

## Case Series



### A SAFETY PRACTICE OF RASAOUUSHADHIS IN AMAVATA BRIDGING WITH RENAL PARAMETERS-A CASE SERIES

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#### ABSTRACT :

**Background:** *Amavata* is a disorder in which the *Vata Dosha* is vitiated and *Ama* accumulates in the joints, simulating what is now known as rheumatoid arthritis (RA). A total of 10 patients who had classical *lakshanas* of *Amavata*, i.e., *Sadana, alasaka, gourava, arochaka, and vedana* with elevated ESR and RA titer positive, were taken, and *shamanaoushadhis* having *rasaoushadhis* were used to assess the safety of visceral organs by using herbomineral medication consumed for longer duration. **Clinical findings:** A total of 10 patients having classical *lakshanas* of *Amavata* were diagnosed, and *ama* *lakshanas* like *aruchi, govraha, and alasya* were assessed. Along with that blood test, ESR, serum creatinine, and blood urea were done on every 30<sup>th</sup> day of follow-up. **Results:** *Shamanaoushadhis* were taken for the period of 120 days in total with evaluation of ESR, serum creatinine, and blood urea after every 30 days of the intervention. Despite consuming the herbomineral combinations for 120 days, patients did not show any adverse effects on renal parameters, indicating the safety of these combinations in combating chronic illnesses like *Amavata*. **Conclusion:** Patients suffering from *Amavata*, who had elevated ESR levels, consumed *Shamanaoushadhis* for a total of 120 days, specifically *Amavatari rasa, Mritunjaya rasa, Shudha vatsanabha churna, and Rasnasaptaka Kashaya* with lukewarm water. They experienced relief in symptoms and maintained their cellular renal functions. This case series shows the importance of the use of *rasaoushadhis* for blood investigations in chronic cases and for longer durations.

**KEYWORDS:** *Amavatari rasa, Ama, Case series Rasaoushadhis, Rheumatoid arthritis*

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## 1. INTRODUCTION

Rheumatoid arthritis (RA) chronic, inflammatory, autoimmune disorder affecting about 0.5-1% of adult population, with incidence of two to three times greater in women and men. [1] RA long-term autoimmune disorder affects the whole body, marked by painful inflammation of the joints, symmetrical involvement of peripheral joints. Disease presents itself and its severity can differ among individuals. The exact causes of RA are not fully understood; however, it is believed to arise from combination of genetic factors, infections and environmental influences. [2] *Amavata* is a disorder in which the *Vata Dosha* is vitiated, *Ama* accumulates in the joints, simulating that is now known as RA. *Ama* is poorly metabolized substance that is not consistent for the body. *Ama* can cause pain, stiffness, edema, soreness, and other symptoms in the associated joints once it becomes localized in bodily tissue or joints. *Amavata* shares many characteristics with RA, an autoimmune disease that results in symmetrical polyarthritis and chronic inflammation. [3] Ayurveda aims to treat such long standing disorders with precise treatment by both *Shamana* and *Shodhana chikitsa*. Where the patient needs prolonged course of treatment with repeated *shodhana* and *Shamanoushadhis* which includes *Kastoushadhis* as well as *rasaoushadhis* wherein long standing *rasaoushadhis* needs monitoring to prevent from visceral organ damage. When patient requires a lengthy course of treatment that involves frequent *shodhana* and *Shamanoushadhis*, including *Kastoushadhis* and *Rasaoushadhis*, where chronic *rasaoushadhis* require monitoring for damage to

visceral organs. In this case series common *Shamanoushadhis* which are mentioned classically were used, i.e *Amavatari rasa*, *Mritunjaya rasa Shudha vatsanabha churna* and *Rasnasaptaka kashaya* for 40 days and follow up of 30 days with blood tests like ESR, Blood urea and serum creatinine were done. Intention was to have a safety practice as *rasaoushadhis* in *Amavata* was being used for longer duration. In such cases regular monitoring of Renal parameters. The glomeruli readily filter creatinine, while the proximal renal tubule secretes between 10% and 30% of it the basal condition. The rates of creatinine synthesis and excretion are relatively stable under normal conditions. Automated chemical analyzers often use either rate blank or nonrated blank alkaline picric acid to assess serum creatinine. [4] The liver produces urea. The urea transporters UT-A and UT-B help carry urea through bloodstream to kidneys, where it is essential for the excretion of nitrogen-containing substances. Urine is formed by tubular reabsorption and secretion after glomerular filtration. In contrast, approximately 99 percent of the filtrate is reabsorbed in the renal tubules, preserving fluid balance. To control pH and get rid of toxins, tubular secretion transfers waste materials from the peritubular capillaries into the filtrate. [5] All the patients were diagnosed based on classical *lakshanas* of *Amavata* and with elevated ESR levels, RA titer positive, *Shamanoushadhis* having herbo-mineral preparations were used and visceral organ safety was assessed by measuring Serum creatinine and blood urea.

## 2. MATERIALS AND METHODS:

### Patient details:

Patients having classical *Amavata* *lakshanas* i.e *Sadana* (weakness), *Arochaka*(anorexia), *vedana* (pain), *sthambha* (stiffness), *arati* (distress) etc. [Table 1] were taken with blood parameters ESR and RA titer positive were included. At the start of intervention Sr Creatinine and Blood urea was measured and same tests were repeated on every visit. [Table 2]

**Clinical findings:** All the 10 patients had normal with regular heartbeat, pulse rate and BMI with no

comorbidities, visceral findings were within normal limits.

**Diagnostic assessment and treatment protocol:** The diagnosis was made by clinical findings and confirmed by investigation [Table 1 & 3]. The patients were treated with *shamana*, during every *shamana* intervention [Table 3], blood tests were assessed [Table 3 & 4]

#### **OBSERVATIONS:**

**Table 1** *Lakshanas of amavata Assessed*

Sl. No.	Specific features	1		2		3		4		5		6		7		8		9		10	
		BT	AT																		
1.	<i>Sadana</i>	++	+	++	-	++	-	++	+	++	+	++	-	++	-	++	-	++	+	++	-
2.	<i>Arochaka</i>	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-
3.	<i>Aalasya</i>	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-
4.	<i>Udara guruta</i> (Heaviness of abdomen)	++	-	++	-	+	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-
5.	<i>Bala bramsha</i> (Diminution of physical strength)	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-
6.	<i>Gourava</i>	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-
7.	<i>Vedana</i>	++	+	++	-	++	-	++	-	++	+	++	-	++	+	++	-	++	-	++	+
8.	<i>Shotha</i>	++	-	++	+	++	-	++	-	++	-	++	-	++	+	++	-	++	-	++	-
9.	<i>Arati</i>	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-	++	-

**Table 2: Timeline of medicine**

SL No	Name of the Drug	Dose	Anupana	Duration
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1	<i>Amavatari rasa</i>	1 TID	Leukewarm water	120 days
2	<i>Mritunjaya Rasa</i>	1 TID	Leukewarm water	120 days
3	<i>Rasnasaptaka kashaya</i>	3Teaspoon TID	Leukewarm water	120 days
4	<i>Shudha Vatsanabha</i>	50mg TID	Leukewarm water	120 days
Medicines were taken from GMP certified UMA Pharmacy.				

**Table 3: Hematological bio-chemical parameters and DAS score before and after intervention.**

Sl.No.	ESR		DAS		Blood Urea		Sr. Creatinine	
	BT	AT	BT	AT	BT	AT	BT	AT
1.	60	35	5	2.2	23	23	1.0	0.8
2.	20	15	4.6	2	24	22	0.9	1.0
3.	10	15	5.0	2	17	20	1.0	1.0
4.	30	10	4.8	1.8	31	25	1.3	1.2
5.	55	35	5.1	2	22	25	0.8	0.7
6.	55	30	4.4	2	25	30	0.7	0.8
7.	60	20	4.2	1.8	17	20	0.8	0.8
8.	60	15	5.0	2	26	25	1.0	1.1
9.	65	20	5.1	1.4	15	20	0.8	0.7
10.	70	20	4.6	1.8	21	26	0.7	0.7

**Table 4: *Shamanoushadhis* on visit.**

<i>Shamanoushadhis</i>		<i>Amavatari Rasa</i>	<i>Mritunjaya Rasa</i>	<i>Rasnasaptaka Kashaya</i>	<i>Shudha Vatsanabha</i>
Patients	Follow up In Visits	40 days of every visit.			
1	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
2	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
3	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
4	1 <sup>st</sup>	✓	✓	✓	✓

	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
5	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
6	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
7	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
8	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
9	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓
10	1 <sup>st</sup>	✓	✓	✓	✓
	2 <sup>nd</sup>	✓	✓	✓	✓
	3 <sup>rd</sup>	✓	✓	✓	✓

**3. OUTCOME:** The following blood parameters of the patients were measured during intervention, after treatment: ESR, Blood Urea and Sr. Creatinine [Table 2]. The patients were having the symptoms like *Sadana*, *arochaka* etc [Table 1] significant relief were seen during and after treatment. The treatment is given for period of 120days in 3 visit follow-up with interval of 40 days and continued with the same medication Table 4.

**4. DISCUSSION:** The two primary *Doshas* in *amavata* are *ama* and *vata*. The biological force that detects, stimulates all bodily functions is called *vata*. The functional normalcy of *Vata* is compromised when the

*Gati* of *Vata* is hindered by *Ama* in *Srotasath* leading to *Amavata*. Since *Ama* and *Vata Dosha* is the primary cause of the illness, *Vatahara* and *Amapachaka Chikitsa* is the treatment used in this instance. [6] In this case series patients got relief from pain, stiffness, swellings, range of movements were improved and appetite was improved. *Amavata* was addressed to keeping *ama dosha* and *agni* of the patients. As this disease needs long standing medication but usage of *Rasaoushadhis* is challenging task as other organs has to be well maintained for the metabolism. *Shamanoushadhis* were administrated for the duration of 120 days with a follow

up on every 40 days [Table 2 & 3]. *Shamanoushadhis* used, have reduced the *lakshanas* of the patients [Table 1] and also reduced the level of inflammatory process in the body [Table 2].

Research has indicated that soluble uric acid promotes the proliferation of vascular smooth muscle cells (VSMCs), and the process is mediated by soluble uric acid through the mitogen-activated protein kinase (MAPKs) pathway. Additionally, soluble uric acid has been shown to have pro-inflammatory effects on vascular cells; in VSMC, it triggers the production of chemokine monocyte chemoattractant protein-1 (MCP-1) by activating transcription factors nuclear factor κ-B (NF-κB), MAPKs, and cyclooxygenase-2 (COX-2). Additionally, soluble uric acid increases the up-regulation of C-reactive protein in both VSMCs and endothelial cells, contributing to the pro-atherogenic characteristics of soluble uric acid as herbo-mineral formulations acts on proliferation it also helps in (MAPKs). [7] As formulation was consumed by the patients for longer duration threshold renal parameters were maintained as the cellular damage was prevented by the pro-inflammatory effects on vascular cells by the drugs.

Ayurvedic pharmaceutics places a high value on herbo-mineral formulations, initiating for pro inflammatory effects on vascular cells Almost 70% of formulations combine one or more metallic or mineral ingredients with number of herbs that help to improve efficacy, relieve disease symptoms, and promote long and healthy life(1-2). Herbo mineral formulations, known as *Kharaliya*, *Parpati*, *Kupipakva* and *Pottali Rasayana*, are

differentiated by the different methods applied to raw medicines. *Kharaliya Rasayana* is the most fundamental and significant of these pharmaceutical formulations. One of the traditional formulas made using *Kharaliya* process is *Amavatari rasa*, having *Triphala*, *chitraka*, *Guggulu* and *eranda taila* is *Vedanahara*, *vatahara*. [8] *Kajjali* has *Sukshma* and *Srotoshodhaka* properties, which elevates *Agni* and inhibit formation of *Ama* along with *Dipana*, *Pachana*, *Amahara* and *Kaphavatahara* properties of *Amavatari Rasa*. *Amavata* is considered as *Amashayotha Rasaja Vikara Vyadhi*. *Dipana Pachana* is the choice of treatment in such condition. Traditionally mentioned formulation was used as it is anti-inflammatory & anti-arthritis. *Amavatari rasa* also contains *Shudha Parada* i.e purified mercury it has no untoward effect on renal cells and hepatic cells we can see no changes in serum creatinine levels and blood urea levels [Table 2]. Mercury causes toxicity when inhaled, skin contact and direct consumption but, in this formulation it was purified with *ardraka swarasa bhavana* even after consuming for 120 days it has helped in easy bioavailability and in addition helped to relieve symptoms which showed positive results in cellular level. At multiple levels of inflammation associated with RA to reduce progressive pathogenesis. A component of many antioxidant proteins, including glutathione, nicotinamide adenine dinucleotide dehydrogenase, and the primary constituent of the vitamin's thiamine and biotin, as well as amino acids, including taurine, methionine, cysteine, and homocysteine. Antioxidant, anti-inflammatory, and accelerated healing processes have been noted when

RA patients are treated with various sulfur-containing compounds. *Gandhaka* content did not induce additional hepatotoxicity and alteration in skeletal muscle secretions as there were no alterations in level of serum creatinine and blood urea [Table II]. As *Amavatari rasa* has been said to be safe in RA conditions as it is anti-rheumatic drug.[9]

*Mrityunjaya Rasa* is herbo-mineral formulation having *visha dravyas* which is also prepared by various *shodhana* and *bhavana*. *Hingula shodhana* is done by *shunti swarasa* which is *ushna* does *deepana pachana*, *agnivardhaka* and *amapachaka*. *Vatsanabha shodhana* is done by *gomutra* which does *kapha nirharana*, *Gandhaka* and *tankana* in *shodhita* form is *tridoshara*, *Vedanahara*. As this formulation purified form of cinnabar, sulphur powder, sodium pyroborate aconitum ferox all these possess *vata kapha*, *Jwaraghna*, *Kushthagna* and *Amapachaka*. Whereas the herbal drugs *Maricha* is *Katu*, *Tikshna*, *Dipana*, *Shwasa* and *Shula rogahara*, and *Krumighna*. *Pippali* is having *Jwaraghna* property and ginger is *Ushna*, *Tikshna*, *Dipana*, *Madhur vipaka* and *Ruksha*.[10] Cinnebar present in *Mrityunjaya Rasa* is safe to use when it is purified and does not change the physiological action of the body.[11] Minerals present in the case series were safe as they did not cause any untoward effect on consumption of more than 90 days, intention of doing follow up for 120 days to check the cellular effect of the herb-mineral preparation which was unaltered as renal parameters were assessed during intervention considering effect renal toxicity but it showed to be safe. Practice of *rashaoushadhis* with regular testing on

renal parameters like serum creatinine and blood urea was the intention of the case series, liver toxicity was not considered here as study was already done during drug safety practice. The entire case series emphasizes on safety practice of *rashaoushadhis* in *amavata* for duration of 120 days. And gives outcome that prolonged usage of *rashaoushadhis* will not cause any visceral damage[Table 3].

*Rasnasaaptaka kashaya* is the herbal remedy that works best for a variety of inflammatory diseases. The medications *Rasna*, *Eranda*, *Devadaru*, *Aragwadha*, *Punarnava*, *Guduchi*, and *Gokshura* in *kwatha/kashaya* form are used in its formulation. *Amapachaka* and *vata shamaka* are attributes of this *kashaya*. It lowers *ama* through the *amapachana* property and uses the *vata shamana* property to lower the person's pain and inflammation. The substance in *Kashaya* because it possesses *virechaka* properties, *Aragwadha* is *Mrudu virechaka*, and *Kapha dosha hara* performs the *vatanulomana*. Potential analgesic and anti-inflammatory properties of *eranda* and *rasha*. Its *Ushna Virya* makes *Punarnava* a feature of *Kapha Vata Hara*, *Shothahara*, and *Rasayana*[12] *Rasnasaaptaka kashaya*'s medications work together to produce an analgesic and anti-inflammatory effect. Patients showed significant reduction in DAS score [Table 3].[13]

**5. CONCLUSION:** Patients had the classical *lakshanas* of *Amavata* with elevated ESR and RA titer positive were included and blood parameters like Blood urea, Serum Creatinine, DAS scoring was done before intervention of classical formulation i.e *Amavatari Rasa*, *mritunjaya Rasa*, *Shudha Vatsanabha* and *Rasnasaaptaka Kashaya*

for 40 days with blood tests on follow up on every 40<sup>th</sup> day [Table 4]. As patients consumed *Rasaoushadhis* for 120 days, there was no physiological changes in the cellular levels [Table 3] as these herbo-mineral formulations are safe in terms of blood urea, serum creatinine [Table 3] and patient also had reduction in classical *lakshan*as of *Amavata* [Table 1]. The comprehensive strategy of the treatment and investigations were done to have safety practice of *rashaoushadhis* for longer duration which addressed both long-term wellness initiatives and symptomatic alleviation.

**Declaration of Patient Consent** – The authors confirm that they have acquired a patient consent form, in which the patient or caregiver has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient or caregiver acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

#### Patient perspective

The patients were under *Amavata* Treatment for 6 months after being diagnosed with *Amavata*, worried about the effects of *rashaoushadhis* on visceral organs. As treatment progressed with blood tests on all follow up patients were willing to continue the medications regularly. Following the intervention and follow up, they expressed relief and satisfaction with the outcome, particularly the healthy condition.

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