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A REVIEW OF AVAILABLE LITERATURE AND SCIENTIFIC STUDIES ON HERBS CONDUCTED SO FOR CONCERNING TREATMENT OF AMAVATA (W.S.T RHEUMATOID ARTHRITIS)

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ABSTRACT

The *Amavata* (Rheumatoid Arthritis) is the most common disease presently seen worldwide affecting approximately 1 to 2% of adult population. As per the Ayurveda provoked *Ama* and vitiated *Vata* simultaneously lodge in *Trika* and *Sandhi* and leads to *stabdhata* (stiffness),*shotha* (swelling) *shoola* (pain) in the body. The bodyache, loss of taste, heaviness, fever, and indigestion are also founded in *Amavata*. The *Amavata* has been challenging problems to the medical field. Various treatment protocols are applied in this disease with partial success. In the modern system of medicine the treatment of *Amavata* is immuno-modulators, Anti-inflammatory and Analgesic in which the steroid and non-steroid (NSAIDs) drugs are used which shows serious side effects like gastrointestinal ulceration and bleeding, hepatotoxicity, stomatitis, dyslipidaemia. The prevalence of Rheumatoid Arthritis suggests that there is no complete integrated regimen to cure this disease or to pacify its symptoms. To provide a better life style to patient, some cost effective safer drugs with minimal or no side effect is highly require. The treatment in Ayurvedic literature is vast but yet little explored. Therefore there is need to explore and generate necessary evidence for Ayurvedic

management of this disease. The primary aim of this paper is to review the available literature along the experimental studies conducted to date.

KEYWORDS: *Amavata*, Rheumatoid Arthritis, Internet, Published Article.

INTRODUCTION

The *Amavata* is resultant combined effect of simultaneous aggravation of two pathological entities- *Ama* and *Vata*. The *Ama* is undigested harmful toxic metabolite of *Agnimandya* and *Vata dosha* vitiated by its etiological factor. When these two factors simultaneously take part in *Samprapti* (pathogenesis) than resultant disease become very difficult to treat. The *Samprapti* (pathogenesis) starts from the *Annavaha Srotasa* and then extend through *Madhyama rog marga* with special inclination for *Kapha Sthanas* especially *Sandhi* (joints). In such condition, patient weeps in agony of pain and reduced functional capacity with severe stiffness and crippling deformity of joint, which make them bed ridden.[1]

DEFINITION

The condition in which provoked *Ama* and *Vata* simultaneously lodge in *trika* (pelvic, shoulder, girdle) and *sandhi* leading to *stabdhata* (stiffness) this condition has been identified as *Amavata*.[2] Rheumatoid arthritis described in the modern system of medicine can be correlated with *Amavata*. Rheumatoid arthritis is a chronic inflammatory disease of unknown etiology marked by a symmetric, peripheral polyarthritis. It is most common form of chronic inflammatory arthritis and often results in joint damages and physical disability.[3] The disease prevalence worldwide is approximately 0.8% (0.3% to2.1%) of the adult population. Like many other autoimmune disease RA occurs more commonly in female than male with a 3:1 ratio. In India, the prevalence of RA is 0.5% to 0.7%. The peak age of onset in the fourth and fifth decade of the life with more than 75% patients developing disease between 30 and 50 years of age.[4]

The Basic principles of Modern-day Treatment of Rheumatoid Arthritis are the tight disease control strategy' based on objectified assessment of disease activity as a guide for response-driven targeted treatment for improved outcome.

The goals of RA management are to control pain and swelling, delay disease progression, minimize disability and improve quality of life. Non-steroidal Anti-inflammatory drugs (NSAIDs) have both analgesic and anti-inflammatory property but do not change disease

outcome and side effects are gastrointestinal ulcer (15-20% of patients) ulcer with bleeding and perforation (2-4% of patient).[5] Glucocorticoid have greater action on joint pain but have numerous side effect including adrenal suppression, ulcer and osteoporosis.[6] DMARDs, such as the currently popular methotrexate, sulfasalazine, leflunomide reduced the progression of joint erosion but have slow onset and no analgesic activity. DMARDs can produce severe systemic toxicity, however, including infections (being immunosuppressive). Methotrexate has been shown to cause pulmonary complication.[7]

Ayurveda is widely practiced system of traditional medicine India. In Ayurveda following treatment protocols are prescribed by various *Acharyas. Acharya Cakradutta* was first to describe the line of treatment and drugs for *Amavata*. Further *Bhavapraksha* and *Yogratnaker* followed the same protocols *as Langhana, Swedana, Dipana, Virechana, Snehapana, Basti, Kshar Basti* supported by most of the *Acharya* for the treatment of *Amavata*.[8,9,10]

METHODS AND MATERIALS

Following the line of treatment described by ancient *Acharyas* of Ayurveda, many studies has been conducted and some has been published showing significant improvement in the symptoms of *Amavata*. Details of those articles available at internet has been collected and analysed.

The details has been summarised as under -

Sr.	Drug	Effective Dose	Study Models	Duration	Sample size	Result
1	*Shiva guggulu* & *Simhanada guggul*[*14]	6gm/day	Clinical trial	8 week	70	Highly significant P<0.001 T=3.45
2	*Vardhamana pippli Rasayana*[*15]	1gm BD increasing up to 5 gm BD	Clinical trial	15 days	73	Highly significant P<0.001 T=6.73
3	*Aswagandha* powder & *siddha makardhwaj*[*16]	5gm & 100mg BD	Pilot study	3 week 4 week	75	Highly significant P<0.01 DAS=5.01+/-0.36 to 4.29+/-0.21
4	*Amavatari Ras* [*17]	750mg BD	Clinical trial	30 days	20	Highly significant P<0.001 T=2.04-4.06
5	*Amrita ghrita* [*18]	15gm BD	Clinical trial	45 days	28	Highly significant P<0.001 T=5.09-9.70
6	*Ajmodadi churna* & *Eranda tail*[*19]	5gm BD 10 ml BD	Clinical trial	30 days	20	Highly significant P<0.001

						X^2=42.61
7	*Rasona pinda*[*][20]	50-60mg/kg	Clinical trial	90 days	50	Significant P>0.05 t=0.89-1.02
8	*Vatari guggul & Matra Basti*[*][21]	500mg TDS & 60ml/day	Clinical trial	45 days 21 days	50	Highly significant P=0.001 t= 5.61-16.36
9	*Kshara Basti & Nirgundi Ghana Vati*[*][22]	Vati-500mg TDS	Clinical trial	16days 30 days	50	Highly significant P<0.001, t=3.87 & p>0.001,t=16.17
10	*Panchamooladi kaala Basti*[*][23]	80ml/day	Clinical trial	21days	12	Highly significant P<0.001 T=8.83-10.53
11	*Shunthi Churna*[*][24]	2gm BD	Clinical trial	30 days	30	Highly significant P<0.01
12	*Bhallattaka Kshira paka*[*][25]	80ml BD	Clinical trial	1 week alternate to 4 week	21	Highly significant P<0.01 T=2.40-3.7
13	*Rasna Rasonadi Ghana Vati*[*][26]	250mg TDS	Clinical trial	90 days	51	Highly significant P<0.001 T=15.67-17.34
14	*Haritaki & Trivrutadi churna*[*][27]	5gm BD both	Clinical trial	30 days	35	Highly significant P<0.02, t=3.07-5.68 & P<0.01-0.05,t=4.15
15	*Alambushadi churna*[*][28]	6gm BD	Clinical trial	6 week	30	Highly significant P=0.001 SE=0.001-0.007
16	*Sunti churna & Vrudhadaru mool churna*[*][29]	500mg TDS	Clinical trial	21 days	15	Both drugs show significant result.

Besides these traditional formulations some standardised formulation has been also clinically tested and they have also shown significant improvement in symptoms with good safety profile. Detailed of these formulations are as under.

RA-1: A standardized formulation, called RA-1, was prepared from purified plant extracts of *Withania somnifera*, *Boswellia serrate*, *Zingiber officinale* and *Cuurcuma longa*, and evaluate over 16 weeks in a randomized double blind, placebo controlled, parallel efficacy, single centre phase II drug trial. Here 182 patients with active on chronic RA were enrolled and efficacy assessed as per protocol. Significant with p<0.05, in conclusion RA-1 was found to be a moderate DMARD with an excellent safety profile.[30,31]

IRA-01: IRA-01 contain extracts of *Boswellia serrate, Trigonella foeum, Linum usitatissimum, Curcuma longa, Camellia sinensis, Tribulus terrestris* and *Piper longum*. Here

130 RA active patients enrolled in the study with one year follow up. On completion significant improvement in all efficacy variables including joint pain, swelling and stiffness. HAQ was found (some $p<0.001$). It was concluded that IRA-01 was a slow onset DMARD with modest efficacy, excellent safety profile.[32]

NMITLI/B1: This Ayurvedic formulation developed by NMITLI. Project contains extracts of *Tinospora cardifolia, Withania somnifera, Tribulus terrestris, Zingiber officinale*. This trial compared B1 with proprietary of monoherb preparation (a formulation of *Semicarpus anacardium*) and hydroxychloroquin (HCQS). Total 121 patients with active RA were randomized in three arms, single blind parallel efficacy, 24 week. The ACR-20 improvement response was demonstrated 44%, 55% and *36*% of the B-1, HCQS and mono-herb respectively. Result suggests the B-1 drug similar efficacy to HCQS, but with greater safety profile.[33]

ORTHOKAP TAB: The study was done on 20 patient with 2 tab twice daily (each tab=500mg). the trial drug Orthokap herbomineral combination of *Rasabhra guggul, Vata Gajedra Singha, Shallaki satwa, Shankh Bhasma*. The clinical study shown significant effects in improving condition of *Amavata*.[34]

DISCUSSION

The *Ama* and vitiated *Vata* is described in Ayurvedic literature is root cause of stiffness, pain and swelling. So the drug which shows *Amapachana, Amashodhak* and *Vata* balancing pharmacodynamics property is highly effective in this disease (Like *Shunthi churna, Alambushadi churna, Ajmodadi churna, Rasona pinda* etc.). These drugs increase *Agni* and checked formation of *Ama*, resulting anti-inflammatory and analgesic mode of action.

Gold containing drugs comprise a class of distinctive Anti-arthritic agents (DMARDs) used when NSAIDs are insufficient to treat severe case of Rheumatoid arthritis. The reported remission of RA with gold therapy is 30 per cent.[35] It is fascinating that ‘gold’ in its Ayurvedic ash from (like *Sidh Makardhwaj*) has been used to treat rheumatoid arthritis since ancient times. Similarly the *Rasayana* (like *Vardhamana pippali, Aswagandha* etc.) aims to increase body’s resistance to disease, delay aging and promote body strength and intellect. *Ricinus communis (Erand)* and *commiphora mukul (guggul*) are prime example of potent anti-arthritic medicinal plant described in *Charak samhita*.

The *Panchakarma* comprises treatment curative to *dosha* imbalance, is indicated to specific stage of the disease. They are widely used to treat many form of arthritic condition, including RA. *Langhana* in initial stage helps for strengthened digestive and metabolic system. The Oleation therapy (*Basti*, massage) aim to cleanse and purify the body to restore *tridosha* equilibrium reliving pain by local application.[36] In the *Amavata* dry sudation (*Ruksha sweda*) is advocated. *Basti* is the treatment of choice for *vata* aliments. In *Amavata vaitarana basti* is popular treatment widely practised and studied as well. The *virechana karma* is described for effective management of *Amavata;* it might be responsible for *Agnivardhana* and evacuation of *Ama*, which is the main culprit of this disease.[37]

CONCLUSION

Considering all the literature and data available regarding the treatment of *Amavata*, it can be said that the management of *Amavata* in Ayurveda is almost similar to the conventional allopathic therapy, because both primarily aim to reduced pain, swelling and stiffness of the joints. However herbal therapy appears to be safe as compared modern system of medicine as Ayurvedic preparations include mainly herbs that make the body work more efficiently. The allopathic drugs containing chemicals interfere in the body's natural process, resulting in unwanted side effects. Because they offer fewer or no side effects, herbal therapy should be preferred in the treatment of *Amavata* (RA).

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