



A Comprehensive review on Hydrotherapy in the Management of Rheumatic joint pain.

Dr. Suruchi Sindhu

Dr. Suruchi Sindhu, Assistant Professor, Swasthvritta Dept , Quadra Institute of Ayurveda , Roorkee, Uttarakhand 248001.

Corresponding Author: Dr. Suruchi Sindhu

Abstract:

One of the earliest systems of medicine, health, and healing is ayurveda. This way of knowledge has been used continuously for more than 4,000 years and has a long history of use. The popularity of Ayurveda is due to the fact that, despite several advances in modern science, its therapies still rule the field. Because of today's sedentary lifestyle, a number of ailments have emerged. Unusual lifestyles, avarice, and wrath have all entered the human experience. Numerous biological anomalies are a result of how humans live today, which is changing. The disease rheumatoid arthritis damages the joints. It results in discomfort, edoema, and rigidity. The other doctors typically have rheumatoid arthritis if one knee or hand does. The wrist and hands are frequently affected, and the same joints are frequently affected on both sides of the body. Any joint in the body can be affected by this condition, which frequently affects many joints at once. There is significant evidence supporting the use of hydrotherapy in the care of rheumatoid arthritis, according to a systematic review, and it has been shown to reduce pain and swelling.

Keywords- Ayurveda, Hydrotherapy, Aamvataic shool, Rheumatic joint pain.

Introduction-

Rheumatoid arthritis (RA) is a symmetrical, chronic inflammatory autoimmune disease that first affects the small joints before spreading to the larger joints, skin, eyes, heart, kidneys, and lungs.¹ Stiffness, edoema, and discomfort are the results. The other doctors are likely to have rheumatoid arthritis if one knee or hand does. The wrist and hands are frequently impacted, and the same joints on both sides of the body are typically affected. Patients may experience sickness and fatigue from this condition, which can affect any joint in the body. Chronic rheumatic and arthritic conditions

are on the rise. Modern medical research has made an effort to identify a clear category of these disorders based on causative, biochemical, and clinical criteria. Functional and musculoskeletal issues are described in a similar way in Ayurvedic literature. Some of these are different diseases, although others are minor disorders that affect the joints and other regions of the body.² The descriptions given in the classical Ayurvedic literature and subsequent Ayurvedic literature are very different. It is feasible to provide a comprehensive explanation that addresses the genesis, physiopathological changes, and clinical manifestation using the Ayurvedic concepts of doshas, dhatus, malas, and srotasas. According to Charak and Sushruta, Vaatarakta is R.A.

Historical review of Rheumatoid arthritis -

Vedas: There are a few references to joint problems in the Atharvaveda, including the term vishakhanda, which refers to unorganised joints. In order to prevent joints from becoming loose, it is advised to "destroy the balasa situated in organs and joints."³

Puranas:

There are various collections of sharira-related topics in the Puranas. AgniPurana describes the total number of joints as well as the vatarogas' relevant channels.⁴

Brihatrayee:

There is no description of the illness Amavata in Brihatrayee either. The Charaka Samhita, which dates to at least 1000 B.C., makes reference to the phrase Amavata, possibly to indicate the relationship between Ama and vata. The name "Amavata," however, is mentioned in several of the therapeutic indications for pharmacological compounds. These include Kamsahareetaki⁵, Vishaladiphantaof Pandu chikitsa, which are said to be effective in Amavata⁶. In Susruta Samhita (700-600 B.C) only the description of ama is found. In AstangaSangraha (400 A.D) and Astanga Hridaya (500 A.D) there is no description about Amavatabut the description about ama is available.

Madhava nidana:

In Madhava Nidana, Madhavakara provides the first explanation of Amavata as a distinct illness. Nidana, Samprapti, Roopa, Upadrava, and Sadhyasadhata are all clearly explained.

Nidana of Amavata –

Nidana is described as a specific factor that has the potential or propensity to cause a disease. Nidana, then, refers to the precise cause of the sickness. Nidana has been categorised using a variety of categories and viewpoints. Among these, bahya hetu and abhyantara hetu are two classifications.⁷ Factors like ahara, vihara and kala are considered as bahya hetus, where as abyantara hetu or intrinsic factor mainly comprises of dosha and dooshya.

Ama is a material that is Asatmya in nature. Ama often refers to unripe, undercooked, immature, and undigested foods. However, in the context of Ayurveda, this phrase refers to an occurrence brought on by a dysfunctional kayagni, dhatwagni, or bhootagni. In roganidana, the idea of ama is vital. The fundamental principle of Ayurveda indicates that ama is the source of the majority of ailments

classified as kayachikitsa. As a result, "Amaya" has been used as a synonym for "vyadhi." According to Vagbhata, "the annarasa is not correctly generated due to the hypo functioning of ushma (agni), and this rasa experiences fermentation or putrefaction while being held in amashaya." The word for this rasa condition is ama."⁸ Vijayarakshita, commenting on Amavata, in his Madhukosha commentary, has quoted a number of definitions and descriptions of ama.

Rheumatoid arthritis:⁹

If Amavata is studied from a modern perspective, it is clear that it cannot be precisely compared to a single disease but rather to a group of diseases that are described by the modern medical system. It indicates that rheumatoid arthritis is a "auto immune" condition. B- cells in the blood and synovial tissues of nearly all RA patients develop autoantibodies against the Fc region of immunoglobulin G molecules or rheumatoid factors. The word for such circumstances is edseropositive. The pathologic defining feature of RA is synovial membrane expansion and proliferation along with articular cartilage and subchondral bone degradation. Vascular permeability is enhanced and immune complexes are phagocytosed by phagocytic cells in RA. Ragocytes, also known as RA Cells or Ragocyte aggravations of immune complexes within polymorpho nuclear leucocytes, are frequently observed in rheumatoid synovial fluid.

The development of lymphoid follicles that resemble immunologically active lymph nodes leads to the establishment of the synovial membrane of the joints. As the articular cartilage is gradually worn down and damaged, inflammatory granulation tissue develops and spreads over and beneath it. Later, fibrous adhesions may develop across the joint space between the layers of inflammatory tissues, and fibrous or bony ankylosis may take place. Similar granulomatous lesions can develop in the sclera, pleura, lung, and pericardium. According to immunofluorescence, plasma cells in the lymph nodes and synovium produce rheumatoid factors.

Hydrotherapy

The use of water for pain management and treatment is a component of alternative medicine (particularly naturopathy), occupational therapy, and physical therapy. It was formerly referred to as hydrotherapy and water cure. In order to achieve therapeutic goals including enhancing blood circulation and alleviating illness symptoms, a variety of treatments and therapeutic processes that make use of the physical characteristics of water, such as temperature and pressure, are referred to by the phrase.

Following the expansion and advancement of contemporary medical methods in the 18th and 19th centuries, hydrotherapy gained in popularity¹⁰. The development of hydrotherapy was thought to be a more personal form of medical treatment that did not necessarily present to patients the alienating scientific language that modern developments of medical treatment entailed. As traditional medical practise became more professional in terms of how doctors operated, it was felt that medical treatment became increasingly less personalised¹¹. Hydropathy was initially introduced and promoted in Britain by Captain R. T. Claridge in London in 1842, followed by lecture tours in Ireland and Scotland in 1843. Limerick, Cork, Wexford, Dublin, and Belfast were

all stops on his 10-week tour of Ireland in June, July, and August 1843. He also delivered two lectures in Glasgow after that¹².

The use of water for pain reduction and treatment is a component of alternative medicine (especially naturopathy), occupational therapy, and physiotherapy. It was once known as hydrotherapy and is also known as water cure. The phrase refers to a wide range of techniques and treatments that use the physical characteristics of water, such as temperature and pressure, for therapeutic ends, including the stimulation of blood flow and the alleviation of specific disease symptoms¹³. Various therapies utilised in modern hydrotherapy include whirlpool baths, hot Roman baths, hot tubs, Jacuzzis, cold plunges, and mineral baths. Other therapies include underwater massage, water jets, and Kneipp treatments, Scotch hoses, and Swiss showers.

Uses-

Aquatic treatment, physical therapy, and cleaning agents are the only three possible applications for water therapy. Its primary purpose, which has existed for a very long time, is as a means of delivering heat and cold to the body. Many of the techniques and approaches used in hydrotherapy employ water as a medium to promote thermoregulatory reactions for therapeutic benefit.¹⁴

In addition to therapy, hydrotherapy is employed in nursing, where it has a long history of use. Although shower-based hydrotherapy techniques have become more popular in place of full-immersion ones for burn treatment, this is mainly due to the convenience of cleaning the equipment and the reduction of infections brought on by contaminated water¹⁵. Hydrotherapy, which involves selective mechanical debridement, can be utilised when tissue removal is required for the treatment of wounds. Examples of this include therapeutic irrigation with suction and guided wound irrigation¹⁶.

Technique-

The following are the devices and setups that are used to apply heat and cold

- Packings, hot and cold, general and local, sweating and cooling¹⁷;
- Steam rooms and hot air baths;

Bandages (or compresses), wet and dry, as well as general baths with hot and cold water, sitting, spinal, head, and foot baths, hot and cold fomentations and poultices, and hot and cold water potations.

Hydrotherapy which involves submerging all or part of the body in water can involve several types of equipment:

Since at least the 1940s, mechanical pumps have been utilised to create whirling water flow in water tanks. Similar technologies have been sold as "hot tub" or "spa" products for use in leisure activities¹⁸. Some people avoid using whirlpool baths to treat wounds since they can harm all kinds of tissue and don't target the tissue that needs to be removed. Whirlpools can also harm delicate

bodily tissue, increase the danger of bacterial infection, and, when used to treat arms and legs, increase the risk of edema-related problems.¹⁹

Numerous titles from that era attest to the fact that using cold water is frequently associated with hydrotherapy, especially as it was pushed at the height of its Victorian renaissance. Even during the height of this well-known renaissance, not all therapists restricted their use of hydrotherapy to cold water²⁰. But the Turkish bath was frequently linked to the specific use of heat. Richard Barter fervently embraced this after David Urquhart introduced it to England in the 1850s after his return from the East²¹. The most notable of hydropathy's many contributions to public health is the Turkish bath, which along with the morning tub and the custom of drinking water, became a public institution.

Recent technique of Hydrotherapy-

Physical therapists, sports medicine institutions, and rehabilitation centres all use ice baths as a form of cryotherapy. Its supporters claim that it leads to a better lymphatic system and blood flow return, as well as more effective recycling²². Combining the use of hot and cold in one session is accomplished by varying the temperatures, whether in a shower or separate tanks. Advocates assert that lymphatic drainage and the cardiovascular system have improved. By promoting blood flow and lowering edoema, contrast hydrotherapy, according to experimental findings, may aid to lessen injury during the acute stages.

Discussion-

This study's primary objective was to evaluate the efficacy of hot water and Epsom salt compresses for treating rheumatoid arthritis joint pain in elderly patients undergoing arthroscopy, spine arthrography, and joint replacement. Amavata (ama and vata) is characterised by joint discomfort, inflammation, and stiffness. This condition can make joints temporarily or permanently disabled and interfere with daily activities. Ayurveda claims that vatadosha stimulates ama, which accumulates in the joints or trika sandhi. Ama and vata both play significant roles in the onset and course of disease. Ahara and vihara imbalances also greatly aid the development of disease. The management of disease in modern medicine primarily relies on painkillers, which solely address the symptoms of the illness. Ayurveda, however, targets the underlying causes of illness. Thus, the goal of the current study was to assess how well hydrotherapy managed Amavata or arthritis. Hydrotherapy is the external or internal use of water in any of its forms (water, ice, or steam) for health promotion or the treatment of a variety of ailments with a range of temperatures, pressures, durations, and locations. It is one of the many natural therapies that were practised in ancient societies like India, Egypt, China, and others. Although many nations have used water to generate various physiological/therapeutic effects on various systems to maintain health, prevent sickness, and treat it.

Conclusion-

Hydrotherapy's restorative and therapeutic benefits are dependent on its mechanical and/or thermal impacts. It takes advantage of the body's response to hot and cold stimuli, prolonged heating, water pressure, and the sensation it produces. One of the limitations of hydrotherapy is that, depending on the temperature of the water, it has different effects on various bodily systems. Although these effects are supported by scientific evidence, it is still unclear how hydrotherapy treats these diseases. Further research is needed to determine this mechanism. The mean pain perception score of the rheumatoid arthritis patients before and after a hot water compress with Epsom salt was significantly different. There was a correlation between the patients' levels of pain perception and the chosen demographic factors. The goal of this study was to evaluate the efficacy of using hot water compresses with Epsom salt to relieve rheumatoid arthritis joint pain in patients, so that hot water compresses with Epsom salt can be utilised in the future to treat all rheumatoid arthritis joint pain patients and promote health.

References-

1. Lee JE, Kim IJ, Cho MS, Lee J. A Case of Rheumatoid Vasculitis Involving Hepatic Artery in Early Rheumatoid Arthritis, *J Korean Med Sci*. 2017 Jul;32((7)):1207-10.
2. Chaudhari K, Rizvi S, Syed BA. Rheumatoid arthritis, current and future trends. *Nat Rev Drug Discov*. 2016 May;15((5)):305-6.
3. *Atharvaveda* Chaukhamba Sanskrit Sansthana Varanasi, Edition reprint 2004.
4. Agni Purana ;By Acharya Shribaladevopadhyaya, Chaukhamba Sanskrit Samsthan, Varanasi.279/25, 26
5. Charaka Samhita of Agnivesh and Cakrapanidatta by Kashinath Shastri. Chaukhamba Sanskrit Samsthan, Varanasi , 8th edition 2004.c.chi.12thadyaya/51-52 shloka,pp-304.
6. Charaka Samhita of Agnivesh and Cakrapanidatta by Kashinath Shastri. Chaukhamba Sanskrit Samsthan, Varanasi , 8th edition 2004,c.chi.16thadhyaya/61-62 shloka,pp-423.
7. Madhavanidanam of srinadhavakara with the Madhukosa Sanskrit commentary.25thadyaya/4 shloka ,Madhukosha, Chaukhamba Sanskrit Samsthan, Varanasi ,22 edition 1993, pp-460.
8. Astangahrdayam of vagbhata by Kaviraja trideva Gupta, Chaukhamba Sanskrit Samsthan, Varanasi ,Reprint edition 2005.
9. Boyd's text,Davidson's Principles and Practice of Medicine,20th edition,2006, pp- 1101-1106.
10. Jump up to a-d American Physical Therapy Association (15 Sept. 2014), "Five Things Physicians and Patients Should Question", Choosing Wisely: an initiative of the ABIM Foundation, American Physical Therapy Association, retrieved 15 August 2018
11. Thrash, Agatha; Calvin Thrash (1981). Home Remedies: Hydrotherapy, Massage, Charcoal and Other Simple Treatments. Seale, Alabama, Thrash Publications. ISBN 0-942658-02-7.
12. Metcalfe, Richard (1898), pp. 8, 77, 208, 210. Note: Type "Oertel" into search field to find citations.

13. Stevenson, Angus, ed. (2007). "Definition of Water Cure". Shorter Oxford English Dictionary. 2: N-Z (6th ed.). Oxford: Oxford University Press.p. 3586. ISBN 978-0-19-920687-2
14. Kozier, Barbara; Erb, Glenora; Olivieri, Rita (1991). Fundamentals of Nursing: Concepts, Process and Practice (4th ed.). Redwood City, California: Addison-Wesley. pp. 1335–1336. ISBN 0-201-09202-6.
15. Pugh, W. T. Gordon; Pugh, P.D. Gordon; Pugh, Margaret S. (1962). Practical Nursing, including Hygiene, Elementary Psychology and Dietetics. Edinburgh & London: William Blackwood & Sons.
16. Miller, Benjamin; Keane, Claire (1987). Miller-Keane Encyclopedia & Dictionary of Medicine, Nursing, and Allied Health (4th ed.). Philadelphia: W.B. Saunders. ISBN 0-7216-1815-4.
17. Gruber, Ronald; Laub, Donald; Vistnes, Lars (February 1975). "The effect of hydrotherapy on the clinical course and pH of experimental cutaneous chemical burns". Plastic & Reconstructive Surgery.
18. Jump up to:^a ^b Davison, Peter G; Loiselle, Frederick B; Nickerson, Duncan (May–June 2010). "Survey on current hydrotherapy use among North American Burn Centers". Journal of Burn Care & Research.
19. Rode, H.; Vale, I. Do; Millar, A.J.W (January 2009). "Burn wound infection". CME. **27**(1): 26–30. Retrieved 26 June 2010.
20. Sidney Lee (editor) (1899). "Urquhart, David". entry in Dictionary of National Biography. Vol. 58 (Ubal dini – Wakefield). London: Smith, Elder and Co. pp. 43–45 (n42–44 in pg. field). Retrieved 22 April 2010.
21. Shifrin, Malcolm (3 October 2008). "Dr Curtin's Hydropathic Establishment: Glenbrook, Co.Cork". Victorian Turkish Baths: Their origin, development, and gradual decline. Retrieved 12 December 2009.
22. Whorton, James C; Karen Iacobbo (2002). Nature Cures: The history of alternative medicine in America. New York: Oxford University Press. pp. 89, 90. Retrieved 14 December 2009.