

Integrated Approaches in Treatment of Rheumatoid Arthritis in Perspective of Panchakarma and Physiotherapy-A Critical Review

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ABSTRACT

Rheumatoid arthritis is a chronic painful inflammatory autoimmune disorder and with progression of disease causes the inflamed synovium to invade and damage the cartilages and bones of joints in turn leads to deterioration in quality of life and shortened life expectancy. Here, the symptoms may be either intermittent or progressive in RA patients. The main moto of RA management is to get pain relief, prevention of joint damage and functional loss. In Ayurveda, RA is correlated to Ama vata based on the symptoms produced in RA. Panchakarma is an effective therapy in managing musculo skeletal disorders. Due to alpaagni, apaaka of rasa dhatu occurs and got accumulated in amasaya produces ama leads to Amavata. Panchakarma is the best treatment to bring back Agni to normalcy by digesting *Ama*, and eliminate out vitiated doshas. Among Panchakarma procedures swedana, virechana, snehapana and kshara basti are told as treatment modes. Also, physiotherapy and rehabilitation application significantly augments the medical therapy by improving the RA management there by reducing the difficulties faced by RA patients for doing their routine activities. The modalities of physiotherapy such as cold/heat application, electrical stimulation, hydrotherapy and rehabilitation treatment techniques such as joint protection strategies, massage, exercise patient education are used after assessing patient's physical state. Amavata is a challenging disease for the doctors due to its features. So, Panchakarma along with physiotherapy will provide a greater relief from RA afflictions.

KEYWORDS: Rheumatoid arthritis, Ayurveda, Panchakarma, Physiotherapy, Amavata

SCOPE OF FUTURE RESEARCH:

RA is such a disorder which cause misery to the life of a person by hampering the indulgence in doing the day to day activities which is characterized by joint inflammation, which causes swelling, redness, pain and loss of function¹. It is a chronic inflammatory disease that may affects various systemic tissues and organs which includes skin, blood vessels, heart, lungs and muscles but basically attacks the joints producing a non-suppurative proliferative synovitis that often progress to destruction of the articular cartilage and ankylosis of the joints². Community prevalence study shows that the ratio of occurrence between female and male is 3:1. The onset of disease is more frequent during the 4th and 5th decade of life with 80% the patients developing the disease between age group of 35-50 years².

So we should find a solution for the difficulties which produced by this disease in the life of a person to a maximum extent. So, studies should be conducted in more advance manner to get rid from this and also cost effective as currently there is no permanent cure for RA. So, more studies are essential for this as autoimmune diseases are very dreadful in nature and once if the deformity is manifested it becomes permanent. so, we need a permanent solution for destruction of this from the very initial stage of

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its manifestation itself which reverse its pathology. As Panchakarma and physiotherapy are very safe and effective in this mode of disease as Shodhana done by means of Panchakarma after Deepana and Pachana will helps to irradiate the free radical or Ama thereby decreasing the difficulties caused by the Dosha vitiation in amavata/RA and physiotherapy help to improve the weakness of joints, its mobility, muscular stiffness etc gently, gradually and smoothly there by helping the patient in achieving success over the diseases both physically and mentally there by increasing the quality of life. Also physiotherapists helps to pre-diagnose the signs and symptoms of RA and also helps to find out the secondary disease manifestation associated with RA so that it help to arrest the progression of diseases in advance. So, more advance studies should be conducted for this disease by integrating Panchakarma and physiotherapy which may help to find out a reliable solution for a greater extend without causing side effect.

RESEARCH OUTCOMES FOR INDUSTRY / COMMUNITY / GOVERNMENT:

Now a days, people are facing unbearable pain and mental depression due to the effect produced by RA manifestation in their body. So, people are becoming physically as well as

emotionally weak which in turn further vitiates the condition as it is a psychosomatic autoimmune disorder. Here, by doing this research, we will get a positive result by improving quality of patient's life without having any adverse effect as well as studies shows that there is drastic improvement in the quality of physical as well as mental status of the patients. So, undergoing researches by this means will help to improve enthusiasm in people with RA as currently no permanent cure is found out for RA treatment and also in allopathy, only steroidal injections and pain killers are available for an instant relief and which will further cause more impairment in the health status of people there by creating a new disease or secondary disease manifestation as a part of this. So, here continuous monitoring of the changes occurring as a result of supportive measures given by panchakarma and physiotherapy helps to assess the day to day fluctuation in the disease pattern and found the improvement from diseased state to health. So, it is found that, this measures will provide economically as well as reliably good status for the community, and also will help in industrial as well as government level also as a good health of physique as well as mind is essential for the achievement of the purusharthas i.e; the basic aim of life according to Ayurveda such as dharma, artha, kama and moksha. For a better community, better health should be there, then only there will be correct upgradation of government as well as industry is possible.

INTRODUCTION:

Rheumatoid arthritis is a chronic inflammatory painful disorder of unknown etiology with bilaterally symmetrical polyarthritis which affects the fingers and toes with bony erosion, disability and deformity. It primarily involves the synovial membrane and periarticular tissues of the joints where synovium becomes inflamed causing warmth, redness, swelling and pain. As the disease progresses, the inflamed synovium invades and damages the cartilages and bones of the joints. The potential of the synovial inflammation to cause cartilage destruction is the hallmark of the disease³. RA affects 1% of population worldwide, affecting women two to four times more often than men⁴. As RA is an autoimmune disease, so here, the self-tolerance of immune system breaks down and immune system fails to recognize self-antigens and mounts a misguided attack against them thinking that the body's immune factors as enemies. The symptoms usually starts gradually with fatigue, morning stiffness (lasting more than one hour), widespread muscle aches, loss of appetite, and weakness followed by joint pain. When the patient denied to use the joints then, it can become warm, stiff and tender in nature. When synovium (joint lining) becomes inflamed, it gives off more fluid leads to swollen joints. Joint pain is mainly felt on both sides of the body, and which affects the wrist, knees, elbows, fingers, toes, ankle or neck. The concept of autoimmunity is well-explained under the concept of *Ama*, an intermediate product generated due to the deranged metabolism of digestive fire triggering a chronic inflammatory process in the body. So, RA can be correlated to *Ama vata* to a greater extent based on the symptoms present as it is an *Ama dosha janya vata vikara*. Currently there is no permanent cure for RA and therefore, patients are subjected to various life-long treatment modalities like Panchakarma and physiotherapy. Both works as supportive treatment in reduction of symptoms of RA. Ayurveda advises undergoing specific Panchakarma according to season to purify the body, relax

the mind, improves the digestion and metabolism. Here, panchakarma procedures like swedana, virechana after snehapana and kshara basti are explained as treatment modalities by acharyas. Also, the main motto of physiotherapy and rehabilitation applications in patients with RA are to prevent disability, to increase functional capacity, helps in pain relief, and to provide education to patient⁵. These modalities will help in the rapid recovery and also are safe without any side effects there by helping in the betterment of functioning of body parts.

REVIEW OF LITERATURE:

Historical review:

Ayurveda is considered as upaveda of atharva veda. In Vedas, there is no direct reference of *Amavata*. A few references related to joint disorders are identified in *Atharvaveda* in the name of *vishakanda*, which means disorganised joints.

The disease *Amavata* is available from the period of Charaka as a reference in various treatment contexts. Charaka does not describe *Amavata* as an independent disease instead he describes about *ama* and *ama pradoshaja vikaras* and lists the following predisposing factors of rheumatism. He describes while explaining *avarana chikitsa* of *vata vyadhi*, in lines of *pramehahara* and *medohara vidhi*, treatment for *Amavata* can be seen. Also here he explained *avarana* of *vata* by *ama* as *Amavata* and mention it as a symptom⁶.

However, by Madhavakara (900 AD) who devoted a full chapter (25th) of *Amavata* in his famous treatise *Madhava Nidanam* described *Amavata* as a separate disease entity for the first time in detail dealing with the etio-pathogenesis of the disease in a systematic manner besides the signs, symptoms, complications and prognosis.

Disease review:

Rheumatoid arthritis is an autoimmune disease occurs mainly in age group of 20-40 years. It is having gradual and insidious onset. Cardinal features involves morning stiffness, involvement of larger joints, swelling of 3 or more joints, pain, stiffness and symmetrical swelling of peripheral joints, mild fever, presence of serum RA factor in blood.

It is correlated to *Amavata* in Ayurveda based on the similarity of symptoms and but in this case, presence of serum RA factor may or may not be seen. *Amavata* is a *rasavaha srotajanya vikara* occurs as a result of *agni dushti*, *amotpathi* and *sandhi vikruti*. *Amavata* develops as a result of prakopa of *ama dosha* as well as *vata dosha*.

PANCHAKARMA TREATMENT FOR RA:

1. Swedana:

The use of swedana therapy in *Amavata* and in other rheumatic diseases is well mentioned in Ayurvedic classics. *Snehana* is contraindicated in *ama vikaras* as it triggers the condition. For managing rheumatic conditions, *Ruksha sweda* has been advised in the form of *valuka pottali*, *churna panda sweda*, etc, due to the presence of *Ama*. In chronic stage, if *Rukshata* is increased, then *snigdha Sweda* can be adopted. Swedana can be specially indicated in the presence of *sthambha*, *gaurava* and *shula*⁷, which is present as the predominant features of *Amavata*. *Ushna jalapana*, a kind of internal swedana is also indicated here, which acts as *Deepana*, *pachana*, *jwaraghna*, *srotoshodhaka*⁸ etc.. Swedana

also helps in dravikarana of Doshas and make them to move from shakha to kostha so that they can be eliminated by shodhana therapy. Swedana helps in sroto shuddhi and thus results in movement of Dosas from the shakha to kostha. In addition this, it can also given in sthambha, sita, Gaurava, jadya, and sula which constitutes the features of Amavata.⁷

2. Virechana:

Virechana, which is the best mode of treatment line for pitta dosha, yet it is also effective in the vitiated kapha and Vata dosha to some extent. So in this way it is also a better line of treatment in this condition. For treatment of RA, after langhana therapy, swedana and Tiktha, katu, Deepana dravyas are given for the attainment of nirama doshaavastha there by preparing body for shodhana. Generally vamana precedes virechana but in Amavata, the patients are subjected to virechana therapy due to following factors: a) Avarana of pitta sthana by kledaka kapha will results in ama production, thus hampering the digestive activity of the pachaka pitta. So, here virechana helps in two ways, ie; 1) It removes the kledaka kapha avarana, 2) It is the most suitable therapy for sthanika pitta dosha. b) Symptoms of Amavata are indicated of pratiloma gati of vata ie; like Anaha, vibandha, Antrakujana, kukshishula etc. which can be best controlled by virechana, where as vamana causes aggravation of these features.

3. Snehapana:

After adopting above therapies, the patient should be subjected to samana snehana because of following points:

- The shodhana which is adopted produce dhatu rukshata in patient which in turn results in vata prakopa and further aggravates the disease. So, by snehapana it can be prevented to the best.
- Due to the nature of the disease and therapy adopted, the bala of patient got decreased itself which can be effectively controlled by sneha administration⁹. Moreover, it also helps to kindle the agni¹⁰.
- Snehapana also has indicated in cases of Asthi majagata vata as presence of these dhatus are quite evident in Amavata¹¹ as snehana mitigates the vitiated vata due to its inherent vata anulomana action, it is strongly indicated in Amavata, if there is predominance of vata dosha is found in its nirama stage. However the patients of Amavata are prompt to develop digestive defects. So, sneha is best to administer after medicating with Deepana and Pachana Dravyas.

4. Basti:

Basti is the specific line of treatment for vataja vikaras¹². It is known that vata is the main dosha which is having predominant influence on the trividha roga margas namely the sakha, kostha and marma. Also, vayu is responsible for the formation, communication and spread of tridosha, trimala and saptha dhatus in the body. So, for vata dosha, basti is considered as artha chikitsa. In Amavata, both Anuvasana as well as Asthapana Basti can be given based on the condition. Anuvasana basti removes the dryness of body caused by the Amahara treatment modality, that eliminates vata dosha, maintains the functions of Agni and nourishes the body. Niruha basti eliminates Doshas which comes to the kostha by langhana, swedana and other therapies. In addition to this, generally Basti produces local effects also by removing Anaha, Antrakujana, vibandha etc. For anuvasana and ksharabasti for asthapana, saindhavadi taila is advised.

PHYSIOTHERAPY FOR RA:

By means of physiotherapy and rehabilitation methods, we can improve the management of RA and also helps the patient in the reduction of difficulties faced by them in day to day life. Before planning the treatment, we have to examine the patient thoroughly for following factors- functional assessment, range of motion of joints, muscle strength test, postural assessment, and evaluation of respiratory function. The treatment includes:

1. Cold / heat applications:

For arthritis treatment, these are the most common modalities adopted. Here, cold application is mostly used in acute stages and hot is used in chronic stages. By using hot modalities, analgesic effect is produced, muscle spasm is relieved, and elasticity of peri-articular structures are obtained. Before exercise, heat is applied to get maximum benefits. Superficial hot pads, IR radiation, Paraffin wax bath, Fluidotherapy, are some of the thermotherapy used for application. Cold application is preferred in active joints where intra-articular heat increase is not suitable. The different methods of applying cold therapy are Cold pack, ice, nitrogen spray, and cryotherapy.

2. Electrical stimulation:

It is used to relieve pain in RA patients. TENS (Transcutaneous Electrical Nerve Stimulation) is used commonly and is highly beneficial that its analgesic effect persists up to 18 hours and cause reduction of synovial fluid and inflammatory exudates in acute arthritis. TENS is generally a short acting therapy and also has high placebo effect. But we can't use it in poly arthritic condition. IFT can also be used to get analgesic effect.

3. Hydrotherapy:

The objective of this therapy is to increase range of motion, to strengthen muscle, relieve painful muscle spasm, and to improve well being of patient. Its effect is associated with hot water along with minerals present in it. It helps in muscle, tendon and ligament relaxation, also in case of muscle weakness and widespread painful joint inflammation, this action allows the patient to perform their exercise programmes.

4. Rehabilitative treatment:

It includes joint protection strategies such as rest and splinting using compressive gloves, assistive devices, and adaptive equipments have a great role in management of RA symptoms and deformities, and helps in prevention of joint stress and stiffness.

5. Massage therapy:

It is commonly used therapy to improve flexibility, improves general well being, and help to diminish swelling of inflamed joints. It also help to reduce stress hormone level. Hence, it works as a supportive aid for RA patients.

6. Therapeutic exercises:

In RA patients, muscle weakness occurs due to immobilization/ reduction in activities of daily living. It helps to increase the physical capacity of the patient. Before establishing the therapy, factors like age of patient, systemic/ local involvement of joints, stage of disease, compliance of the patient with the therapy should be considered. The components of exercise therapy are range of

motion (ROM) exercises, stretching, strengthening, aerobic conditioning exercises, and routine daily activities. For acute arthritis, no straining exercises should be adopted. ROM exercise should be done to avoid contractures after assessing the patient's condition.

7. Patient education:

In RA patients, socio-psychological factors affecting the disease process such as poor social relations, disturbance of communications with environment, unhappiness and depression at work are commonly seen. This will help to educate the patient in a better way about the merits and demerits of drug therapy, importance of physiotherapy, self relaxation techniques etc which will help the people to get a strong mental as well as physical wellbeing.

MATERIAL AND METHODS:

Literature was reviewed from various Ayurvedic classics like Charaka samhita, madhava nidhana, etc, various Ayurvedic journals and articles and modern text books of physiotherapy- all informations are compiled, & discussed. In the ayurvedic treatment, includes oral medications, Panchakarma treatments, yogas, etc is given to improve the physical state of patient. RA can also be treated with physiotherapy by various means like heat/cold modalities, electrotherapy, Hydrotherapy, patient education, exercise therapy, etc

Both Panchakarma and Physiotherapy treatments work at their own prespective individually but the integrated application of both helps in bringing better results in RA patients. Physiotherapy becomes fully effective only when underlying Doshic imbalances are managed with proper Ayurvedic treatment for RA.

DISCUSSION AND RESULTS:

As discussed, RA is an autoimmune disorder and currently there is no permanent cure for RA, we should adopt proper Ayurvedic line of treatment including both oral as well as external mode of applications as mentioned by Acharyas in classics and Physiotherapy for getting better relief from the symptoms and there by achieving proper physical and mental strength to overcome the RA impairments. By adopting Panchakarma treatment along with oral medications, helps in achieving Aamahara, Shoolahara, Sthambhahara and Jwarahara actions against Amavata Lakshana. Also, adoption of physiotherapy along with Panchakaarma treatment found seems to be improving the health and mobility of patient both mentally and physically in better manner. By adopting swedana karma, it liquefies the dosha and make the dosha to move from shakha to koshta and helps in elimination of it. Otherwise, the doshas present causes avarodha of srotas. Generally in all pathological conditions, saama doshas will sticks to various srotases and it should be stimulated to move out from the body through deepana, pachana, snehana and swedana poorva karmas. The principles of physiotherapy also work in same way. Opening of sukshma srotas and thereby increasing blood circulation is the primary objective of heat therapy. Cold/heat therapy will helps in getting analgesic effect and muscle spasm got relaxed. Electrical stimulation will help to relieve the pain. Hydrotherapy helps in increasing range of motion, strengthen muscles, relieve painful muscle spasm, relaxation of muscles, tendons and ligaments, and increases well being of patient. Massage

therapy will helps in increase of flexibility. Rehabilitative treatment will helps in joint protection and therapeutic exercises will helps in decreasing muscle weakness. In certain joint diseases, while treating the pain in rheumatoid arthritis, etc cases as per Ayurveda, patient is advise to take ruksha sweda due to the presence of aama and if taken along with wax bath shows significant results in relieving of pain. Different light therapy like infrared therapy, ultraviolet therapy along with swedana also shows very significant relief in pain symptoms.

CONCLUSION:

Treatment principles used in panchakarma and physiotherapy procedures are same and if it is adopted together will help to get dual effect of both treatments. From the above data it is clear that there is a positive result in the cure of RA disease if integration is done between panchakarma and physiotherapy. Further studies are required to conduct for finding out the integration of panchakarma along with different physiotherapy procedures individually and also to find out the variation in the results of procedures and from that find out the better combinations to be adopted for RA treatment.

CO-RELATION WITH ANCIENT INDIAN LITERATURE:

1. Vedas:

There is no direct reference regarding amavata in vedas. Ayurveda, which is the upaveda of atharva veda mentions only few references regarding joint disorders in the name of vishakhanda¹³.

2. Puranas:

Puranas mentions about the facts regarding sharira. Agni purana mentioned the total number of joints and pathyas for vata rogas which is concerned to joints¹⁴.

3. Brihatrayees:

In brihatrayees also, there is no description regarding amavata. The term amavata has been mentiioned in charaka samhitha to denote the relation of ama with vata.it is mentioned in some therapeutic indication of drug compound, kamsahareetaki¹⁵, vishaladi phanta of pandu chikitsa¹⁶ are described to be effective in amavata.

While mentioning vata vyadhi chikitsa, amavata word is used to denote avarana of vata by ama and also as a symptom¹⁷. In addition to this, description regarding nidana, samprapthi, rupa and chikitsa for amapradosha is found¹⁸. In susrutha samhitha(700-600 BC), Ashtanga Sangraha(400 AD) and Ashtanga Hrudaya (500 AD) only the description of ama is seen.

4. Bhela samhitha:

Here, only the word amashayagata vata is available.

5. Harita samhitha:

Amavata description is found in this treatise.here, 'angavaikalya' is given as lakshana and 'khandashaka' as nidana.treatment for amavata is also available in this.

6. Madhava nidana:

The first description of amavata as an independent disease is explained in Madhava Nidana by Madhavakara.here, clear explanation of nidana, samprapthi, roopa, upadrava, saadhyasadyata is available.

7. Gada nigraha:

Description of amavata and its treatment is mentioned in this treatise. Vikunchana is explained as a lakshana of Amavata.

8. Vangasena:

Amavata description is found in this text. Author mentioned specially 'takra tulya mootra' as amavata lakshana.

9. Vijayarakshitha:

In his Madhukosha commentry on Madhava nidana told sankocha, khanjatwa, etc as the upadrava of amavata.

10. Rasa ratna samuchaya:

Author Rasa Vagbhata has mentioned different yogas for amavata.

11. Sharangadhara samhitha:

Here, description about classification of amavata is available and he suggested the use of 'Naga' in this disease.

12. Basavarajeeya:

Author has explained the 'peetamootratha' as lakshana of amavata.

13. Bhavaprakasha:

Author Bhavamishra has explained Amavata in detail. Indication of eranda beeja is mentioned in this text.

14. Yogaratnakara:

In this text, complete description of Amavata is available. Also, many aushadha yogas are mentioned in this text.

15. Bhaishajya ratnavali:

Author Govindadasa explained nidana and elaborately discussed about various chikitsa also.

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