Case Study

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A MULTIMODAL INTERVENTION IN AMAVATA (RHEUMATOID ARTHRITIS): A CASE STUDY

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Received on: 02/09/16 Revised on: 23/09/16 Accepted on: 20/10/16

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DOI: 10.7897/2277-4343.075223

ABSTRACT

Amavata is a chronic disorder that has both skeletal and extra skeletal manifestations. The chief pathogenic constituents are Ama and Vata which simultaneously affect the joints and causes stiffness of the body. Based on the clinical presentation, RA (Rheumatoid arthritis) shows more resemblance with Amavata. The condition is managed by DMARDs (Disease Modifying Anti-rheumatic drugs) and corticosteroids, but still remains a challenging problem to the medical field as it doesn't completely eradicate the disease. Ayurveda has given a detailed description regarding the management of Amavata which includes Langhana (procedures like fasting, drying etc.), Swedana (sudation), Deepana (appetizing) with Tikta -Katu rasa (astringent-pungent), Virechana (therapeutic purgation) etc. After analysing the treatment principle of Amavata, by Acarya (preceptor) Cakradatta, a combined intervention of Langhana, Swedana, Deepana and Virechana was undertaken. We hereby present a case report with regards to a patient who has been successfully treated for one month with follow up for another one month. The combined interventions included internal medications with Rasnasaptaka kashaya and Dasamoola haritaki avaleha, externally with Valuka sweda (Sudation with heated sand pack) & Patrapotali sweda (sudation with pack of medicated leaves) and Virechana with Moorchita (processed form) eranda taila. Internal medications were continued for another 15 days. Subjective and Objective assessment criteria including Visual Analogue Scale (VAS) for pain and ARA (American Rheumatoid Association) criteria for diagnosing Rheumatoid Arthritis were assessed before and after trial for the efficacy of treatment. Substantial clinical improvement in the symptoms was reported after two months of Ayurvedic treatment protocol thus improving the quality of life.

Keywords: Amavata, Rheumatoid arthritis, Langhana, Swedana, Deepana, Virechana.

INTRODUCTION

With the march of time, man has become more mechanized due to busy schedule and forgets simple principles of healthy living. Unhealthy food practices, life style and environment makes him a victim of many dreadful diseases faced by the mankind today. Amavata is one such kind of a condition mention in Ayurveda that arises due to the constant use of incompatible combination of food articles and regimens. Acarya Madhavakara has given a detailed description regarding the Nidana (cause), Samprapti (pathogenesis) and clinical features of Amavata¹. Indulgence in mutually opposite qualities of food, lack of exercises etc which are predominant in Kapha and Vata Dosha (phlegm and air humors) eventually leads to Mandagni (weak digestive fire) that hampers the digestion and metabolism in the body. As a result, transformation of Rasa dhatu (metabolic end product) becomes impaired in Amasaya (gastrointestinal tract) where it is called Ama (metabolic toxin). Vitiated Vata dislodges Ama which has an inclination towards sandhis (joints) and produces symptoms like Angamarda (malaise), Aruchi (anorexia), Trsna (thirst), Alasya (tiredness), Gourava (heaviness), Apaka (indigestion), Shoonata (swelling), Sandhi shoola (joint pain), Sthabdata (stiffness)² etc. The clinical features of Amavata resemble closely with R.A. which is believed to have a prevalence range of approximately 0.8-1.0% in Caucasians with a female to male ratio of 3:1³. Patients with RA have an increased mortality due to an increased risk of cardiovascular diseases. RA can make a person moderately or severely disabled within 20 years. The mainstay of treatment includes early usage of DMARDs, NSAIDs (Non steroidal anti-inflammatory drugs), analgesics, use of biological agents etc. but they require regular monitoring

because of the associated risk of hepatic and haematological toxicity.⁴ Many research works have been done on the treatment for this disease, but still it remains a challenge to the physicians of medical field.

The treatment principles of Amavata includes removing Ama through Srotoshodhana (purifying body channels) by procedures like Langhana, Swedana, Agnivardhana (improving digestive fire) by adopting Deepana drugs which are Tikta-katu rasa predominant and alleviating Vata by Virechana, Snehapana (medicated ghee consumption) and Vasti (medicated enema). As the main culprits are Ama and Vata whose treatment principles are mutually contradicting to each other, keen observation and skill is very essential in the management to keep the Doshas in control.

In Ayurveda, our Acharyas have always given a group of treatment modalities as Chikitsa sutras (treatment principles) for all diseases. Ample research works including internal medications and Panchakarma procedures have been done in Amavata, but a study to assess the combined effect of a group of treatments has not been undertaken. Based on the Chikitsa sutra explained by Cakradatta for Amavata⁵, a study to assess the combined effect of Langhana, Swedana, Deepana and Virechana have been undertaken here.

As Rookshana (imparting dryness) is a type of Langhana, it was done in the form of Valuka sweda⁶ and internal Rookshana was done by giving Rasnasaptakam kashaya⁷ and Dasamoolaharitaki avaleha⁸ which are Deepana possessing tikta-katu rasa. Snehaswedana⁹ (oleation –sudation) was done in the form of

Patrapotali sweda (using leaves like Nirgundi (*Vitex negundo*), Arka (*Calotropis gigantea*), Chinja (*Tamarindus indica*), Eranda (*Ricinus communis*) etc. with Kottamchukkadi taila¹⁰ as the oil. Virechana¹¹ was done using Eranda taila¹² in the Moorchita¹³ form.

The main objective of the study was to evaluate the combined efficacy of Rookshanottara patrapotalisweda (Rookshana followed by patrapotali sweda), Virechana & internal medications in Amavata thereby providing relief to their ailments and improving quality of life.

MATERIALS AND METHODS

Place of study-Amrita School of Ayurveda, Clappana P.O, Karunagapally, Kollam District, 690525, Kerala, India

Case report – A 49 year old female patient with MRD No: 61341 was admitted in female general ward, bed no: 25 for 15 days from 07.05.2016 to 21.05.2016. She presented with the following complaints:

- Signs & symptoms of Amavata like Angamarda (malaise), Aruchi (anorexia), Trsna (thirst), Alasya (tiredness), and Gaurava (heaviness) since four years.
- Gradual onset of bilateral pain and stiffness over MCP (Metacarpo- phalangeal joint), wrist joints, elbow joints, ankle joints and knee joints since four years
- Morning stiffness for more than one hour since four years.
- Mild swelling over both wrist joints since two weeks.

On examination she displayed restriction of movement in her wrist joints, ankle joints and knee joints due to pain. Her blood investigations had done on 06.05.2016 revealed raised ESR (103 mm/hr) and CRP (51.5 mg/L) levels. Serum Uric acid (3.93mg/dl), RA quantitative (5.99IU/ml), ASO quantitative (49.82IU/ml) were found to be within normal limits. Based on the ACR-EULAR (American College of Rheumatology-European League against Rheumatism collaborative initiative) 2010 criteria for diagnosing Rheumatoid arthritis¹⁴, the case was diagnosed as Rheumatoid arthritis with a score of 7/10. She had undergone treatments including analgesics and NSAIDs initially that provided temporary relief to her condition.

Personal history

Diet: Mixed diet, prefers spicy, non-vegetarian food

Appetite: Irregular

Bowel: constipated often

Bladder: Normal

Sleep: disturbed

Allergy & Addictions: nil

Ashtasthanapareeksha

Nadi (pulse): vata pitta, 80/min

Mootram (urine): normal

Malam (stool): constipated

Jihwa (tongue): upalipita (saama- coated)

Sabdham (voice): normal

Sparsham (touch): normal but warmth over both wrist joints.

Drik (eyes): normal

Aakrithi (built): moderately built, BMI: 23.43kg/m²

Table 1: External treatment & Internal medicine schedule

Treatment	Medicine	Dose	Days
Rooksana with Valuka sweda			1-7 days
Patrapotali sweda	Kottamchukadi taila	200 ml	8-14 days
Virechana	Moorchitaeranda taila	30 ml	15 th day
Internal medications	Rasnasaptakamkasaya	50 ml bd	1-30 days
	Dasamoolaharitaki avaleha	1 tbspd, Bedtime	1-30 days

Table 2: Contents and Properties of Medicines used in the Treatment

Medicine	Ingredients	Properties
Rasnasaptakam Kashaya	Rasna (<i>Alpinia galanga</i>), Amrita (<i>Tinospora cordifolia</i>), Aragvadha (<i>Cassia fistula</i>), Devadaru (<i>Cedrus deodar</i>), Trikantaka (<i>Tribulus terrestris</i>), Eranda (<i>Ricinus communis</i>), Punarnava (<i>Boerhaavia diffusa</i>) Shunti (<i>Zingiber officinale</i>)	Soolaghna (analgesic) Kapha-Vata samana (pacifying) Dipana, Pachana (Appetizer, Carminative) Immunomodulator (Amrita ¹⁵ , Punarnava ¹⁶) Anti-inflammatory (Punarnava, Shunti ¹⁷) Appetizer, carminative (Shunti)
Dasamulaharitaki avaleha	Vilwa (<i>Aegle marmelos</i>), Kasmarya (<i>Gmelina arborea</i>) Tarkari (<i>Clerodendrum phlomidis</i>), Patala (<i>Stereospermum saueolens</i>), Dunduka (<i>Oroxylum indicum</i>), Brhati (<i>Solanum indicum</i>), Kantakari (<i>Solanum xanthocarpum</i>), Prsniparni (<i>Uraria picta</i>) Saliparni (<i>Desmodium gangeticum</i>) Gokshura (<i>Tribulus terrestris</i>), Haritaki (<i>Terminalia chebula</i>), Guda (jaggery), Tvaka (<i>Cinnamomum xeylanica</i>), Ela (<i>Elatteria cardamom</i>) Nagara (<i>Zingiber officinale</i>), Maricha (<i>Piper nigrum</i>), Pippali (<i>Piper longum</i>), Yavakshara (<i>Hordeum vulgare</i>), Honey	Kaphahara (pacifies Kapha) Sophahara (removes swelling) Vedanasthapana (analgesic) Analgesic, anti-inflammatory (Dasamula ¹⁸) Antiarthritic (Haritaki ¹⁹)

Kottamchukkadi taila	Kushta (<i>Saussurea lappa</i>), Shunti <i>Zingiber officinale</i> , Vaca (<i>Acorus calamus</i>), Shigru (<i>Moringa oleifera</i>), Devadaru (<i>Cedrus deodar</i>), Lasuna (<i>Allium sativum</i>), Sidhartha (<i>Brassica juncea</i>), Suvaha (<i>Alpinia galanga</i>), Tila (<i>Sesamum indicum</i>), Dadhi (curd), Chinja (<i>Tamarindus indica</i>)	Vatakaphasamana, Srotoshodhana, Sthabdahara (removes stiffness) Soolaghna Anti inflammatory (all drugs) ^{20,21} Antioxidant (Vaca ²² , Chinja ²³)
Eranda taila moorchita form (processed)	Eranda taila, Dhanyaka (<i>Coriandrum sativum</i>), Triphala (<i>Terminalia chebula</i> , <i>Terminalia bellerica</i> , <i>Emblica officinalis</i>) Haridra (<i>Curcuma longa</i>), Shunti	Kaphavata samana Anti inflammatory, Immunomodulator ²⁴

The medicines chosen had a general property of being KaphaVata samana in nature.

Criteria for assessment

The following subjective and objective parameters were used to assess the combined effect of the treatment.

Table 3: Grading of Subjective Criteria²⁵

Grade	0	1	2	3	4
Angamarda (Malaise)	No Angamarda	Occasional Angamarda but patient is able to do usual work	Continuous Angamarda but patient is able to do usual work	Continuous Angamarda which hampers routine work	Patient is unable to do any work
Aruchi (Anorexia)	Normal desire for food	Eating timely without much desire	Desire for food, little late, than normal time	Desire for food only after long intervals	No desire at all
Trsna (Thirst)	Normal feeling of thirst	Frequent feeling of thirst, but quench with normal amount of liquids	Satisfactory quench after increased intake of fluids but no awakening during nights	Satisfactory quench after increased intake of fluids with regular awakening during nights	No quench after heavy intake of fluids
Alasya (Tiredness)	No tiredness	Starts work in time with efforts	Unable to start work in time but completes the work	Delay in start of work and unable to complete	Never able to start the work and always likes rest
Gourava (Heaviness)	No feeling of heaviness	Occasional heaviness in body but does usual work	Continuous heaviness in body but does usual work	Continuous heaviness which hampers usual work	Unable to do any work due to heaviness
Sotha (Swelling)	No swelling	<10% increased circumference of the affected joint	>10% increased circumference of the affected joint	>20% increased circumference of the affected joint	
Sthambha (stiffness)	No stiffness	0 – 10 min	10 – 120min	2 - 8 hours	> 8 hours
Sandhishoola (joint pain)	Occasional	Mild pain of bearable nature	Frequent moderate pain, but no difficulty in joint movement	Slight difficulty in joint movement due to severe pain, requires medication & may remain throughout the day	Severe pain with more difficulty in moving the joints, disturbing sleep & requires strong analgesics

Table 4: Grading of Objective Criteria²⁶

Grade	0	1	2	3
Fatigue	Not there	Full time work despite fatigue	Patient must interrupt work to rest	Fatigued and requiring long term rest.
Grip strength	200mmHg or More	199 to 120mmHg	119 to 70 mmHg	Under 70mmHg
Wintrobe ESR (in 1st hour)	0-20	21-35	36-50	>50
Hemoglobin (g %)	12.5 or more	12.4 to 11	10.9 to 9.5	<9.5
General function	All activity without difficulty	Most activity but with difficulty	Few activity cares for self	Little self-care mainly on chair & bed
Patient's estimate	Fine	Almost well	Pretty good	Pretty bad
Physician's estimate of RA activity	Inactive	Minimally active	Moderately active	Severely active
Foot pressure (in kg)	25-21 kg	20-16 kg	15-10 kg	<10 kg
Walking time (for 25 feet in number of seconds)	15-20 sec.	21-30 sec.	31-40 sec.	>40 sec.

For diagnostic as well as for assessment purpose, the degree of disease activity was estimated on the basis of criteria laid down by American Rheumatism Association (1967).

Figure 1: VAS Numeric Pain Distress Scale was used to assess the Severity of the Condition

RESULTS

During the treatment course patient expressed gradual relief in her complaints. On the day of admission (07.05.2016) she was started with Valuka sweda externally and internally with Rasnasaptakam kashaya and Dasamula haritaki avaleha. Her ESR level was 103mm/hr and CRP level was 51.5mg/l. After 4 days of treatment; the patient had relief in her pain and stiffness. After 7 days of Rookshana, external Patrapotali sweda was started with Kottamchukkadi taila, continuing the same internal medications. After 12 days of treatment, she had

considerable relief from her symptoms. On 15th day morning, Moorchita Eranda taila of 30 ml was given and she had attained 6 Vegas (number of purgation) by noon. The patient's general condition was stable and was discharged. Internal medications were continued for another 15 days and when patient came for review on 10.06.2016, subjective and objective assessment were done to assess the effectiveness of treatment. Her ESR level reduced to 15 mm/hr and CRP reduced to 3.5mg/l. Patient came for follow up after one month which was uneventful without any recurrence.

Assessment chart

Table 5: Subjective Criteria

Features	BT	AT	Follow up
Angamarda	3	1	0
Aruchi	3	0	0
Trshna	2	0	0
Alasya	3	0	0
Gourava	3	0	0
Angashotha	1	0	0
Stambha	2	0	0

BT: Before Treatment, AT: After Treatment

Table 6: Sandhishoola

Lt		Name of joint involved	Rt	
BT	AT		BT	AT
2	0	MCP	2	0
3	1	Wrist	3	1
2	1	Knee	2	1
2	0	Ankle	2	0
2	0	Elbow	2	0

BT: Before Treatment, AT: After Treatment

Table 7: Objective Criteria

Parameters	BT	AT
Fatigue	2	0
Gripping strength(in mm of Hg)	Lt 3	2
	Rt 3	2
Wintrobe ESR(in 1st hour)	103mm/hr	15mm/hr
Hemoglobin (g %)	12.1 g%	11.6g%
General function	2	0
Patient's estimate	3	1
Physician's estimate of RA activity	2	0
Foot Pressure(in kg)	Lt 3	1
	Rt 3	1
Walking time(in sec)	1	0

Figure 2: Changes in ESR level Before & After treatment

Figure 3: Change in CRP level Before and After treatment

Figure 4: Visual Analogue Scale during the Treatment

DISCUSSION

Ama and Vata are the main culprits in causing the disease Amavata. Hence, the main purpose of treatment is to reduce Ama by Amapachana followed by Vatasamana measures. Ama has the qualities of Guru (heavy), Snigda (oily), Sthira (immobile), Pichila (slimy) etc whereas Vata has the properties of Laghu (Light), Ruksha (dry), Chala (movement), Vishada (clearness) etc. A judicious usage of treatment is necessary here as the modalities adopted for Ama nirharana (removal of Ama) and Vata samana are contradictory to each other.

Langhana, the first line of management explained for Amavata helps to pacify Ama.

As Rookshana and Langhana have similar qualities, it was done in the form of Valuka sweda. It helped in the Shoshana (drying) of Ama situated in the Sleshmasthan (joints), thus pacifying symptoms like Sthambha (stiffness) and Shoola (pain) suffered by the patient. Internal Rookshana was attained by Rasnasaptakam kashaya and Dasamoolaharitaki avaleha. Rasnasaptakam kashaya is Amapachana (digesting Ama) and drugs like Rasna has got deepana pachana (appetizer-carminative) properties and is indicated in Trika, Sandhi & Asthi shoola (pain over joints which are the main sites affected

in Amavata. In Dasamoolaharitaki avaleha Dasamoola has Sopahara (removes swelling) and Vedanasthapaka (analgesic) properties and Haritaki is well known for Anulomana (mild purgative) and Rasayana action (immunomodulatory), which makes it an ideal choice in the management of Amavata. SnehaSweda done in the form of Patrapotali sweda helps in the Dravikarana (liquefaction) of dosas localized in the shakhas (tissues) and brings it to the koshta for easy shodhana (purification). Kottamchukkadi taila is the oil used for Patrapotali sweda as it is indicated in Amavata and is kapha vata samana, sukshma (subtle), stambhahara, sulahara. It is ruksa, tiksna (penetrating) and is usna virya (hot potency). Eranda taila is indicated in kapha predominant vata disorders as it has the properties of tikshna, usna, sukshma and helps in disintegrating, digesting and clearing the channels blocked by Ama. By the property of Virechana, Eranda taila helps in expulsion of dosas from koshta and act as Vatanulomana (bringing vata to its normalcy). Various studies have been done on Castor oil and its anti-inflammatory, anti-toxin properties have been proved. It also has an impact on lymphatic system thus boosting up the immune functioning in the body.

Based on the results obtained, it is evident that langhana/rookshana followed by Sneha sweda considering the strength of Ama and Vata helped in pacifying the symptoms of the patient.

Timeline of treatment

CONCLUSION

Amavata and RA are chronic diseases affecting mankind having an auto-immune pathology. Hence both local and systemic management are necessary for its pacification. Judicious usage of Amavata chikitsa in RA has yielded encouraging results. Bahiparimarjana (external procedures) will reduce the pain, stiffness, and swelling thus enhancing mobility. Panchakarma procedures help in checking autoimmune pathologies. Based on the results obtained, this study to assess the combined efficacy of treatment, helped in relieving the symptoms of the patient. But a large scale study is necessary to be conducted for a longer duration to obtain an accurate conclusion.

ACKNOWLEDGEMENT

I sincerely express my indebtedness and deep sense of gratitude to Ratnaprava Mishra and Mahesh C. Kundagol for their valuable guidance and help in completing this work successfully.

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Cite this article as:

Baby Christy, Chacko James, K. Krishnakumar. A multimodal intervention in Amavata (Rheumatoid arthritis): A case study. Int. J. Res. Ayurveda Pharm. Sep - Oct 2016;7(Suppl 4):71-77 <http://dx.doi.org/10.7897/2277-4343.075223>

Source of support: Nil, Conflict of interest: None Declared

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