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A concise review of herbal analgesics as mentioned in *Bruhatrayee* - A literary study

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Abstract

The market at present is flooded with a variety of analgesics to provide a patient with relief. Almost all the analgesic drugs are liable to have untoward effects on our body. Pain in the joints may not necessarily be fatal but it sure does cripple the life of the patients. Hence it is the need of the hour to provide mankind with near perfect solution to the joint pain which they suffer.

The article enlists most of the herbal analgesics which are useful in treating joint pain and inflammation. It also highlights upon the issue of the side effects caused by modern analgesics.

Article will help the reader to understand the role of herbal analgesics and thereby promote further research on the scope and usage of herbal medicines.

Keywords: Analgesics, pain, herbal medicine

Introduction

Musculoskeletal conditions are a vast group regarding pathophysiology but are linked anatomically and by their association with pain and impaired physical function. They include a vast range of conditions from acute onset and short duration to lifelong disorders including osteoarthritis, rheumatoid arthritis, osteoporosis and low back pain. The prevalence of many of these conditions increases with age and many are affected by lifestyle factors like obesity and lack of physical activity. The increasing number of older people and the changes in lifestyle throughout the world means that the burden on people and society will increase dramatically. This has been recognized by the United Nations & WHO, with their endorsement of Bone & Joint decade 2000-2010^[113].

Pain is the most prominent symptom in most people with arthritis^[114] Pain is the body's message that something is wrong^[115]. The intensity of pain of pain suffered differs enormously from person to person^[116]. It is the most important determinant of disability in patients with osteoarthritis.

A recent study of Rheumatic Musculoskeletal disorders conducted in the urban region of Pune, India, using the COPCORD Bhigwan model, found 14% prevalence of musculoskeletal disorder^[117].

Inflammation of joint usually accompanied by pain, swelling and frequently changes in structure. Etiology: arthritis may result from or be associated with infection (gonococcal tuberculous, pneumococcal) rheumatic fever, ulcerative colitis, trauma, neurogenic disturbances, degenerative joint disease, periarticular conditions. There are various types of arthritis like acute suppurative arthritis, allergic arthritis, bacterial arthritis, degenerative arthritis, gonococcal arthritis, gouty arthritis, hypertrophic arthritis, juvenile rheumatoid arthritis, syphilitic arthritis, tuberculous arthritis etc. The involvement of joints in arthritis may be mono or polyarticular^[118].

By judging the alarming rate at which the problems of musculoskeletal diseases are increasing it is the need of the hour to provide feasible solution to the issue of joint pain since most modern analgesics have untoward effectson the body after their prolonged use. The article contains a list of most of the herbal medicines mentioned in the classical texts of *Bruhatrayee*.

Need of topic

The market has a number of modern day analgesics which the common man is consuming regularly for his solution to pain. The masses are unaware of the side effects these drugs have on their body after their prolonged consumption. Ayurveda offers herbal solution addressing the need for pain relief the article enlists most herbal analgesics on which further research is needed to validate its efficacy and safety.

Aim and objectives**Aim**

To study the herbal analgesics mentioned for joint disorders in Ayurveda *Bruhatrayee* classics

Objectives

To do a literaray study on the various modern drug analgesics and the effects and side effects they have on the body.

Materials and methods

Review work done and literature from the classical texts of *Bruhatrayee* and research websites alongwith modern medical science literature and allied pharmacological studies have been incorporated in the study

Below mentioned are a few of the many Ayurvedic drugs from *Bruhatrayee* which help in *shoola* and *shotha prashaman* i.e. help in providing relief from joint pain and act as potent analgesics.

Serial number	Condition used in when pain is the main symptom	Formulation/drug used
1	In gout Vatarakta	<p><i>Rasna, guduchi</i>, two types of <i>bala</i> ^[11], <i>Chyawanprash</i> ^[6], The use of <i>triphala, nimba, katuohini, yashti</i> is advised ^[12], <i>mahatiktak ghrita</i> ^[13], <i>kalyanak ghrita</i> ^[14], <i>sarpi modak</i> ^[17], <i>dhatryarishtha</i> ^[20], <i>shravanayadi taila</i> ^[22], <i>bala ghrita</i> ^[23], <i>parushak ghrita</i> ^[24], <i>jeevaniya ghrita</i> ^[25], recipe containing four types of fat ^[26], <i>sthiradya ghrita and taila</i> ^[27], medicated milk ^[28], laxatives ^[29], <i>madhuparnyadi taila</i> ^[30], <i>sukumarak taila</i> ^[31], <i>amrutadya taila</i> ^[32], <i>mahapadma taila</i> ^[33], <i>khuddakpadmak taila</i> ^[34], <i>madhuka taila</i> ^[35], <i>shatapaka madhuka taila</i> ^[36], <i>shatapaka and sahasrapaka bala taila</i> ^[37], recipe of medicated oil with <i>guduchi, dugdha, draksha, madhuka, kashmari</i> etc. ^[38], <i>pinda taila</i> ^[39], <i>dashamoola siddha ksheer</i> ^[40], <i>tagaradi lepa application</i> ^[41], <i>triphaladi kalka</i> ^[42], <i>Niruha basti</i> of <i>yastimadhu, shatavaha</i> etc to be given ^[61], <i>Hapushadya yapan basti</i> ^[65], <i>Pichhabasti</i> ^[72], <i>dhanvantar ghrita</i> ^[74], <i>Sukumar ghrita</i> ^[75], (<i>vatajvatarakta</i>) <i>Shravani, guduchi, shatavari</i> ^[85], (<i>pittaj vatarakta</i>) <i>patola, amruta triphala</i> ^[86], (<i>kaphaj vatarakta</i>) <i>triphala, guduchi, kokilaksha, lelitaka, vasa, rice wash</i> ^[87], <i>Pinda taila</i> of <i>madhuchista</i> ^[88], <i>Madhuyashtyadi taila</i> ^[93], <i>Sahasrapaka bala taila</i> ^[94], <i>Siddha taila</i> with <i>dwipanachamula, meshashrunji, swadanstra, sarla</i> etc ^[105], <i>Vardhaman pippali yoga</i> ^[106], <i>Triphala, nimbi, yashti, katuohini</i> ^[12].</p>
2	vata vyadhi	<p><i>Abhyang</i> to be done with <i>masha, saindhav and ghrita</i> ^[43], <i>Dashamoola siddha ghrita</i> ^[44], <i>Majja siddha</i> with <i>dashamoola, jeevak, vidari, kapikachhu</i> ^[45] <i>Vasa siddha</i> with <i>bala, bilwa</i> etc ^[46], <i>Mahasneha siddha</i> with <i>triphala,</i> <i>kulattha, krushnagandha</i> etc ^[47], <i>nirgundi taila</i> ^[48], <i>mulaka taila</i> ^[49], <i>sahachar taila</i> ^[50], <i>bala taila</i> ^[52], <i>amrutadya taila</i> ^[53], <i>rasna taila</i> ^[54], <i>mulakadya taila</i> ^[55],</p>

		<p><i>vrushamuladi taila</i> ^[56], <i>mulaka taila</i> ^[57], <i>taila</i> fortified with <i>yava, kola, kulattha, shigru</i> ^[58], <i>agurvadya taila</i> ^[59], <i>niruha basti</i> of <i>dwipanchamula</i> etc. ^[60], <i>anuvasan basti</i> of <i>bilwa taila</i> ^[62], <i>anuvasan basti</i> of <i>vasa, jeevaniya gana dravyas</i> ^[63], <i>vatsakadi gana dravyas</i> ^[69], <i>tilvakadi ghrita</i> ^[80], <i>panchatikta ghrita guggulu</i> ^[81], <i>prasarini taila</i> ^[82], <i>sahacharadi taila</i> ^[83], <i>bala taila</i> ^[84], <i>veertarvadi gana</i> ^[97], <i>vatashaman dravya</i> ^[98], <i>tilvak ghrita</i> ^[99], <i>anu taila</i> ^[100], <i>sahasrapaka taila</i> ^[101], <i>patra lavan</i> ^[102], <i>sneha lavan</i> and <i>kanda lavan</i> ^[103], <i>kalyanak lavan</i> ^[104], <i>bala taila</i> ^[107], <i>shatapaka bala taila</i> ^[108], <i>vachadi taila</i> ^[109], <i>anuvasan basti</i> of <i>chitrakadi taila</i> ^[110], <i>bhutikadi anuvasan</i> ^[111], <i>rasonadi ghrita</i> ^[112]</p>
3	Rheumatoid arthritis <i>amavata</i>	<p><i>Kansa haritaki</i> ^[18], <i>vishaladi phanta</i> ^[19], <i>churna</i> of <i>vishala, katuka, musta</i> etc. ^[78], <i>pathya, dashamoola, trijatak</i> ^[79].</p>
4	In relief from joint pain	<p><i>Dashamooladya yapan basti</i> ^[66], <i>dadimadi ghrita</i> ^[77], <i>dashamoola</i> with <i>ksheer</i> ^[89], four types of <i>sneha</i> with <i>madhur dravya</i> ^[90], <i>ksheer+jeevaniya gana+laghu panchamula</i> ^[91]. <i>kshuma</i> paste, <i>eranda beej</i> paste, <i>shatavaha+ksheer</i> ^[92], <i>yapan basti madhu, taila</i> ^[95], <i>lashun yoga</i> ^[96]</p>
5	Sciatica <i>gridhrasi</i>	<p><i>Rasona ksheerpaka</i> ^[9, 76] <i>ashtaktvar taila</i> ^[21],</p>
6	Oedema <i>shotha</i>	<p><i>Haritaki</i> ^[5], <i>pippali rasayan</i> ^[7], (<i>jwara with shotha</i>) milk boiled with <i>trikantak, bala, vyaghri, guda, nagar</i> ^[8], <i>danti haritaki</i> ^[10], <i>patola</i> ^[11], <i>mahapanchagavya ghrita</i> ^[15].</p>
7	<i>Adhya vata</i>	<p><i>Eladi gutika</i> ^[16], <i>Anuvasan basti</i> with <i>saindhava, eranda, shatavaha</i> ^[64], <i>varunadi gana dravyas</i> ^[68], <i>vacha haridradi gana dravyas</i> ^[70], <i>pathya</i> with <i>gomutra</i> ^[71].</p>
8	<i>Sandhaniya gana</i>	This group of drugs helps int the unification of two parts ^[2]
9	<i>Vedanasthapan gana</i>	This group of drugs helps in reducing pain i.e. it does the karya of <i>vedanasthapan</i> ^[3]
10	In giving strength to bones	It is the property of <i>majja</i> , one of the 4 types of <i>sneha</i> to help in strengthening bones ^[4]
11	<i>Vataghna gana</i>	<i>Bhadradaru, kustha</i> etc. ^[67]
12	<i>Vata+kapha rogas</i>	Use of <i>hingu, tikta, vacha</i> etc. ^[73]

Conclusion

An analgesic is used to attain analgesia i.e. relief from pain. Analgesics act on the peripheral and central nervous system thereby giving relief. they are different from anaesthetics which temporarily affect and in some instances completely eliminate sensation There are many analgesics which are used in the market for pain relief which include paracetamol, NSAID'S, opioid drugs etc. Paracetamol is used generally to treat pain which is of mild to moderate

nature and when combined with opioids it is used to treat post-operative surgical pain ^[119] Non-Steroidal anti-inflammatory drugs like aspirin, ibuprofen etc. are most commonly used.

Derivatives of NSAID'S are COX-2 inhibitors. These drugs are celecoxib, rofecoxib etc and are known to produce less gastrointestinal hemorrhage in patients ^[120] Opioids like morphine, codeine are used as analgesics but patient is at a risk of developing addiction to these drugs.

However almost all the analgesics are liable to produce side effects on the human body?

Aspirin can cause irritation of the gastric mucosa, tinnitus, damage to the kidney, reduced blood clotting ability. NSAID'S can cause headache, nausea, stomach irritation, diarrhoea, fatigue, dizziness, sleep disorders, rashes on skin, allergy, allergy-like hypersensitivity reactions. They also increase the risk of myocardial infarction and stroke and hence are not recommended in those who have had a previous heart attack as they increase the risk. They may also possibly increase the risk of erectile dysfunction. the ulceration risk increases with the duration of therapy and with higher doses. NSAID'S should be used with caution in patients of Inflammatory bowel disease due to their tendency to cause gastric bleeding and form ulceration in the gastric lining. In rarer instances NSAID'S may cause more severe renal conditions like Interstitial nephritis Nephrotic syndrome, Acute renal failure, Acute tubular necrosis. Renal papillary necrosis. When NSAID'S are used in combination with paracetamol they may lead to analgesic nephropathy. Photosensitivity is also one of the adverse effects which is commonly overlooked. NSAID'S should not be given in pregnancy and may cause premature birth, miscarriage. The preparations that are produced from a combination of analgesics can cause nausea, vomiting, dizziness, liver and kidney damage. Opioids can produce nausea, vomiting, constipation, drowsiness, reduced physical co-ordination and balance^[121].

Pharmacological trials and *in vitro* trials have been conducted extensively on the herbal analgesics and positive findings have been observed.

Many clinical trials have been conducted till date and it has been observed that herbal preparations are potentially suitable for the treatment of joint pain and where there was a significant difference observed in measures such as grip strength, walking time, joint tenderness^[122, 123].

Now the question arises of the clinical relevance and implications of the efficacy of herbal medicines. It seems that herbal medicines have been found to be more effective, but this may be so to lower or stop the consumption of NSAID'S and hence reduce the adverse effects of NSAID'S. But this is going to generate a major need to have a data for long time on the safety of the usage of herbal medicines.

It may be concluded that a number of herbal medicines are useful in reducing pain but still this topic remains under researched and does seem to merit further attention.

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