



ROLE OF AMRITA BHALLATAK RASAYAN IN THE MANAGEMENT OF RHEUMATOID ARTHRITIS

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ABSTRACT

Rheumatoid arthritis is a long-term autoimmune disorder that primarily affects joints. Onset is most frequent during middle age and women are affected 3 times as frequently as men. It typically results in warm, swollen, and painful joints. Pain and stiffness often worsen following rest. Most commonly, the wrist and hands are involved, with the same joints typically involved on both sides of the body. The disease may also affect other parts of the body. Often, symptoms come on gradually over weeks to months. While the cause of rheumatoid arthritis is not clear, it is believed to involve a combination of genetic and

environmental factors. The underlying mechanism involves the body's immune system attacking the joints. This results in inflammation and thickening of the joint capsule. The potential of the synovial inflammation to cause cartilage destruction is the hallmark of the disease. According to Ayurveda it can be correlated with *Amvata*. Predominance of *vata*, *kapha* & *mandagni* along with tridosha dusti was found to play an important role. Maximum doshanubandha found as *vata* & *kapha*. The management of Rheumatoid arthritis includes steroids, NSAIDS etc. which give symptomatically relief to the patient and they may have a greater rate of adverse effects. In Ayurveda, *Bhallatak* is best for *vata kapha* disorder as per Acharya Charaka says, it promotes the “*Agni vyapara*” thus preventing the production of “*Ama*” in the body which is the main culprit in the disease *Amavata*. So the drug “*Amrita Bhallatak*” is selected as a *rasayan yoga*.

KEYWORDS: Rheumatoid Arthritis, *vata*, *kapha* & *mandagni* along with *tridosha dusti*.

INTRODUCTION

Derivation of RA

According to modern medicine the derivation of the word

Rheumatism is derived from the word – “Rheumatimos” a greek word designating ‘mucous’, an evil humour which flows from brain to the joints and other portion of the body, producing pain.

The term “Rheum” also means stiffness.

The term Arthritis derived from – a greek word “arthros” means joint. Arthritis means inflammation of the joint.

Rheumatoid Arthritis (RA) is a systemic disease that primarily causes joint inflammation, pain, loss of function and eventual joint destruction and deformity. The disease is of variable severity ranging from mild inflammation in a few joints to symmetric involvement in multiple joints, mainly in the hands and feet. One of the oldest records of the disease is a brief description in the *Rigveda*, which roughly dates back to 1500 B.C. In the 9th century A.D., Indian physician, Madhava wrote a full description of *Aamavata*. But it was not until 1800 that the disease, described by French physician Augustin Jacob Landré-Beauvais, was recognized in the western world. In 1859, British rheumatologist Alfred Baring Garrod, named the disease RA.

In the last 50 years, extensive research by modern medical scientists has shed light on various pathways of inflammation in RA, but the etiology of the disease is still unknown. New research has revealed various biological agents that block the pathways of inflammation and provide much-needed relief to a significant number of patients. However, these agents are very expensive, require close monitoring, have side-effects, and need to be used indefinitely. Modern medicine has studied the mechanism of inflammation in depth and provides a treatment plan to fight against inflammation. Ayurveda primarily uses a defence strategy in the management of disease. According to the Ayurvedic understanding of pathophysiology of disease, disequilibrium occurs at a higher level of physiology and of the gastrointestinal tract to cause immune response and inflammation.

RA is a systemic connective tissue disorder which affects predominantly the synovial joints. Hence the term ‘rheumatoid arthritis’ RA is a chronic, multisystem disease of unknown etiology. Although there are variety of systemic manifestation, the characteristic features of

RA is persistent inflammatory synovitis, usually involving peripheral joints in symmetric distribution. The potential of the synovial inflammation to cause cartilage destruction is the hallmark of the disease. Amavata in modern medical science, clearly resembles with RA. modern point of view the antigen is taken up by lymphoid tissue and gland of the body where specific serum factors or antibodies formed associated with kapha system of the body. Pathogenesis of RA includes initiating factors, genetic predisposition, the cellular and humoral immune system, complement the neutrophil, macrophages, synovial cell and chondrocyte, cellular enzymes, interleukines, kinines. Connective tissue activating peptides, tissue such as cartilage, synovium and bone, arachidonic acid system and physical and psychological factors. Several lines of evidence point towards aberrant immunological function, which includes infiltration of the synovial tissue by many different cell types of the immune system, (Macrophages, T & B lymphocytes etc.) Hyper gamma globulinaemia and the presence of autoantibodies particularly classical IgM RF. In this mechanism both humoral (B cell or plasma cell) and the cellular (T cell) systems are involved.

‘B’ cell is responsible for antibody formation. The best known antibody involved with RA is so called Rheumatoid factor. This antibody is an antibody to human gammaglobulin that has become antigenic possibly because of the alternation of its tertiary structures by some of the initiating mechanisms. Rasayan enhances the qualities of body elements. Therefore immunity is developed. There are a number of Rasayan formulations beside single drug having effect on immune-system. We already know that immuno-complex in joint space plays the main role in manifestation of the disease. Immuno-complexes could be said to be formed as a result of failure or inadequacy of elimination or neutralization of antigen. Immunologic tolerance breaks down and the body has difficulty in discriminating between its own antigen and for an antigen. The concept of Ama in Ayurveda could well be inclusive of the concept antigen-antibody complexes. So to suppress the abnormal immune response and to increase the general resistance to disease process rasayan may administered.

DISEASE BACKGROUND

In Rheumatoid Arthritis synovium becomes inflamed causing warmth, redness, swelling and pain. As the disease progress the inflamed synovium invades and damages the cartilage and bone of the joint. Surrounding muscles, ligaments and tendons become weakened, and unable to work normally.

Following three process occurs during the pathological disease process in RA.

- (1) Inflammatory synovitis
- (2) Joint damage
- (3) Systemic manifestation of RA

According to Ayurveda RA can be correlated with Amavata.

VATA IN AMAVATA

When the normal physiological process in which vata is produced is impaired & results in the malformation of vata then it is termed as Amavata.

CONCEPT OF SHLESHMA IN AMAVATA

Kapha is likely to be affected in each and every case of Amavata though other two doshas are involved, specially 'shleshaka kapha' is the main concerned factor in the disease amavata.

It is already stated that 'mandagni' is caused with the predominacy of kapha.

The disorder of kapha is the root cause in the genesis of ama. Ama possesses very similar properties with that of kapha (Guna samya), do it has special affinity to act and interact with 'shleshmaka' tissue of the body. The result is cellular and tissue changes specially in the target organs, joints etc. The main site of lesion in Amavata are the various joints of the body which are again the site of shleshaka kapha, obviously the 'shleshamaka kapha' seems to be present in the big joints of the body, surrounded by shleshmadhara kala. But it is not necessary as in addition to bigger joint there are other smaller joint where synovial membrane is absent. But in Ayurvedic classification the joint are of two type, chala and achala and all of them have shleshamaka kapha. 'shlish' means "to embrace" from which the term shleshaka is derived as told before. Thus it refers to the connecting property of the connective tissue distributed throughout the body. In other words this aspect of the '*shleshaka kapha*' may be compared with connective tissue of the body which has got the property to connect. Thus it will be convenient and scientific to locate the site if lesion of *Amavata* in the connective tissue and call it a connective tissue disorder.

DRUG REVIEW

In order to promote wellbeing and long healthy life, to prevent illness and reverse the aging process the ancients developed a holistic and scientific system of medicine called Ayurveda, literally meaning – "the science of life".

1. One of the unique aspect of this system is the programme of rejuvenation and detoxification of our body, thus prevents illness, strengthening the immune-system and promoting the healing in the body tissue.

2. Basically a drug is anything we take that change the way our body normally functions Medicines are drugs used to keep people healthy or restore them to health. There are therapeutic drugs used in medicines to restore health.

According to Ayurveda, there is nothing in the universe which can not be used as a medicine. A toxic drug which is highly tikshna property used along with proper management proves to be an excellent remedy while iatrogenic use of a medicine turns into toxicity. So every drug is a double edged weapon whose proper use can save a life and its improper use may prove fatal.

3. Man is constantly exposed to innumerable challenge for his survival and existence. Side by side nature has bestowed us with countless natural immunomodulators. Since Ayurveda is a holistic and natural system of healing it is only to be expected that the simplest and most common place of items shall be used as ingredients for creating some very-easy to make, but most effective cures for and preventive against day-to-day ailments. Recognising the precious merits of indigenous medicines and reviving its pristine glory the following drug have been sculptured to work as therapeutic tool for the present study.

Selection of drug for chikitsa (samprapti bighatana) depends chiefly on pathological factors (samprapti ghataka), disease itself and cardinal features etc.

Present study aimed to get effective and safe treatment for “Rheumatoid Arthritis” with the help of clinical principles of Ayurveda.

In this study the drug named “*Amrita Bhallataka*” is selected. As “Bhallataka” is a best rasayan when administered in a proper way.

As per Acharya Charak

Bhallatak is tikshna paki like Agni but if administered properly it is useful like “Amrita” hence the drug is named as ‘Amrita Bhallataka’.

Directly or indirectly the immune response of the body plays a major role in the manifestation of the disease “Amavata” (*vyadhi kshamatwa*). Rasayan therapy helps in promotion of health by improving immunity and by restoring oja.

Sushruta and his commentator dalhana used the term “bala” to signify oja and stated “bala” is the power of the body sufficient to resist the disease.

Bhallatak is best for vata kapha disorder as per Acharya Charaka says

“It promotes the “Agni vyapara” thus preventing the production of “Ama” in the body which is the main culprit in the disease Amavata.

So the drug “Amrita Bhallatak” is selected as a rasayan yoga in the present study. The drug also carries *Chedana, deepana, shothaghna and shulaghna* properties. To minimize its toxicological action it is cooked with Dugdha, Ghrita and Sita. With these drugs when processed properly, Bhallatak is remarkable well tolerated. The contents of the drug is being given below.

Drug – Amrita Bhallatak

Contents	Part
Suddha Bhallatak	4
Jala	16
Godugdha	4
Goghrita	1
Sitopala	1

THE PHARMACOLOGICAL ACTION OF BHALLATAK

The chief action of Bhallatak is on amasaya and uttaraguda. Due to its yakrit uttejaka karma bile secretion occurs properly thus acting a good appetizer.

While excrete through skin, sweating occurs.

Due to its vrikka uttejaka karma first urine output increases but then gradually decrease, sometime blood comes in urine.

Due to nadi uttejaka karma, pulse rate increased and heart functions normally.

It increases the WBC count due to action on lymphatic gland and helpful in subsiding inflammation.

Chemical constituent

Part Active principle

Nut kernel - sweet oil in small quantity

Fruit pericarp - bitter & powerful astringent principle

Juice of pericarp - 90% anacardic acid

(Black corrosive) 10% higher non – volatile alcohol (cardol) which contain catechol anacardol and fixed oil.

Vesicating oil- 32p .c soluble in ether and which blackens on exposure to air

Root bark - Acrid, viscid juice.

Crushed seed extract - Fixed oil

a - Monohydroxyl compound

b - Monobasic acid, Diacetyl of Hydrophilawanol

Juice of pericarp - Monohydroxyphenol called semicarpol.

O-dihydroxy compound 40% of the extract called Bhilawanol

A tarry non-volatile corrosive residue.

Toxic symptom

High coloured scanty urine sometime tinged with blood

Irritable and loose bowels with gripping.

Within 12hr the brown oil of the nut raised a black blister, the fluid cause eczematous vesicle on any part of the body. It may come in contact with, Painful micturition.

The urine being reddish brown and bloody and painful stool as a sequel to the external application of the oil.

Treatment

With mild toxic symptom it is often not necessary to stop the drug together, only a reduction of the dose being sufficient. But if there is any great difficulty of micturation or any rashses, Bhallatak should at once be omitted.

Antidote

Albumen of the coconut, sesamam seed & haritaki. Milk juice of the albumen of coconut sweatend to taste is to be drunk in large quantity up to disappearance of the rashses, itchiness

and purgative action.

Externally coconut oil, kasmarda kalka, dhanyak kalka, Vibhitaka majja, arjunapatra kalka, haridra kalka can be applied.

Aromatic spirit of ammonia with demulcent drinks and emollient can applied.

Restriction to be observed while taking the drug

Avoidance of walking in sun

Excess sex.

Probable Action On Cardinal Symptom

Sandhishula

1. Bhallatak- Its katu rasa, ushna veerya digest Ama thus it reduces pain by pacifying chief pathogenic factors i.e. ama.

By virtue of its tikshna guna it corrects the srotasanga and thus eradicate the vitiated vata which is the main cause of shula

2. Ghrita –Its madhura rasa and snigdha guna pacifies vata, the deepan & visaghna properties digests the ama thus ameliorates shula.

Sandhi shotha

Bhallatak – It's vatakaphaghna properties corrects sandhi shotha, deepan, karma, tikshna and ushna guna ameliorates the causative factors of shotha.

Stabdghata – (stiffness)

Bhallatak – By virtue of katu rasa, ushna, veerya, tikshna guna and vatanulomaka properties it removes sandhi graham.

By deepan pachan properties it digests the ama and by chedana, lekhana properties it corrects the srota samga thus removes sandhi stabdghata.

Probable Action On Dusya-

The main dushya involved in Amavata is rasa dhatu, along with asthi, majja, snayu and kandara. The selected drug have jwaraghna and shothghna properties which indicate that those work at level of rasa dhatu.

Bhallatak is a well known rasayan thus the drug having rasayan effect performs sarvadhatushulakarma.

Probable Action As Rasayan

Every rasayan drug acts in the body through rasa, agni srotos. Bhallatak does its rasayan karma by promoting nutrition through improving the Agnivyapara i.e. digestion and metabolism. It promote digestion of food and vitalize the metabolic activity status at the level of dhatus. It acts at the level of agni.

DISCUSSION

The symptoms of RA mentioned in modern medical science resembles with the Amavata. The etiology of RA is uncertain, but it is thought to be multifactorial.

There are several popular theories established regarding the cause. Widely the disease is famous as an auto-immune disorder. The management of Amavata is still in enigma for modern science. Ayurvedic classics provides a clear therapeutic guidelines for the treatment of Amavata. Namely langhana, swedana, Tikta -katu – Deepana drugs, Virechana etc.

The treatment is based on Ama pachana and amelioration of vitiated vata.

As the disease is born out from the vitiated vata and kapha, a shamana yoga which has a definite action on vitiated vata kapha dosha specially as well as an immuno-suppressant action in modern point of view. (RA is an auto – immune disorder in which body's immune response fails to recognize its own antigen & foreign antigen).

Amrita Bhallatak also is a well-known Rasayan, which possess sothahara and shula prashamana qualities and gives desired Rasayan effect. The drug suitably acts on vitiated vata & kapha and produce the ultimate effect.

CONCLUSION

- (1) Amavata in modern medical science, clearly resembles with RA. This comparison is almost undoubtful, but including RA, some other diseases in modern medical science also comes under the Amavata in Ayurveda.
- (2) Amavata is a disease which is not stated in Brihattrayee as a separate chapter form, but it is somewhat mentioned in vata vyadhi chapter (In both charak & shusruta) in a hidden form with a clear cut clinical feature.

In 7th A.D. Acharya Madhava added some new clinical feature to it only & gave a vivid discription.

- (3) The peak age, for the disease RA was found to be third and 5th decade of life but it can occur at early age / 6th decade also.
- (4) Prevalent ratio of disease in female and male i.e., 3:1.
- (5) RA is chronic in nature and has insidious onset. It may aggravate within a very short time period.
- (6) Predominance of vata, kapha & mandagni along with tridosha dusti was found to play an important role.
- (7) Mandagni produces the Ama which disturbs the normal state of bodily elements (Dosha, Dushya etc). All the 5 types of vata play a major role in the disease process.
- (8) The maximum joints involved in RA is MCPJs, PIPJs followed by knee, wrist & elbow joints. Since Sandhis are the sthanas of Shleshma Dosha, any joint of the body can be involved (All joints involvement are not mainly calculated in RA).
- (9) Presence of Rheumatoid factor does not help in diagnosis of RA rather than it helps to consider prognosis.
- (10) Bhallatak as a visha dravya proved as Amrita after cooking with Ghrita, Dugdha & Sita. No major side effects or toxic effects are found.

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