**AYURVEDIC APPROACH IN MANAGEMENT OF AMAVATA W.S.R TO RHUMATOID ARTHRITIS: A CASE STUDY**

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**ABSTRACT**

Amavata is a chronic immuno-inflamatory systemic disorder mainly affecting synovial joints, caused due to formation of ama and its association with vitiated vata dosha and deposition in shleshma sthana i.e (joints). Clinical features of Amavata resembles with Rheumatoid Arthirtis, it poses a challenge for the physician owing to its chronicity, morbidity and complications. The treasure of Ayurveda therapeutics has laid out detailed treatment line for amavata. A 40years old female patient reported to our hospital with shoola and stambha of metacarpophalangeal joints of both hands followed by shoola in corresponding knee joints 1 year back. This was succeeded by shoola and mild sotha on bilateral wrist, ankle and elbow joints. Blood investigations of the patient revealed that she was anemic with Hb-8.2g/dl, had elevated ESR-74 mm Hg fall in 1st hr, and reactive RA factor. Based on clinical examination and blood investigations, diagnosis of amavata was made and Ayurvedic treatment protocol was advised with baluka sweda (sudation) as external application for 21 days, agnitundi vati before food for 7 days, dashmoolarasnadi kashayam and simhanad guggul after food for oral intake for 60 days. The patient was asked for follow up every 15 days up to total of 60 days. Assessment was done subjectively based on clinical symptoms and blood investigations as objective parameters. There was substantially significant improvement and the patient felt relieved from shoola, shotha and stambha of the joints after the treatment. This case study reveals the potential of Ayurvedic treatment protocol in management of amavata. Keywords: Amavata, Shoola, Stambha, Shotha, Agnitundi Vati, Baluka sweda, Dashamoolarasnadi Kashaya, Simhanad guggul, Rheumatoid Arthritis.

**INTRODUCTION**

Rheumatoid Arthritis (RA) is a chronic, immune-inflammatory systemic disease that affects synovial joints with extra articular manifestations caused due to formation of ama and its association with vitiated vata dosha and deposition in shleshma sthana i.e (joints)1.It makes life miserable and crippling due to unknown cause, claiming the maximum loss of human working capacity. The symptoms of RA most closely resemble with that of Amavata as mentioned in Ayurveda texts. The disease is a product of vitiation of tridosha though ama and vata are the initiating factors in the pathogenesis2.Cakrapaniduta has described the principles and line of treatment for Amavata3. Langhana (fasting), Swedana (sudation), use of drug of Tikta (bitter) and Katu (pungent) Rasa, Deepana drugs (stimulating hunger), Virechana (purgation therapy), anuvasana basti (enema) are beneficial in the management of Amavata. Despite the administration of best available modern drugs, the disease has a tendency to progress and cripple the patients. Conventional medicines - NSAID’s (Non-steroidal antiinflammatory drugs) have adverse effects on GIT (gastrointestinal tract) and DMARD’s (Disease modifying antirheumatoid drugs) cause hepatic, renal and marrow suppression. Thus, Ayurveda provides a safe, economic and effective treatment of RA. A treatment protocol based on these principles of Ayurveda was designed and administered to a patient of amavata which is presented as a case study. In this regard, a case study has been done to evaluate the role of baluka sweda, agnitundi vati, dashamoolarasnadi kashayam and simhanad guggul in patient of Amavata.

**MATERIAL AND METHOD**

The treatment was planned as:

* Baluka sweda as external application for 21 days
* Agnitundi Vati 2Tab before food for 7 days
* Dashmoolarasnadi Kashyam 20ml after food for 60 days
* Simhanad Guggul 2Tab after food for 60 days

The study was conducted at Saint Sahara Ayurvedic Medical College & Hospital, Kot Shamir Bathinda. The patient was informed about the treatment and the study was carried out ethically in accordance with International Conference on Harmonisation-Good Clinical Practices guidelines.

**CASE REPORT**

**Pradhana Vedana:** A female patient of age 40 years with O.P.D no.4412 dated 12.12.2016 visited Ayurvedic O.P.D of SSAMC with complaint of Shoola, Shotha and Stambha in multiple joints since 1 year.

**History of present illness:** A 40 years old female patient developed pain and stiffness of metacarpophalangeal joints of both hands followed by knee joints. After few days, she suffered from pain and mild swelling on bilateral wrist joints. Gradually she developed pain and stiffness on bilateral ankle joints and elbow joints. She was facing difficulty in performing her day to day activities due to pain. She was also suffering from generalised body aches and decreased appetite for last 2 months. She had undergone allopathic treatment-NSAIDS but got only temporary relief. With these complaints, patient approached to our hospital for further treatment.

**History of past illness:** No History of diabetes, hypertension, rheumatic heart disease, Gout and any chronic disease.

**Family history:** The mother of the patient had history of rheumatoid arthritis.

**Personal history:** The patient was enquired about his personal habits and the findings have been shown in Table 1.

**Table 1: Personal History**

|  |  |
| --- | --- |
| Ahara- Samisha | Vihara- Ratrijagrana |
| Mala Pravriti- Vibandha | Nidra- Alpa |
| Mutra pravriti- Bahumutrata | Vyasana- Tea 7 times daily |

**Ashtavidha Pariksha:** The patient was assessed on the Ayurveda diagnostic methods and her ashtavidha analyses and the findings have been tabulated in Table 2.

|  |  |
| --- | --- |
| Nadi- 80/min, Regular | Shabda- Prakruta |
| Mala- Vibandha | Sparsha- Ruksha |
| Mutra- Bahu | Drik- Pallor |
| Jivha- lipta  | Akriti- Madhyama |

**General examination Vitals**

* Pulse Rate -80/min, regular
* Blood Pressure-130/80 mmHg
* Temperature- 96.8 F
* Respiratory Rate- 18/min

**Systemic Examination:**

 On examination, patient was found to be conscious and well oriented to time, place and person. Assessment of Central nervous system, Cardiovascular system and Respiratory system of patient was found normal clinically. No clinical abnormality was detected on per abdomen examination. On inspection of Musculoskeletal system, marked swelling was present on bilateral wrist joints and knee joints with mild decrease in ROM. On palpation, tenderness was observed in MCP joints of hands, wrist joints and ankle joints. However, no joint deformity was present.

**Blood investigation:**

 Blood investigations of the patient reveals:

* Hb-8.2g/dl
* ESR-74 mm Hg fall in 1st hr
* RA factor- Reactive
* TLC, DLC and S. Uric acid values were within normal limits.

**Treatment plan:**

Patient was treated in out-patient department. Treatment of the patient started from the date of her 1st visit to O.P.D. The duration of treatment was 60 days and follow up was done on every 15 days. External and internal (oral) treatment schedule given to the patient has been outlined in Table 3

**Table 3: Treatment protocol**

|  |  |  |  |
| --- | --- | --- | --- |
| Treatment | Medicine | Dose | Days |
| External Treatment | Baluka Sweda | Once Daily | 21 |
| Internal Treatment | Agnitundi Vati | 2Tab Twice daily | 7 |
| Dashmoolarasnadi KashayamSimhanad Guggul | 20ml Twice daily2Tab Twice daily | 6060 |

**Criteria for selection of medicine:**

Rooksha swedana, Agnitundi vati, Simhanad guggulu and Dashmoolarasnadi kashyam are advised by Chakradutta in patients of amavata. Oral medication was selected on the basis of the properties of ingredients in their formulation composition. The drugs used are known to pacify vitiated vata-kapha dosha and Ama in amavata and have the ability to relieve its sign and symptoms4, details of drugs administered orally have been shown in Table 4.

**Table 4: Drugs included in treatment protocol**

|  |  |
| --- | --- |
| **Drug** | **Formulation Composition** |
| **Agnitundi Vati** | Kajjali ( Black sulfide of mercury), Ajwain ( Trachyspermum ammi), Sudh vatsanabha ( Aconitum ferox), Harad ( Terminalia chebula), Bahera (Terminalia bellerica), Amla ( Emblica officinalis), Sajjikshar, Yavakshar, Chitrakmool ( Plumbago zeylanicum), Saindhav lavan ( Rock salt), Survarchal lavan ( Black salt), Samudra lavan( Sea salt), Shavet jiraka( Cuminum cyminum), Vidanga( Emblica ribes), Shunthi( Zingiber officinalis), Pippali ( Piper longum), Marich ( Piper nigrum), Sudh kuchla ( Strychnos nuxvomica) |
| **Dashamoolarasnadi Kashayam** | Dashamoola, Bilwa (Aegle marmelos), Agnimantha (Premna obtusifolia), Gambhari (Gmelina arborea), Shyonaka (Oroxylum Indicum) Pathala (Stereospermum suaveolens), Shalaparni (Desmodium gangeticum), Prushnaparni (Uraria picta), Bruhati (Solanum Indicum), Kantakari (Solanum xanthocarpous), Gokshura (Tribulus Terrestris), Amruta (Tinospora cordifolia), Eranda (Ricinus communis), Rasna (Pluchea lanceolata), Nagara (Zingiber officinalis, Daru/Devadaru (Cedrus deodara) |
| **Simhanad Guggul** | Chitraka (Plumbagozeylanica), Pippalimoola(Piperlongum)Yavani (Trachyspermumammi) Karavi (Piper chaba) Ajamoda (Trachyspermum roxburghianum) Jeeraka (Cumin seed) Suradaru (Cedrus deodara) Chavya (Piper cubeba) Ela (Cardamom) Saindhava Lavana (Rock salt) Kushta (Saussurea lappa) Rasna (Pluchea lanceolata) Gokshura (Tribulus terrestris) Dhanyaka (Coriander) Triphala – Haritaki (Terminalia chebula), Vibhitaki (Terminalia bellirica), Amalaki (Emblica officinalis) Musta (Cyperus rotundus)Trikatu (Pepper, long pepper and ginger) Twak (Cinnamon) Usheera (Vetiveria zizanioides) yavagraja (Hordeum vulgare) Barley Taleesapatra (Abbies webbiana) Patra (Cinnamomum zeylanicum) Guggulu (Purified Commiphora mukul) Sarpi (ghee) |

**Assessment criteria:**

Patient was assessed on the basis of clinical sign and symptoms of amavata mentioned in ayurvedic text and criteria fixed by American Rheumatology association (1987) and implemented after some modifications. Therapeutic effect was recorded using specially prepared Grading scale shown in Table 5 and Table 6.

**Haematological Assessment:**

The patient was assessed for the following Haematological parameters before and after treatment.

 • Haemoglobin (Hb)

• Erythrocyte Sedimentation Rate (ESR)

• Serum Rheumatoid Factor (RF)

**OBSERVATIONS AND RESULTS**

It was observed (Table 7) that patient had marked improvement in severity of symptoms. Patient gradually recovered with the treatment. There was significant improvement in symptoms of angamarda (bodyaches), aruchi (anorexia), sandhistabhta (morning stiffness) and sandhishula (joint pain). Sandhishula (Table 8) in metacarpo-phalyngeal joints, knee joints, wrist, elbow and ankle joints was completely reduced. Sparshasahishnuta (tenderness) in MCP, wrist and ankle joint was markedly improved (Table-9) and no tenderness was elicited on examination post treatment after 60 days. General functionality, gripping power and walking time was markedly improved and patient could walk a distance of 10 meters in twenty seconds’ time post treatment. ESR (Table 11) was decreased from 74 mm fall in first hour to 32 mm fall in first hour. RA factor was reactive. There was also mild improvement in haemoglobin of the patient and it was raised to 10.4gm%.

**Table 5: Subjective parameters**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Symptoms** | **0** | **1** | **2** | **3** | **4** |
| Angamarda (bodyaches) | Absent | Occasional | Intermittent | Often | Always |
| Aruchi (anorexia) | Absent | Occasional | Intermittent | Often | Always |
| Jwara (fever) | Normal | Mild | Moderate | High | Hyperpyrexia |
| Sandhishula (joint pain) | No pain | Mild bearable pain | Moderate pain | Severe pain with slight difficulty in movement | Severe pain with more difficulty in movement |
| Sandhishotha (joint swelling) | Absent | Mild,<10% increased circumference of the affected joint | Moderate,>10% increased circumference of affected joint | Severe, >20% increased circumference of the affected joint |  |
| Sandhistabhta (joint stiffness) | Absent | Mild stiffness lasting less than an hour | Moderate stiffness lasting more than an hour | Severe stiffness for more 2-8 hours | Severe stiffness for more than 8 hours |
| Sparshashishunta (tenderness) | No tenderness | Mild tenderness | Moderate tenderness | Severe tenderness | Severe tenderness with Resistance to touch |

**Table 6: Objective parameters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameters | 0 | 1 | 2 | 3 |
| General function capacity | Ability to do all activities without difficulty | Ability to do activities but with difficulty | Ability to do few activities, always require help | Unable to perform activities, bed or chair ridden |
| Gripping power | 200 mm Hg or more | 199-120 mm Hg | 119 - 70 mm Hg | Under 70 mmHg |
| Walking time (25 feet in no. of seconds) | 15-20 sec | 21-30 sec | 31-40 sec | >40 sec |

**Table 7: Observations**

|  |  |  |  |
| --- | --- | --- | --- |
| Symptoms | Before treatment | During treatment | After treatment 60 days |
| 30 days | 45 days |
| Angamarda (bodyaches) | 3 | 2 | 1 | 0 |
| Aruchi (anorexia) | 3 | 1 | 0 | 0 |
| Jwara(fever) | 0 | 0 | 0 | 0 |
| Sandhishotha | 2 | 0 | 0 | 0 |
| Sandhistabhta | 2 | 1 | 0 | 0 |

**Table 8: Observations of Sandhishula in different joints**

|  |  |  |  |
| --- | --- | --- | --- |
| Joint | Before Treatment | During treatment | After Treatment60days |
| 30days | 45days |
| MCP | 3 | 1 | 1 | 0 |
| Wrist | 3 | 1 | 1 | 0 |
| Elbow | 2 | 1 | 0 | 0 |
| Ankle | 1 | 0 | 0 | 0 |
| Knee | 3 | 1 | 0 | 0 |

T**able 9: Observations of Sparshashishunta in different joints**

|  |  |  |  |
| --- | --- | --- | --- |
| Joint | Before Treatment | During treatment | After Treatment60days |
|  |  | 30days | 45days |
| MCP | 2 | 1 | 0 | 0 |
| Wrist | 3 | 1 | 1 | 0 |
| Elbow | 2 | 0 | 0 | 0 |
| Ankle | 1 | 0 | 0 | 0 |
| Knee | 2 | 0 | 0 | 0 |

**Table 10: Functional assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| Functional assessment | Before treatment | During treatment | After Treatment60days |
|  |  | 30days | 45days |  |
| General functional capacity | 1 | 1 | 0 | 0 |
| Gripping power | 2 | 1 | 0 | 0 |
| Walking time (25 feet in no of sec) | 4 | 1 | 2 | 2 |

**Table 11: Haematological parameters**

|  |  |  |
| --- | --- | --- |
| Parameters | Before treatment | After treatment |
| Haemoglobin(g/dL) | 8.2 | 10.4 |
| ESR (mm fall in 1st hr) | 74 | 32 |
| RA factor | Reactive | Reactive |

**DISCUSSION**

Amavata is a complex of disease, pathogenesis of which lies in generation of Ama after Mandagni. This ama along with vitiated vata and kapha dosha results in dosha-dushya combination, thus generating the nidus for symptoms of Amavata to occur. The aim of the treatment in Amavata is to reduce ama by its metabolism (Amapachana) and to normalise the vitiated vata and kapha dosa. The drugs used in the treatment protocol, act by breaking the pathogenesis of the disease.Agnitundhi vati improves agni by digestion of ama which is main responsible factor for manifestation of disease. Baluka Sweda was performed as part of external treatment. It is a type of ruksha sweda which relieves the stiffness, pain and heaviness in the body and induces sweating 6. Baluka Sweda is mostly used in Kaphaja disorders and disease originated out of Ama, especially in Amavata. It helps in shoshan (digestion and drying) of ama present in kapha sthana (joints) thus decreasing stiffness of the joint and alleviating the pain. Swedana also increases the dhatwagni at the part involved thereby improving its function and mobility, particularly the joints in this case7. Dashamoolarasnadi Kshaya is digestive and carminative (deepana & pachana) due to presence of Amrita, Shunthi, Dashamool in it. Rasna and devdaru exhibit potential anti-inflammatory effect8,9. Simhanada guggulu is advised in amavata by Bhaishajya Ratnavali10. Guggulu itself is a good anti-inflammatory agent11 (sophahara and vedanasthapaka). Simhanada Guggul also elicits antiarthritic activity largely due to the prevention of connective tissue breakdown, decreased capillary permeability and improvement of immune system12. The combination of these drugs apart from breaking the pathogenesis of the disease, also give symptomatic relief to the patient. It is only because of the action of drugs that the inflammation and pain in joints is reduced remarkably and the patient tolerance is also better in comparison to the DMARD’s.

**CONCLUSION**

 The treatment protocol included combination of external localised and internal medication which worked in tandem to reduce the symptoms of rheumatoid arthritis. The drugs were well tolerated by the patient and her range of movement also improved. A comprehensive detailed clinical study is required to generate potential data to verify the outcomes of this case report.

**REFERENCES**

1. Milind Y. Nadkar, API text book of medicine, Rheumatology Chapter 7, Rheumatoid Arthritits, Association of Physicians of India, Mumbai, 8th ed. 2008, p. 291

2. Yadunandana Upadhyay, Madhav Nidan of Madhavakara, Madhukosha hindi commentary, First Volume, 25th chapter, Amavatanidanam, Chaukhamba Sanskrit Sansthan, Varanasi, Reprint;2003. p 508-9.

3. Sharma P.V. Cakradatta of Cakrapani, English translation, Chapter 25, Amavatachikitsa, Chaukhamba Sanskrit Sansthan, Varanasi, 2nd Ed.1998, p. 227

4. Baidyanath Bhavan, Ayurveda Sar Sangraha, Guggul Prakran, Shree Baidyanath Ayurveda Bhawan, Allahabad, Reprint 2006, p. 521

5. Tripathi Inderdev, Cakradatta of Sri Cakrapani, elaborated hindi commentary, Chapter 25, Amavatachikitsa, Chaukhambha Sanskrit sansthan, Reprint 2002, p.166-8

6. Shastri Kashinath & Gorakhnath Chaturvedi, Charaka Samhita of Agnivesha elaborated Vidyotini Hindi commentary, Sutra Sthana 14th chapter Swedadhyay, Chaukhambha Bharati Sansthan, Varanasi, reprint edition; 2005. p. 283.

7. Shastri Ambikadutt, Susruta Samhita edited with Ayurveda tatva sandipika Hindi Commentary, Chikitsa Sthana 32nd chapter, Swedavcharniya-adhayay, Chaukhambha Sanskrit Sansthan, Varanasi, reprint edition; 2007. p.141.

8. Srivastava Vandita, Varma Neeraj, Tandon JS, Srimal RC, Anti-Inflammatory Activity of Pluchea lanceolata: Isolation of an Active Principle. Int. J. of Crude Drug Res, 1990; 28:2:135-7

9. Shinde UA, Phadke AS, Nair AM, Mungantiwar AA, Dikshit VJ, Saraf MN, Membrane stabilizing activity — a possible mechanism of action for the anti-inflammatory activity of Cedrus deodara wood oil. Fitoterapia, 1999:70; 251-7

10. Bhaishajya Ratnavali by kaviraj Shri Govind Das Sen Sanskrit text with English translation,Dr.G.Prabhhakara Rao, Published by Chaukhambha Orientalia Varanasi, Amavata adhikara 130-135

 11. Bagul MS, Srinivas H, Kanaki NS, Rajani M. Anti inflammatory activity of two Ayurvedic formulations containing guggul. Ind J of Pharmacol 2005; 37:399-400

12. Bhaishajya Ratnavali by kaviraj Shri Govind Das Sen Sanskrit text with English translation,Dr.G.Prabhhakara Rao, Published by Chaukhambha Orientalia Varanasi,Agnimandya Rogadhikara 117-118.