disorders due to variation of Vata) like Avabahuk are excessive physical stress and workload, improper diet, poor nourishment, over traveling, history of trauma or accident and especially old age. All these factors cause Vata Dosha Prakopa (Vitiattion Vata) in the body.¹ Prakupita (vitiattion) Vata dosha does Sthanasansraya (get localised) at the site of the shoulder joint.² This pathological change results in very painful and restricted movements of the shoulder joint, particularly in the case of Avabahuk. If there is any history of trauma or dislocation or fracture at the site of the shoulder joint then there are

*Corresponding Author: Prathamesh P. Shetye. Email: drprathameshshetye@gmail.com.
Chances of formation of the scar tissues at the affected part of the joint. Due to scar tissues, movements of the shoulder joint become very painful and also restricted.

In *Avabahuk* various structural and functional degenerative deformities takes place at the site of *Ansa Sandhi* i.e. shoulder joint. Stiffness is present at the site of the joint. In *Ayurvedic* literatures *Avabahuk* is described as the disease in which there is *Stambha* (stiffness) and *Ruja* (pain) at the site of *Ansa Sandhi* (shoulder joint) which makes the movements of the shoulder joint very painful and also restricted.

*Lakshanas* (symptoms) of the *Avabahuk* are very similar to Frozen Shoulder in which there are degenerative, structural and functional changes takes place at the site of shoulder joint.

Stiffness in the nerve roots at the shoulder region which makes difficulty to make movements of the shoulder joint has a result of the frozen shoulder changes in ligaments. Pain, tenderness and stiffness at the site of the *Ansa Sandhi* are the common symptoms of *Avabahuk*. Pain in the shoulder radiates to arm, restricted shoulder movements, numbness of the upper extremity are present. There is limited range of movements of the shoulder due to the stiffness in the shoulder region. The problem often occurs mainly due to any previous injury. Most often *Avabahuk* is very common in people in between the age group of 40 to 60 years. It occurs most frequently in women (especially in postmenopausal women) than in men. Peoples who are suffering with various chronic diseases are more prone to face this disorder.

*Aacharya Sushruta* have mentioned that *Agnikarma Chikitsa* is the best para surgical treatment regarding all other treatments as once the disease is cured with *Agnikarma Chikitsa*, it does not recur again. *Acharya Sushruta* have described the importance of *Agnikarma Chikitsa*, its methods (*Dahanopakaranas*) and instruments for burning along with indications and contraindication in details. In ancient period *Agnikarma Chikitsa* was used incurable disorders after application of *Kshara* (treatment with alkali) or after Medicinal treatments. *Agnikarma* is done in *Asthi, Sandhi* and *Snayus* disorders. In *Avabahuk* there is *Vata dosha dushti* (vitiation of *Vata*) at the site of *Ansa Sandhi* (Shoulder joint). *Sushruta* suggested, *Agnikarma* is the best *Chikitsa* (treatment) for removing *Sandhigata Vata Dushti* (vitiation of *Vata* in joints).

*Avabahuk* (Frozen shoulder) has no specific cure in Modern surgery. Conservative therapy gives limited and temporary relief. Manipulation of shoulder joint is effective one but it is costly and recurrence rate is high. In contrast *Agnikarma* is easy, cost effective procedure in which less time is required and chances of recurrence are very less. Hence, we selected the topic study.

2. METHODS

2.1. Objectives

- To study the efficacy of *Agnikarma* in pain management of *Avabahuk* by using Tamra shalaka (copper probe).
- To Study the disease *Avabahuk* in detail.
- To study the para surgical procedure *Agnikarma* in detail.

2.2. Study design

Study was carried out at MES Ayurveda Mahavidyala Chiplun in OPD of Shalytantra. Study type was Prospective, Open Labelled, Single sample, Randomised Clinical study. 30 patients suffering from *Avabahuk* were included. They were selected by Simple Randomized sampling technique. Ethical clearance was taken from IEC of college. Informed written consent was taken from each patient by explaining them nature of *Agnikarma* procedure and its possible adverse effects. Patients were treated with *Agnikarma Chikitsa* using Tamra Shalaka. *Agnikarma* was done on day 1 in all patients. Follow ups were taken on day 5, day 10 and day 15. It was repeated on follow up days in only those patients who did not show improvement in symptoms. CRF were prepared to record clinical data.

2.3. Selection of Study subjects
2.3.1. Inclusion criteria

- Patient presenting with sign and symptoms of Avabahuk namely; Ruja (pain over shoulder region), Stambha (stiffness), Graha (restricted movements).
- Age between 40 to 60 years.
- Both male and female.
- Patients fit for Agnikarma as described in Samhitas.
- Patients having past history of fracture or dislocation or trauma over the shoulder joint.

2.3.2. Exclusion Criteria

- Age below 40 years and above 60 years.
- Patients with systemic disorders like diabetes mellitus.
- Congenital deformities like cervical rib, sprinkle shoulder.
- Patients having degenerative changes in X ray.
- Agnikarma contraindicated patients.

2.4. Instruments and Drugs

**Instruments**

- Tamra shalaka (3.8 cm long, weight 120 gm)
- Gloves Disposable
- Gauze Piece
- Stove
- Disposable Gloves
- Sponge Holder

**Drugs**

- Dashamooladi Kwath
- Tila Taila
- Madhu
- Ghrita
- Betadine

2.5. Method of Agnikarma procedure

Agnikarma was done in 3 phases i.e. Trividhakarma viz. Poorvkarma (pre-operative), Pradhana karma (Operative/main procedure) and Paschat karma (post-operative).

**2.5.1. Poorvkarma**

Procedure of Agnikarma was explained in detail to the patients and also consent for Agnikarma was obtained. Patient were advised to take Sheeta, Picchila & snigdha aahara prior procedure. Sthanik Snehan with Tila Taila and Nadi Svedana with Dashamula Kwath was done. Shoulder joint was draped with sterile towel. Patient was advised to sit or lying down with comfort. Most tender areas over shoulder joint were marked.

**2.5.2. Pradhankarma**

Tamra Shalaka was heated over the burning gas until it became red hot. Agnikarma was done at most painful points by Bindu Dahana (dot burning) with 'touch and go' method until the limit of Samyak dagdha vrana (mark of proper burning) i.e. Mamsa dagdha. Figure 1 shows Agnikarma procedure. Mamsa Dagdha (deep Burning. But according to our scripture,

**2.5.3. Agnikarma Paschat**

Pratisarana (application) with Madhu (Honey) and Ghrita (Ghee) was done at the site of Dagdha. Sterile bandage should be applied over it. Patient sent to home after rest of half hour. Vata prakopa diet like potato, groundnuts, brinjal, pumpkin was advised to avoid. Patient was advised to avoid Dagdha region by contacting with water for 24 hours.

3. RESULTS AND DISCUSSION

A well guided discussion can help the researchers to get better conclusions of the scientific study. Today’s lifestyle is very fast as well as it is very mechanical also. In this busy life, physical and mental stress of the workload is very common thing. This physical stress of the workload and fast lifestyle with improper dietary nourishment manifest so many disorders especially Vatavyadhi (disorders due to vitiation of Vata) like Avabahuk. Also, in the age group of above 40 years we can found this disorder most commonly in general practice. Avabahuk is very painful condition and often compromises the routine lifestyle of the patient. So good management and affordable line of treatment for patients are major requirements for this most
commonly found disorder of today’s era. In modern medicine and surgery administration of analgesics, application of physiotherapy, manipulation of shoulder joint etc. are advised to treat Frozen shoulder. But these have some limitations. Analgesics have Whereas, Agnikarma Chikitsa is one of the best para-surgical procedure17 without any harmful side effects. It is effective, time saving and cost-effective procedure.

More than 50 % patients were above age 50 yrs (Table 1). Patients above 50 years of age were found more prone to the Avabahuk. This is because of Dhatukshaya. Due to Dhatukshaya bone density decreases giving rise to diseases like Avabahuk. 19 patients were females i.e. 63.3 % while only 11 patients were male i.e. 36.7 % (Table 2). It was seen that well educated individuals (30%) were less affected while illiterate or less educated individuals (70%) were more affected to Avabahuk (Table 3). 17 patients were workers i.e. 56.66 %, 7 patients were drivers i.e. 23.33 % whereas 6 patients were doing seating work i.e. 20 % (Table 4). It can be said that because of chances of trauma at the site of the shoulder joint, workers are more prone to have Avabahuk than other patients. Marmaghat (traumatic injury to the vital parts) over Ansa sandhi due to trauma during work increases chances of tissue rupture of the shoulder joint. Further scar tissues are formed which makes the normal shoulder movements painful and restricted. Individuals doing sitting duties were seen to have less problem of this disorder. 8 patients i.e. 26.7 % were addicted to tobacco, 2 patients i.e. 6.7% each to alcohol and smoking. 18 patients i.e. 60% were non addicted. Addictions may cause Swaprakopakam (self-vitiation) of Vata dosha region and restrict the normal shoulder movements (Table 5).

96.2% relief was observed in Pain, 64.6 relief was observed in Tenderness, 96.3% relief was observed in Stiffness and 96.4% relief was observed in Numbness. It shows that Agnikarma relieved symptoms of Avabahuk very effective (Table 6). Since observations were on ordinal scale, Wilcoxon Signed Rank test was applied to test the efficacy (Table 6). We observed that P-Value is less than 0.05 in Pain, Stiffness, Tenderness and Numbness. Hence it was concluded that that significant effect of Agnikarma chikitsa was observed in effect observed on Pain, Stiffness, Tenderness and Numbness in Avabahuk vyadhi.

Understanding samprapti (pathogenesis) of any disease is helpful to decide plan of treatment.18 In Avabahuk, Vata dosha dushti (vitiation) at the site of Ansa mool pradesha (shoulder region) is the main component of the disease. Due Vata prakopaka ahara and vihara (lifestyle & diet habit), Vata vitiation takes place at the site of Ansa mool pradesha (shoulder region).19 Previous history of fracture or dislocation of shoulder joint gets prone easily to the Avabahuk. Agnikarma is done with red hot metal probe viz. Tamra shalaka (Copper probe) in present study. Ushna, Sukshma, Ashukari gunas help to reduce and pacify vitiation of Vata, Satmbha and Avarodha.20 Counter pain mechanism helps to suppress pain. In this way Samprapti bhanga is achieved.

4. CONCLUSION

- Females, people doing heavy work and aged patients were found more prone to Avabahuk.
- Agnikarma chikitsa is effective in Pain management.
- Agnikarma chikitsa is effective treatment for Avabahuk.
- Overall, 95.87% average effect in symptoms was observed in present study.
- Agnikarma significantly reduced Pain, Stiffness, Tenderness and Numbness in Avabahuk patients.
- No adverse effects were seen during treatment.

REFERENCES

and Medical Sciences 2020; 3 (2): 109-112.

Source of Support: Nil;
Conflict of Interest: None declared.
TABLES AND FIGURES

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-45 Years</td>
<td>5</td>
<td>16.7</td>
</tr>
<tr>
<td>45-50 Years</td>
<td>9</td>
<td>30.0</td>
</tr>
<tr>
<td>50-55 Years</td>
<td>8</td>
<td>26.7</td>
</tr>
<tr>
<td>55-60 Years</td>
<td>8</td>
<td>26.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1. Age wise distribution

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>9</td>
<td>30.0</td>
</tr>
<tr>
<td>U. G.</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Graduate</td>
<td>3</td>
<td>10.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3. Education wise distribution

<table>
<thead>
<tr>
<th>Addiction</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD</td>
<td>18</td>
<td>60.0</td>
</tr>
<tr>
<td>Alcohol</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>Smoking</td>
<td>2</td>
<td>6.7</td>
</tr>
<tr>
<td>Tobacco</td>
<td>8</td>
<td>26.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 5. Addiction wise distribution

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Median BT</th>
<th>Median AT</th>
<th>W</th>
<th>P</th>
<th>Effect</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>3</td>
<td>0</td>
<td>-4.928a</td>
<td>0.000</td>
<td>96.2%</td>
<td>Significant</td>
</tr>
<tr>
<td>Tenderness</td>
<td>2.5</td>
<td>0</td>
<td>-4.909a</td>
<td>0.000</td>
<td>94.6%</td>
<td>Significant</td>
</tr>
<tr>
<td>Stiffness</td>
<td>3</td>
<td>0</td>
<td>-4.964a</td>
<td>0.000</td>
<td>96.3%</td>
<td>Significant</td>
</tr>
<tr>
<td>Numbness</td>
<td>1</td>
<td>0</td>
<td>-4.914a</td>
<td>0.000</td>
<td>96.4%</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Table 6. Wilcoxon Signed Ranks Test

Cite this article as: