

Clinical Evaluation of the Anti-inflammatory Action of Ayurvedic Remedies in Arthritis w.s.r. to *Shotha* - A Review

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Abstract

Indian traditional system of medicine, *Ayurveda* encompasses all aspects of living-health and sickness. Like other pathological conditions inflammation has been documented mainly in the *Brihata Trayee* and *Madhava Nidana*. Inflammation and the oedema associated with it have got the attention due to it in *Ayurveda* as a pathological manifestation. It is known by different names in different contexts namely *Shotha*, *Shopha*, *Svayathu*, *Utsedha* and *Samhata* are the terms used in *Ayurveda*. This paper seeks to present a review on clinical evaluation of the anti-inflammatory action of *Ayurvedic* remedies in *Shotha*, exploring the relationship between inflammation and *Dravya Prayoga* (medicine), based on *Ayurveda* principles.

Keywords

Arthritis, Shotha, Anti-inflammatory, Ayurvedic, Remedies



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INTRODUCTION

Arthritis is a chronic immune inflammatory systemic disorder mainly affecting synovial joints. A major complaint for which a patient seeks medical attention is swelling in and around the joint, pain, stiffness and limited range of motion. Other tissues and organs are also involved in patients with more extensive disease in the form of heart diseases, respiratory complications, sicca syndrome, gangrene etc. modern medical science has made so many advancements but exact aetiopathogenesis of the disease is yet to be conclusive. Modern system of medicine has drugs like NSAID's, corticosteroids, DMARDs and Biologics, which have a lots of sides effects, long lasting and many others are life threatening. That's why *Ayurvedic* remedies are one of the best solution for that. On this mode, *one of the clinical trial in which Panchatikta Ghrita was used in Sandhigata Vata*, one of the *Vata Vikara* & it is a *Yapya Vyadhi*. South Asian countries like Bangladesh, India, Nepal and Sri Lanka are having higher incidence. *Sandhigata Vata* vis-a-vis Osteoarthritis is multi-factorial, non-inflammatory degenerative joint disorders. The data shows that the one of the trail group having *Panchatikta Ghrita* along with

local *Abhyanga* and *Nadi Swedana* has provided better relief in the disease *Sandhigata Vata* (Osteoarthritis). 15.38% patients achieved complete remission, while 61.54% patients found in maximum improvement and 23.07% were having moderately improvement. No patients found unchanged and mild improved. In other control group 07.14% patients obtained complete remission, while 64.28% patients were having moderate improvement, whereas 14.28% patients each were having maximum improvement and mild improvement. No patient found unchanged. There was no apparent change was observed in x-ray before and after treatment. Study reveals that the selected management have potential effect on *Shotha due to arthritis* with the added advantage of being free from side effects. In *Panchatikta Ghrita Guggulu* predominance of *Tikta Rasa* is there. To treat *Sandhigata Vata* drugs acting on to treat both *Vata* and *Asthi* was selected. According to *Charaka*, in *Asthi Dhatu Dushti* the treatment should be given *Tikta Dravya Ghrita* and *Kshira*. *Tikta Rasa* has *Vayu* and *Akasha Mahabhuta* in dominance. Hence it has got affinity towards the body elements like *Asthi* having *Vayu* and *Akasha*

Mahabhuta in dominance. Though, *Tikta Rasa* aggravates *Vayu* which may enhance the pathogenic process of *Sandhigata Vata* but, the main principle of *Ayurvedic* treatment is “*Sthanam Jayate Purvam*”. The main site of *Sandhigata Vata* is *Sandhi* which is the site of *Shleshaka Kapha*. So, by decreasing the *Kapha Dosha Tikta Rasa* fulfils the principle. Most of ingredients of *Panchatikta Ghrita Guggulu* have *Tikta Rasa*, *Ushna Virya* and *Madhur* and *Katu Vipaka*. The *Tikta Rasa* increase the *Dhatvagni* (metabolic stage). As *Dhatvagni* increase, nutrition of all the *Dhatus* will be increased. As a result *Asthi Dhatu*, *Majja Dhatu* may get stable and *Asthi Dhatu* and *Majja Dhatu Kshaya* will be decreased. So degeneration in the *Asthi Dhatu* may not occur rapidly. It can be said, it slows down the degeneration processes. *Tikta Rasa* has got *Deepana*, *Pachana* and *Rochana* properties. So it helps in the improvement of the general condition of health and thus strengthens the whole body as well as joints. On other hand *Tikta Ras* possess *Lekhana* property, so it helps in the weight reduction of the patients and helps in the management of Osteoarthritis. *Tikta Rasa* is also has got *Jwaraghna* and *Daha Prashamana* properties that it may act as

anti-inflammatory agent and can reduce the pain and swelling of the joints. *Ghrita* is *Vata-pittashamaka*, *Balya*, *Agnivardhaka*, *Madhura*, *Saumya*, *Shita Virya*, *Shula*, *JwarAhara*, *Vrishya* and *Vayasthapaka* also. Thus, it pacifies *Vata*, improve the general condition of the body and acts as a rejuvenator of the body. Thus, helps in the *Samprapti Vighatana* of the *Sandhigata Vata*. *Ghrita* is having property like *Yogavahi* which is helpful in increasing bio-availability of other drugs without losing its own property. *Ghrita* also contains vitamin D which plays an important role to utilize calcium and phosphorous in blood and bone building. Due to the *Ushna* property of *Guggulu*, it is one of the major *Vatashamaka Dravya*. Due to its *Ruksha* and *Vishada Guna* it acts as a *Medohara*. According to *Sushruta*, *Guggulu* has got *Lekhana* property which helps in reducing body weight. Due to its *Katu Rasa* it acts as a *Deepana*. Thus help in the improvement of general condition of the patient. *Purana Guggulu* also acts as a *Rasayana* which may help to prevent the any degenerative change in the body. Pharmacologically *Guggulu* has got the properties of anti-inflammatory, immunomodulatory and anti-lipidaemic

action. On the overall effect of the *Panchatikta Ghrita Guggulu*, it has been found that drug is predominant in *Ushna Virya* which helps in pacification of aggravated *Vata* and subside the pain. *Snehana* pacifies the *Vata*, softens the body and eliminates the accumulated *Malas*. *Swedana* relieves the stiffness, heaviness and coldness of the body and produce sweating. By the process of *Snehana* and *Swedana* the blood vessels of skin become dilated and local circulation of blood will be increased. The medicine applied locally is also absorbed by the skin and exerts its effects locally¹.

Other study reveals the effectively of *Shallaki Niriyasa* in Osteoarthritis. Two groups were used to study. One was having oral treatment and other having both oral as well as local application of *Shallaki Niriyasa*. Patients' mobility was improved significantly in both the groups, which indicates the efficacy of *Shallaki* over chief complaints. Reduction in serum triglycerides was seen in both the groups, which confirms that *Shallaki* has hypolipidemic effect. Remission in *Sandhishula*, *Stambha* and radiological improvement was found to be better in oral *Shallaki* group. Remission in *Sandhishotha* was maximum in patients

treated with *Shallaki* both orally and locally, whereas equal improvement in *Sparshasahyata* was observed in both the groups. Some patients in oral group showed complete relief. Overall effect of therapy suggests that *Shallaki* provided moderate improvement in maximum subjects. The patients reported complete remission (11.54%), marked improvement (15.38%), moderate improvement (57.69%) and mild improvement (11.54%) in group having oral treatment, while in other group none of the patients got complete remission. 8.69% patients showed marked improvement, 69.56% moderate improvement and 21.74% showed mild improvement. Overall assessment suggests that improvement was better in group having oral therapy. Majority of the registered patients in this group were of less chronicity, younger age and with mild symptoms. This also may be cause for the significant results. Osteoarthritis is a degenerative inflammatory disorder, where joint inflammation initially causes pain (*Sandhishula*) and later swelling (*Sandhishotha*). Due to pain and swelling, the mobility of joints is restricted (*Stambha*), and on movement results in excruciating pain (*Prasarana Akunchanayoho Vedana*), which becomes unbearable even on mild

touch in the form of tenderness (*Sparsha Asahyata*). The degenerative changes later result in manifestation of crepitus (*Aandhisphutana*). *Sandhigata Vata* and Osteoarthritis are quite similar diseases found in clinical practice in which the etiopathogenesis and symptoms overlaps. *Shallaki* possesses *Tikta* (bitter), *Madhura* (sweet) and *Kashaya* (astringent) *Rasa* (taste), *Guna* (quality) of *Shallaki* is *Ruksha* (dry), *Laghu* (light) and *Tikshna*, *Vipaka* (post-digestive effect) is *Katu* (pungent), whereas *Virya* (strength or effect) is *Ushna*. The *Doshakarma* is *Kapha-pitta Shamaka*. According to classics, *Shallaki* has potent *Vata Kaphahara* properties. The key constituents of *Shallaki* are volatile oil (4-8%), acid resin (56-65%) and gum (20-36%). The triterpenoids are the active constituents and are collectively called boswellic acids. The gum resin of *B. serrata* usually contains 43% boswellic acids, which contain a combination of six major constituents, mainly 3 acetyl, 11 keto, boswellic acids (AKBA), which help to preserve the structural integrity of joint cartilage and maintain a healthy immune mediator cascade at a cellular level, which is active against pain and inflammation by inhibiting leukotriene synthesis.

Specifically, it inhibits the activity of the enzyme 5 lipoxygenase through a non-redox reaction in Osteoarthritis. In that study, improvement was seen in the chief complaints, *Sandhi Shula*, *Sandhi Shotha*, *Akunchana Prasaranayoh Vedana*, *Stambha*, *Sandhi Sphutana* and *Sparsha Asahyata*, due to *Shothahara* and *Vedanasthapana* properties of *Shallaki*. The main site of *Sandhivata* is *Sandhi* which is the site of *Shleshaka Kapha*. Due to its *Tikta Rasa*, *Katu Vipaka* and *Ushna Virya*, *Shallaki* pesifies vitiated *Kapha* and *Vatadosha*, resulting in reduction of *Shotha*, *Shula* and other related symptoms. The pacified *Vata* in the *sandhi* helps to rearrange *Shleshaka Kapha* and thereby improves the symptoms of *Sandhivata*. *Shallaki* possesses analgesic and antiarthritic properties, which are responsible for its analgesic and anti-inflammatory activities. It also acts as COX-2 inhibitor and reduces the pain and inflammation without affecting the gastric mucosa. It soothes the joints and also helps treat levels of synovial fluid, making the entire structure lubricated and easy to rotate or to move. Symptoms of *Vata Vriddhi* improved due to *Shallaki* as it has *Ushna Virya*, and according to some classics, due to *Tikshna Guna*, it acts as *Vata*

Shamak. Shallaki. Also increases *Dhatvagni* by its *Tikta rasa*, leading to proper nutrition of *Dhatu*s, whereas improvement of the symptoms of *Vata Kshaya* is due to *Rasayana* (immunomodulator) and *Bruhaniya Prabhava* of *Shallaki*. The symptoms of *pitta Vriddhi* improved due to *Tikta, Kashaya, Madhura Rasa* and *Snigdha Guna*, and *Pitta Shamaka* activity, while improvement in the symptoms of *Pitta Kshaya* was reported due to *Ushna Virya* and *Katu vipaka*. The *Kapha Vriddhi* symptoms improved by its *Tikta Rasa, Snigdha* and *Laghu Guna, Ushna Virya* and *Katu Vipaka*, consequently it pacifies *Kapha. Shallaki* having *Tikshna Guna* and *Katu Vipaka*, acts against increased *Kapha* and improves the symptoms of *Kapha Kshaya*. The symptoms of *Rasavaha Strotasa* such as *Gaurava* and *Angamarda* improved due to its *Tikta Rasa* and *Ushna Virya*, whereas the symptoms of *Medovaha Strotasa*, i.e., *Kara Padayoh Suptata Daha, Alasya* and *Suptatachaangeshu* (numbness of body parts) improved due to its *Snigdha, Laghu Guna* and *Ushna Virya*, it also reduces *Medas*. The symptoms of *Asthivaha Strotasa* and *Majjavaha Strotasa* improved due to *Tikta Rasa* and *Katu Vipaka*, as they

counteract the pathogenic process of *Sandhivata*. The main site of *Sandhivata* is *Sandhis* which are the site of *Shleshaka Kapha*. By pacifying *Kaphadosha, Tikta rasa* leads to proper nutrition of the other *Dhatu*s. The improvement in radiological findings such as joint space, subarticular sclerosis, synovial effusion, articular erosion and osteophytes was due to the anti-inflammatory activity of *B. serrata* resin. It soothes the joints and also helps treat levels of synovial fluid, making the entire structure lubricated and easy to rotate or to move. AKBA helps preserve structural integrity of the joint cartilage and maintains a healthy immune mediator cascade at a cellular level. *Shallaki* is mediated through the vascular phenomenon; it improves blood supply to joints and restores integrity of vessels obliterated by spasm of internal damage. Decrease in biochemical parameters, mainly, CRP, serum triglycerides and erythrocyte sedimentation rate (ESR), is due to anti-inflammatory activity. Like other age related symptoms, excess free radical production and free radical induced damage may be a key cause of Osteoarthritis. Chronic pain, joint instability, gait difficulties and deformities

disturb daily activities of the patient, and consequently the quality of life is impaired. This chronic pathological process in turn affects mental health resulting in stress, depression etc².

In one of the study of Clinical effect of *Nirgundi Patra pinda sweda* and *Ashwagandhadi Guggulu Yoga* in the management of *Sandhigata Vata* (Osteoarthritis), the maximum number of patients, 25.86% belongs to the 50-60 years age group, 63.79% were female, 100% were having a gradual onset, and 56.03% had chronicity up to one year. In this study, 56.03% had a positive past history, 69.83% had a negative family history, 85.34% had a *Katu Rasa*-dominant diet, and 34.48% had *Adhyashana*; 49.14% of the patients were doing light exercise in their routine life, 37.07% had tension, and 58.11% were having menopause. All the patients had *Dwandwaja Prakruti*, with a maximum number of patients, that is, 51.72% having *Vata-Kapha Prakruti* and 28.45% having *Vata-Pitta Prakruti*; 68.97% had *Rajasika* type of *Manasa Prakruti*. In *Aharaja Nidana*, a maximum number of patients, that is, 69.83% had *Asatmya Ahara*, 63.79% had *Ati Katvadi Rasa Sevana*, and 62.07% had *Ati Ruksha Ahara*. In *Viharaja*

Nidana, a maximum number of patients, that is, 49.14% had *Ati Cheshta*, 39.66% had *Vegavidharana*, 36.21% had *Ati Ratrijagrana*, and 32.76% had *Ati Vata Atap Sevana*. In *Manasika Nidana*, a majority of the patients, that is, 41.38% had *Chinta* and 12.93% had *Ati Krodha*. Considering the risk factors, 83.62% had repetitive stress, of whom 63.69% were females, 42.24% had psychological stress, it was hereditary in 25.00%, and 22.41% had obesity. With regard to cardinal symptoms, 100% of the patients had *Sandhishula*, 96.55% had *Sandhigraha* and *Akunchana Prasaranajanya Vedana*, 87.93% had *Sandhishotha*, 86.21% had *Sandhisphutana*, and 55.17% had *Sparsha Sahyata*. All the patients (100%) were found to have knee joint involvement and only 4.31% had ankle joint involvement. *Sandhigata Vata* is one of the *Vatavyadhi* described in all the *Samhita* and *Sangraha Granthas*. *Acharya Charaka* was the first to describe the disease separately with the name of '*Sandhigata Anila*' under the chapter of *Vata Vyadhi*. There is no direct reference regarding *Nidana* and *Samprapti* of *Sandhivata*. A statistically significant result was found in both the groups, but on the basis of percentage and relief in signs and

symptoms, it was obvious that the overall effect on the patients in trail group was better in comparison control group. No significant change in the laboratory investigation was observed in both groups after treatment. The X-ray finding of degenerative changes remained unchanged. The results would have been better if the therapy had continued for a longer duration. Along with this, if exercises were added to the treatment, it could help in improving the joint function. *Abhyanga karma* was *Snehana*, *Kledakara*, *Jarahara*, *Paushtika*, and *Kapha-Vata Nirodhana*. *Sneha* was used for *Abhyang*, which reached *Mamsa*, *Meda*, *Asthi*, *Majja* and so on. *Dhatu* provided nourishment to them. Massage gave strength to the muscles, relaxed the stiff muscles, and increased the blood flow and metabolism. After *Abhyanga Patra Pinda Sweda* was applied, it decreased the *Stambha*. It released pain, relaxed the muscles, activated the local metabolic process, increased local blood flow, and thus increased the absorption of *Sneha* through the skin. After administration of *Swedana*, it might produce a hypo analgesic effect by diverted stimuli. In the *Sandhivata Sanga* type of *Srotodusti* is present and by doing *Swedana* this *Sanga* is relived and *shaman*

of *Sandhivata*. *Ashwagandhadi Guggulu Yoga* is a polyherbal formulation. The contents of *Ashwagandhadi Guggulu Yoga* are *Ashwagandha*, *Rasna*, *Chopachini*, *Pippalimula*, *Shuddha Kupilu*, *Nirgundi*, *Shallaki* and *Guggulu*. Most of the drugs of this yoga have *Ushna Virya*, *Vata Kapha Shamaka*, *Vedanasthapana*, *Shothahara*, *Deepana*, *Anulomana*, *Balya* and *Sandhaniya* properties. Its pharmacological activities include anti-inflammatory, analgesic, anti-oxidant, immunostimulant and so on. By these properties, this drug is beneficial for the Shamana of *Sandhigata vata*³.

Another study of a comparative study of *Rasona Rasnadi Ghanavati* and *Simhanada Guggulu* on *Amavata* with special reference to Rheumatoid arthritis. The disease *Amavata* is produced by the *Tridosha*, though *Ama* and *Vata* are the initiating factors for its pathogenesis. *Viruddha-Ahara Sevana* and doing moderate to severe exercise after meal were found as prominent etiological/ promoting factors in majority of patients. Better results were observed in *Sandhishula*, *Sandhigraha* and *Sparsha Asahatva* in *Ghanavati* group. This may be due to the *Vata-Kaphashamaka* properties and *Ushna Tikshna Guna* of the drugs. On

Dehabala, *Agnibala* and *Chetasbala* associated symptoms, both the groups provided statistically highly significant results. No side effects of the research drugs were observed during the clinical study. Lastly, it can be concluded that both the groups show significant results; however with respect to complete remission rate, therapy of first group was more effective than second group in the management of *Amavata*. *Rasona Rasnadi Ghanavati* has 10 ingredients. Most of the drugs have *Katu Tikta Rasa*, *Ushna Virya*, *Rasayana*, *Amapachaka* and *Vatashamaka* properties, which help to disrupt the pathogenesis cycle of *Amavata*. The properties of each of the 10 ingredients is as follows,

- Nirgundi has Shula and Shothahar Prabhava,
- Lahsuna has Medhya, hypolipidemic and Rasayana,
- Rasna has Shula and Shothahara,
- Shunthi has Amapachaka and Rasayana,
- Guduchi has Rasayana and immunomodulatory properties,
- Amaltas is Mrudu-Virechak and Kusthaghna Rasayana,
- Punarnava acts as haematinic and Shothahara and liver protective,

- Gokshura is liver protective and Shothahara,
- Eranda is Shula Shothahara and Rasayana,
- Devadaru has Amapachaka and Shothahara Prabhava

Each drug has unique properties which help to minimize the symptoms and destroy the Samprapti. Also, they help to develop the immune power, helping the patients to regain the Dehabala and lustre. Tikta and Katu Rasa present in *Rasona Rasnadi Ghanavati* possess antagonistic properties to Ama and Kapha which are the chief causative factors in this disease. Because of their Agnivridhikar property, they improve the digestive power. Thus, Amarasa is digested and excessive production of Kapha is reduced which in turn removes the obstruction of the Strotasa. Because of Tikshna Guna and Ushna Virya it also alleviates vitiated Vata. The Tikshna and Ushna properties of *Rasona Rasnadi Ghanavati* do not allow the Ama to linger at the site of pathogenesis; thus reducing Strotorodha and pain. It also possesses antagonistic actions to Shita and Ruksha Guna of Vata. Thus, *Rasona Rasnadi Ghanavati* controls Ama and Vata together and inhibits the pathogenesis of RA. *Rasona*

Rasnadi Ghanavati has anti-oxidant properties which neutralize the Ama (Free radical like substance) by scavenger action and Rasayana effect. The Rasayana drug activates cellular metabolism, modulates the immune system and increases and activates body's own antioxidants and radical scavengers. On another hand, the Simhanada Guggulu has ingredients which have Ushna Virya, Katu Vipaka, Ruksha and Snigdha Guna properties, along with drugs such as Triphala, Gandhaka, Guggulu and Eranda Taila which have has Rasayana effects. The properties of its other ingredients are as follows,

- Triphala is Rasayana, Mridu-Virechaka, antioxidant,
- Guggulu has Shulahara, Shothahara, Rasayana properties,
- Gandhaka is Kushthaghna Rasayana,
- Eranda oil is Vaatanuloman, Vrishya Rasayana

Among these, Triphala and Guggulu have proved anti-oxidant properties. In the first stage of disease pathogenesis, Amotpatti takes place. At this stage, Simhanada Guggulu shows Amapachana as all the general pharmacodynamics properties of Simhanada Guggulu, i.e., Laghu, Tikshna, Ruksha Guna, Katu, Tikta Rasa, and Ushna

Virya are against the Guru, Snigdha, Picchila and Shita properties of Ama. Also, Simhanada Guggulu has some anti-oxidant properties which act against Ama. Later, Yugapata Prakopa of Doshas is checked by Vata-Kaphahara action of drugs. Further, Ama formation is stopped by the Deepneeya Karma. In the Strotoabhishyanda, it shows Strotoshodhana and relieves the symptoms of Sandhishula, Shotha, Aalsya and Aruchi by its analgesic and anti-inflammatory action. Also associated symptoms like Vibandha and Anaha are reduced by Anulomana, i.e., purgative properties of the drug due to Eranda Taila and Triphala. Most of the drugs are Vata-Kapaha Shamaka and Agnivardhaka, so it is very suitable for the Samprapti Vighatana of the disease and to combat the main culprits of Vata, Kapha (Ama) and Mandagni, the root causes of Amavata. The Lepa acts through dilution of the accumulated toxins and increasing the peripheral vascularization. On the other hand, it inhibits the synthesis and release of acetylcholine in the inflamed joints. This effect of lepa can be attributed to the Shothahara and Shulahara (anti-inflammatory) properties of majority of the drugs. Most of the drugs of Rasona Rasnadi Lepa have Laghu, Tikshana, Ruksha Guna,

Katu, Tikta Rasa, and Ushna Virya properties, all of which act against Ama. It first relieves the Pratyatma Lakshana of Amavata locally. When we use the Rasona Rasnadi lepalocally, it produces the local counter irritant effect and dilutes the accumulated Doshas. It also absorbs the Doshas by Ushna Tikshna Guna, which leads to Shamana of viatiated Ama and Vata. Hence, it can be concluded that the local application of Rasona Rasnadi lepa with the medical intervention is very beneficial against the symptoms of Amavata⁴.

In Use of Dashamula in Cervical Spondylosis, Dashamula can be employed as main line internal medication, which may have potential to check underlying pathophysiology along with clinical symptoms simultaneously. Cervical spondylosis is a degenerative disease, which generally occurs due to degeneration of intervertebral disc leading to further consequences. In ancient literature of Ayurveda there is no exact clinical entity mentioned as cervical spondylosis, however in present era in work of various scholars it had been correlated to Asthigata Vata, Greeva Hundanam, reeva ikara, etc. having one thing common that all are

associated with Vata Dosha as main vitiated entity underlying the pathogenesis of the disease. Therefore, pacifying the vitiated Vata Dosha; Dashamula is one of the best drug having property of Shothahara (reducing inflammation) and Shirahshulahara (reducing headache). In present era, no absolute pharmacological treatment for cervical spondylosis is available. Pain killers like NSAIDS and steroids are used for symptomatic relief along with antidepressants. Search of drugs acting on underlying pathogenesis i.e., degeneration of intervertebral disc is the need of time. Drugs like fullerol are being under trial, which is proposed to prevent degenerative changes of intervertebral disc due to its antioxidant and anti-inflammatory activity. Dashamula is a polyherbral drug is being used in inflammatory and painful conditions since inception of Ayurveda. Recent researches also justifies the ancient theory that Dashamula do have antioxidant, along with analgesic and anti-inflammatory activity even it was found that the analgesic effect of Dashamula is found comparable to that of diclofenac at high dose. There are different dosage form of Dashamula are used in Ayurveda like Kwatha, Arishtha, Churna, Tailaam, Gritham, out of which

Kwatha and Aristha form are said to have superior antioxidant and anti-inflammatory potential in comparison to other dosage form. The toxicity study of Dashamula had shown it has lesser toxic effects. The pharmacological management of degenerative disease like cervical spondylosis should consist of drugs having tendency to check the pathophysiology i.e. the degenerative process along with the properties to subside the clinical symptoms. Dashamula fits in this criteria as it possess antioxidant properties which can check the degenerative changes along with this it also has the analgesic and anti-inflammatory property, which can check the clinical symptoms⁵.

In Management of Amavata w.s.r.to Rheumatoid Arthritis, formation of Ama & vitiation of Vata takes place simultaneously and affects the Sandhis, which is Madhyama Roga Marga. Chronicity makes this disease difficult for the treatment. As Jambeera Pottali Sweda is a Ruksha Churna Pinda Sweda, it is highly useful in the treatment of Ama present in Sandhis. Its Amla, Lavana, Ushna palliates Vata whereas Ruksha, Ushna, Tikshna, Katu palliates Ama. While treating Ama through Pinda Sweda, palliation & prevention of further

aggravation of Vata can be achieved through Nitya Virechana by Eranda Taila. Classics appreciate the role of 'Eranda Taila' in the treatment of Amavata. As Ama dominates here Shunti Kashaya is selected as Anupana for Eranda Taila. Maximum of 1 month administration of Eranda Taila is permitted in classics in the treatment of other vatavyadhis¹⁰. So, it was administered for 10days. Marked improvement was observed in 20% of patients and 66.66% of patients showed moderate improvement. Minor improvement was observed in 10% of patients. As this combination of Eranda Taila Nitya Virechana and Jambeera Pottali Sweda treatments has shown good results, it can be effectively adopted in patients of Amavata when Ama features dominate⁶.

In another study of efficacy & safety evaluation of Ayurvedic treatment (Ashwagandha powder & Sidha Makardhvaja) in rheumatoid arthritis, patients significant improvements were observed in patients' tender joint counts, swollen joint counts, ESRs, physician's rating of disease activity, physical function and pain. Findings demonstrated the potential efficacy and safety of Ashwagandha (3 wk) and Sidha Makardhvaja (4 wk) in the treatment of

rheumatoid arthritis. For the ACR20 response, there was a moderate improvement while ACR50 and ACR70 responses were not observed. In agreement with earlier reports, Ashwagandha and Sidha Makardhvaja were found to be effective and safe treatment for patients with rheumatoid arthritis. Seven weeks after starting Ayurvedic treatment, mean DAS28 scores significantly decreased in male and female patients. Only 39.74 % of the patients were EULAR responders (moderate). The results of the study were in concordance with several studies on Ayurvedic treatment⁷.

OBSERVATIONS AND RESULTS

This review studies indicate that the Ayurvedic remedies possess anti-inflammatory property. It also appears to exert a positive influence not only on inflammation but also exerts a positive effects on pain, stiffness and limited range of movement of joints. Toxicity studies reveal that this ayurvedic herbs appears to be safe compound to use which not has any adverse effects.

DISCUSSION AND

CONCLUSION

The results of the present study show that the Ayurvedic formulation possesses significant anti-inflammatory, anti-arthritis and analgesic activities in all the clinical trials indicating inhibition of all phases of inflammation. The results of research articles are very encouraging & indicate that this herbal remedies should be studied more extensively to confirm these results & reveal other potential therapeutic effects. Clinical trials using this remedies for a variety of conditions should also be conducted in future for better assessment of Ayurvedic Siddhanta (basic principles). Shotha due to arthritis is commonly found mostly in menopausal females. The present review study reveals that Ayurveda treatment provided highly significant relief in Shotha due to arthritis. This also shows the importance of manual therapies, shows the stable efficacy of the treatment. It is noticed that relief of symptoms has been found in spite of stopping NSAIDs in the patients. Shotha due to arthritis is Yapya (manageable) in nature, so repetitive use of this therapy is needed. Ayurvedic therapy is definitely safe and effective in the management of Shotha due to arthritis.

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