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Case Study

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

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ABSTRACT

Amavata is a chronic immune-inflammatory 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 Arthritis, 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 pathogenesis. [2] Cakrapaniduta has described the principles and line of treatment for *Amavata*.[3] *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 anti-rheumatoid drugs) cause hepatic, renal and bone 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 metacarpo phalangeal 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 Kashayam *Simhanad Guggul*	20ml Twice daily 2Tab Twice daily	60 60

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 symptoms[4], 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 (Plumbago zeylanica), Pippalimoola (Piperlongum), Yavani (Trachyspermum ammi) 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* (body aches), *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 (body aches)	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 (body aches)	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 Treatment 60days
		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

Table 9: Observations of *Sparshashishunta* in different joints

Joint	Before Treatment	During treatment		After Treatment 60days
		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 Treatment 60days
		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 case. [7] *Dashamoolarasnadi Kshaya* is digestive and carminative (*Deepana* & *Pachana*) due to presence of Amrita, *Shunthi, Dashamool* in it. *Rasna* and *Devdaru* exhibit potential anti-inflammatory effect.[8,9] *Simhanada guggulu* is advised in *Amavata* by Bhaishajya Ratnavali. [10] *Guggulu* itself is a good anti-inflammatory agent[11] (*Sophahara* and *Vedana-sthapaka*). *Simhanada Guggul* also elicits antiarthritic activity largely due to the prevention of connective tissue breakdown, decreased capillary permeability and improvement of immune system.[12] 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.

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