

Systemic Review on Benefits of Ksheerbala Taila

¹DR. JAYA K. GHORE, ²Dr.Ashwini Patil, ³Dr.Mrudul Chitrakar

¹B.A.M.S., M.D.(Kaychikitsa),Associate Prof. Panchakarma, D.Y.Patil School Of Ayurveda, Nerul, Nerul, Navi Mumbai.

²B.A.M.S., M.D.(Shalakyatantra),Professor Shalakyatantra, D.Y.Patil School Of Ayurveda, Nerul, Navi Mumbai.

³B.A.M.S., M.D.(Swasthvritta), Associate Prof. Swasthvritta, D.Y.Patil School Of Ayurveda, Nerul, Navi Mumbai.

Abstract

Introduction: In Ayurvedic pharmacology snehapakkalpana has its at most importance. Siddha sneha can be administered through different route for getting varied result .Ksheerbalataila is an important snehakalpana mentioned in Ayurveda texts prepared from Go-ksheera(cow milk),Bala (sida cordifolia) and TilaTaila (sesame oil)and practiced to treat vatvyadhi.The aim of this study is to investigate and offer an updated perspective with different studies on *KsheerabalaTaila* with different mode of administrations.

Method: The present study was conducted in accordance with the PRISMA checklist for systematic reviews and meta-analysis. The required information was collected from the pubmed and scholarly published work in Ayurvedic& other journals. The searches for this review made with the help of Google search engine by key word ksheerabalataila .

Result: This review included 22 papers out of which 12 were clinical study, 6 case study, 2 review articles, 1 pharmaceutico-analytical study & 1 animal study.Ksheerbalataila used in different systemic disorders with different route of administration like shiropichu, shirobasti, talam, nasya, matrabasti, anuvasanbasti, padaabhyanga&samvahana.With these different application we get benefits in treating disorders like ardit, anidra, pakshaghat, maragavran, macular degeneration, epilepsy, cerebral palsy, sandhigatavata .,etc.

Conclusion : Different method of preparation are described in many text and numerous studies have been conducted regarding the clinical efficacy of ksheerabalataila, pharmaceutico- analytical study of trividhas nehapaka of ksheerbala tail shows madhyampakasneha useful for therapeutic efficacy.¹The presence of go-kheera,bala and tilataila makes Ksheerabala tail to pacify all the eighty chronic condition of vata origin.such as Ardita,katishula,katigraha,sandhigatvata,cerebralpalsy,hemiplegia,kampvata and other neurological disorders.It is widely used oil in various panchakarma therapies like snehan,kavala,talam,nasya,matrabasti,shirobasti.,and other methods of moordhanitaila .Ksheerabalatail is an important oil formulation and there is a need to conduct more scientific studies on ksheerabalataila in order to prove its efficacy on various nuerological disorders²

Keywords: *Ksheerabala Taila; Neurological disorders; Sesameoil; Sidacordifolia*

INTRODUCTION :

Bala is a highly valuable drug in Ayurveda and one amongst the three most utilized raw drugs³ .Root of Bala (sidacordifolia)is the major ingredient of an Ayurvedic drug Ksheerbalataila used for the treatment of neurological disorders in Ayurveda. The bhaishajya kalpana vigyan has various formulas for preparation of medicine . In Ayurvedic pharmacology snehapakkalpana has its atmost importance .Siddha sneha can be administered in different route for getting varied result .Snehakalpana is considered to be the best way to extract the lipid soluble active principles from the drugs. Thus it enhances the drug absorpction. So during the process of boiling the active principles from the drugs are moving to the liquid media. To extract the more number of active principles we need more amount of liquid media. So we require more time for the evaporation of the excess water molecules. The

rationality behind the avartita snehalkalpana is the same. Avartana means repetition, here the snehadravaya is undergoing repeated processing with the kalkadravaya and dravadravaya. By the continuous processing of the formulation, we can see there will be loss in the quantity of sneha. The advantages of avartana procedure by which we can reduce the dosage of administration, it will be quick in the action, having utmost therapeutic efficacy, it can act even on minute channels of the body and it will be easier for administration. This view can be supported with the ability of lipid soluble solutes and the free fatty acids to diffuse across the blood brain barrier. Ksheerbalataila is one of the most popular oil preparation in Ayurveda and recognized as a very effective remedy being used in the treatment of Vatvyadhi.

There are 9 openings in human body. In Sanskrit these 9 openings are called 'navadwara'. 'Nava' meaning 9 and 'Dwara' meaning gate or door. All these 9 openings breathe, also open and close as you breathe. Lubricating these 9 openings makes all sensory organs more efficient. Our sensory organs acquire knowledge through these nine openings, and enhances overall health. Based on this the present review article is designed to study varied effect of Ksheerbalataila with administering through different openings of body.

MATERIALS AND METHODS:

Study Design: The present study was conducted in accordance with the PRISMA checklist ⁴

Different method of preparation of ksheerbalataila and its use in various systemic disorders by different route of administration was reviewed. Studies published in English were included in this study.

Search strategy:

Searches were made on pubmed, web of sciences, scopus, for papers published by using key word ksheerbalataila different uses of ksheerbalataila (snehan, padabhyang, talam, basti etc..)

Inclusion Criteria:

Papers from randomised clinical trials, case study, conceptual study, Pharmaceutico analytical study and animal study. The topic of the study was ksheerbalataila.

Exclusion Criteria :

Inadequate sampling

Information Extraction: The abstracts of studies were read carefully and selected based on their inclusion and exclusion criterion. The data sets extracted from paper. The information checklist for the study included, the names of the authors, year of publication, sample size, method, study group, intervention and duration of treatment.

Result : This review included 22 papers out of which 12 were clinical study, 6 case study, 2 review articles, 1 pharmaceutico-analytical study & 1 animal study.

Following is the extract of the clinical study :

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Sr. No.	Title of Study	Author/Name of journal	Study Design	Intervention	Subjects	Results
1	Effect of gandhaka kalpa internally and ksheerabala 101 avarti taila nasya in dry age related macular degeneration - a clinical study ⁵	Aiswarya. Nair, A. Abdul Salam, Ambili. K, International Journal of Ayurveda and pharmaresearch.	Interventional, pre and post evaluation without control	Nasya with Ksheerabala 101 avarti taila followed by administration of gandhaka kalpa with concurrent administration of Ksheerabala 101 avarti taila pratimarsa nasya	30 eyes	This intervention found effective in the management of dry AMD
2	An open label clinical study evaluating the effect of shamana snehana with shatapaki ksheerabala taila in margavaranaja pakshaghata/ ischemic strokes ⁶	Saritha A. K., G. Shrinivasa Acharya and Shailesh Y..jpmr, 2020,7(10), 499- 505	Interventional: Non randomized Single group assignment	Shatapaki Ksheerabala taila in a dose of 24 ml orally in the morning in empty stomach about half an hour before breakfast along with 150 ml of warm water.	30 Patients	Shatapaki Ksheerabala taila proved to be efficacious in reducing the symptoms of margavaranaja pakshaghata and hence improving the Quality of Life
3	Effectiveness of ksheerabala taila	Lande prashanta dinath, chaudhari	Clinical study with pre-test	1.Abhyang with	20	Study gives significant

	matra basti in children with cerebral palsy ⁷	bhojraj arun, ingale pramod pandurang UJAHM 2016,	and post test design.	ksheerbalat aila . 2. Swedan with shashtishali pindswed.3 . Matrabasti with 20 ml lukewarm ksheerabala taila. 6 courses of matrabasti with 7 days gap were given during the period of 3 month		relief in cerebral palsy in improving motor functions and skills
4	Effect of anuvasanabasti with ksheerabalataila in sandhigatavata (Osteoarthritis) ⁸	<u>Pradeep L. Jag Si Grampurohit, Niranjan Rao, and Shivakumar S. Harti</u> Ayu 2014;	Single group clinical study with pre-test and post-test design	The patients were treated with anuvasanabasti with ksheerabalataila 120 ml for 10 days.	30	Anuvasanabasti with ksheerabalataila was significant in reducing the subjective symptoms of sandhigatavata. There was no significant improvement in radiological findings
5	The clinical study of ksheerabala tail primary insomnia	Lokesh H. Patankar , dipali sonawane International Ayurvedic Medical Journal {online}	Single group clinical study with pre-test and post-test design	Padaabhyang with ksheerbalataila for 15 minutes for 7 days	20	Study shows great results with Ksheerabala tail Paadabhyanga as a daily

						Procedure to get relief from stress and to induce sleep. Symptoms like Angamarda, Tandra, Jrumbha were get reduce
6	A comparative clinical study to evaluate shirodhara and shirobasti with ksheerabala taila in anidra w.s.r to isomnia ⁹	Arya R.V International Ayurvedic Medical Journal	A comparative Clinical Study, Group A and Group B consisting of 20 Subjects in each group.	Group A - Shirodhara with Ksheerabala taila, Group B - Shirobasti with Ksheerabala taila	40	Shirodhara and Shirobasti are effective in the management of Anidra. If considering percentage of relief on all the parameters it is more in Group A than Group B.
7	Role of navana nasya with mahamasha taila and shirobasti with ksheerabala taila in the management of ardita: a comparative clinical study ¹⁰	Anil Gupta Int. J. Res. Ayurveda Pharm.	A total of 30 patients selected randomly divided into NavanaNasya Group and Shirobasti Group containing 15 subjects in each group.	Group A Navannasya with ksheerabala taila Group B Shirobasti with ksheerabala taila.	30	both the MahamashaTaila and KsheerabalaTaila are quiet effective drugs in the management of Ardita.
8	Combined effectiveness of Maharasnadi Kashaya with ShuntiChurna and	Kiran K, Vasantha B, MuttappaTotad J Ayurveda Integr. Med Science.	Type of study: Open label, single arm, prospective clinical study.	Maharasnadi Kashaya - 45 ml/day (15 ml thrice a	31 subjects	The treatment effective in JanuSandhiGataVata (osteo

	Matra Basti with Ksheerabala Taila in JanuSandhigataVata (Osteoarthritis Knee): An open label, single arm clinical study ¹¹		Sampling method : Convenience sampling Test: Pre test and Post test Sample size :31 subjects. Study duration : 24 days	day) along ShuntiChoorna - 1 Karsha (12g) (4g thrice a day) - After food orally for 24 daysMatra Basti was administered with Ksheerabala Taila - 70ml/day for initial 8 days. Duration: MatraBasti - Initial 8 days, Maharasna dikashaya and ShuntiChoorna - 24 days..		arthritis of knee).
9	Open label comparative clinical trial of dvipanchamooladi taila and ksheerabala taila matra vasti in the management of low back ache ¹²	Rabinarayan Tripathy,Parameswar Namboothiri,SusmitaPr iyadarshinee Otta. International Journal of Ayurveda and Pharma Research	Comparative clinical trail	Treatment Group- Abhyanga with Karpasasthy aditaila for 35 minutes & Nadisweda 10 minutes. Dvipanchamooladi	30	trail drug was effective in reducing pain, inflammation, stiffness, restricted movement and improving the clinical signs as compared to the control group.

				<p>taila 70 ml Matrabasti Control group Abhyanga with Karpasasth y aditaila for 35 minutes & Nadiswed a 10 minutes. Dvipancha mooladi taila 70 ml Matrabasti Control group- Abhyanga with Karpasasth yaditaila for 35 minutes & Nadiswed a 10 minutes. Matrabasti with Ksheerabal a taila 70ml. nine days</p>		
10	<p>Assessment of ksheerabala taila anuvāsana basti in the management of trika prushtha graha-shoola with special reference to</p>	<p>Patil Dinesh Bansilal/ International Journal of Applied Ayurved Research</p>	<p>Clinical trial was conducted on thirty patients of TrikaPrisht haGraha shoolahavi ng</p>	<p>Ksheerbala taila anuvāsana- Dose- 120 ml in the morning after</p>	30	

	lumbar spondylosis ¹³		lumbar spondylosis	breakfast For 7 days 7,14,21stday.		
11	A study of ksheerbala tail nasya in the management of sandhigat vata with special reference to cervical spondylosis ¹⁴	Dr. Pankaj Kumar Shukla , Dr. Mamata Nakade, and Dr. Mohit Kumar Baghel World Journal Of Pharmaceutical And Medical Research	Single group,pre and post test design.	30 patients selected for treatment with Nasya Karma using 8 drops of Ksheerbala taila in each nostril for 07 days	30	Nasya Karma with Ksheerbalatail a found Highly significant in sandhigat vat (cervical spondylosis)
12	Evaluation of Efficacy of Marma Therapy with Janu Basti in the Management of JanuSandhigata Vata (Osteoarthritis of Knee) ¹⁵	Alka Mishra, Vandana Shrivastavai DEV SANSKRITI: Interdisciplinary International Journal	Single group experiment al study with pre test-post test research design was adopted	Marma Therapy stimulation of four Marma points, i.e. Kshipra, Gulpha, Indravasti and Janu.and JanuBasti on the affected knee joint with, warm (Ksheerbala Taila) for 35 to 40 minutes. int.	20	the present study illustrates the significant efficacy of the administered therapeutic intervention in the management of JanuSandhigata vata, both with regards to short-term relief, and long-term self management.

From the above table the intervention of ksheerbala tail in different way shows varied effect .

Nasya with ksheerbala taila shows benefit in macular degeneration. Dry AMD has slow progression, ksheerbala 101 avarti taila having Rasayana ,jeevaneeya and indriyaprasadana and these properties are vyadhi and doshapratyanika and relevant to treatment principles of dry AMD.

Ardita, primarily is a vata disorder .So the treatment should mainly be emphasized on balya ,brumhana drugs which alleviate Vata,.Navana nasya is described to be the best remedy to pacify vata present in uttamanga (supra clavicular region)Nasya drug via sringataka marma enter brain which is main vital point corresponding to nerve centres responsible for sense organs .

Sandhigat vat .

Matrabasti with ksheerbalataila give benefits in Cerebral palsy,janusandhigatvat,low backache.Anuvasan **basti** with ksheerbalataila shows positive result in sandhigatvat,trikprushtha graham. Ksheerbalataila provides Snehana and brumhana in the body including sandhis.It nourishes kapha by the action of snehana which helps to subside ruksha,khara gunas of morbid vata dosha ,does sandhisanshleshana and gives sthirata for sandhi.By the brimhana action it counteracts the asthi dhatu kshaya taking place in janusandhigatvata .Bala is proved to be having analgesic and anti-inflammatory activities which helps to reduce janushoola and shotha .

Oral administration of ksheerbala taila shows benefit in margavarana janya pakshaghat. The shatpaki ksheerbala taila is a rasayana yoga for all types of vataroga .The rasayana kalpas are best administered for a period of one month for their therapeutic efficacy.Improving the muscle power and strength of the body .It also helped in improving the quality of life of patients. Padabhyanga,and moordhataila procedure with ksheerbala taila give result in insomnia.It produces clarity of sense organs ,confers strength to the voice ,lower jaw and head.It serves to rejuvenate the body and eliminate mental exhaustion .

MoordhaTaila with KsheerabalaTaila when applied on the head, produces clarity of the sense organs, confers strength to the voice, lower jaw and head. It serves to rejuvenate the body and eliminate mental exhaustion ..

ShiroPichu acts systemically by Cellular absorption and circulation and effects on CNS by absorption of Sneha. It has an effect on master gland, the Pituitary and hypothalamus glands, which are associated with many physical and mental functions. Revitalizes the Central Nervous System by enhancing blood supply and nutrition to brain. According to Charak, Sushrut and Vagbhata murdha tail is classical treatment for Nidranash in which shiropichu is one of it.

SarvangaSamvahan with ksheerbalatailagives its benefits when it is done in right manner only. Abhyanga (Massage) augments release of endorphin, which are pain reducing neurotransmitters. Also, Ayurveda states that, when Samvahan is done for specific duration it is beneficial for the body. It enhances the skin, blood, etc. and other Dhatus chronologically, as mentioned in texts.

Case study review table

Sr. no	Title of case study	Authour	Intervention	Result
1	A Single Case study to evaluate the efficacy of Ksheerbala Taila Nasya in the management of Ardita w. s. r. to Bell's Palsy ¹⁶	Bharat G. Ubale, Rajan B. Kulkarni, Eknath GKulkarni , SanjivaniRathod ,Ayurlog National journal of research in Ayurved Science.	1.Mukha abhyanga with Narayanataila and SthanikNadiswed Nasya with Ksheerbalatail 8 drops in each nostril with oral medicine and Other procedures.	NavanNasya followed by the Panchakarma along with oral medicine in the treatment of Bell's palsy (Ardita Vata) has provided significant improvement in this case. After treatment Patient had much relieve in speaking, lagophthalmos and there was improvement in facial muscle movement. Improvement also seen in facial deviation.
2	Importance of Ayurveda In The Management Of Ardita: A Case Report ¹⁷	Priyanka Rani, Ranjana Negi, Gunjan Sharma, Preeti Singh, International Journal of creative research thoughts	Nasya with Kshira balataila, Tarpana with JeevantyadiGhrita, Karnapoorana with Ksheer BalaTaila and Shiropichu with Rasanaaditaila were done along with oral drugs for 28 days	the treatment modalities prescribed for Ardita by Ayurvedic help in breaking down the pathogenesis of disease by pacifying the Vatadosha and thus improving signs and symptoms
3	Management of Ardita Through Ayurveda: A Case Series ¹⁸	Swarnakant Jena, Manish Dhiman, Santosh Kumar	Abhyanga with navneet,and nasya with Ksheerbala Tailand Talam.(Ksheerabala oil and Rasnadichoorna)	provides a way for more clinical trials to evaluate the effect of Navaneeta, and also

		Bhatted, Prasanth Dharma rajan Journal of Indian system of medicine		shows a good effect of OPD basis management of Ayurveda therapies for Arditavata with NavaneetaAbhyanga and Nasya is helpful in alleviating the sign and symptoms found in Bell's palsy (Arditavata) without any side effects
4	Ayurvedic understanding and management of Trigeminal Neuralgia w.s.r. to Anantavaata - A Case Study ¹⁹	Dr. Sugnyani Mathapati, Dr. SM Pasha, Dr. Ahalya S Journal of ayurveda and integrated medical sciences.	Nasya with karpasasthyaadi Taila for 7 days, Shiropichu and Karnapoorana with KsheerabalaTaila, Gandoosha with Murchita Tila Taila and oral medications.	Vaatahara and Brihmana line of treatment has relieved the 80% of the symptoms. Hence there is need to implement the Ayurvedic medicines in larger samples of the disease to draw a concrete conclusion
5	Ayurveda management of Guillain-Barre syndrome: A case report ²⁰	B.R. Tubaki, S. Tarapure Journal of Ayurveda and Integrative Medicine	Treatment with 14 days of various panchakarma procedures and oral administration of Ayurveda medicines for next 151 days s Management was with koshtashodhana, sarvangaabhyanga, shastikashalipindasweda, annalepa, shirotaladharana, niruhabasti, ksheerabalatailaanuvasanabasti.shamanushadhi (oral medicaments).	Ayurveda management of GBS showed amelioration of motor, sensory and sphincter deficits. Treatment with 14 days of various panchakarma procedures and oral administration of Ayurveda medicines for next 151 days showed complete recovery on all

				deficits..
6	Role of KsheeraBala Taila in Mansika Vikara (Manoavasada) 21 -A Case Study ²¹	Saurav Vermal , Shrutee Lodhi and Ashvini KumarInternational journal of Ayu.Pharma .chem	Nasya Ksheerabala Taila DorbalyataAshvagandhaChurna 3gm BD with milk After food Disturb sleep Saraswataristha 15ml BD with equal quantity of water after food Indriyadorbalayta Manasmitragulika 1tab BD with honey after food	This case study is explained about importance of Ksheerabala Taila Nasya in Mansika Vikara (Manavasada)

Animal study :In this study 2 samples of of ksheerbalataila were prepared from Sidacordifolia Linn.and sidaretusalinn. respectievely and both were tested for anticonvulsant effect in Wistar Albino rats.The oxidative stress is the most prominent mechanism in the development and progression of epilepsy and other diseases including alzheimer’s disease,chronic degenerative diseases,stroke,RA,diabetes,and cancer.The presence of antioxidant prevents the possible damage of neurons occurring from repeated seizures.Ksheerbalataila has established to emolliate oxidative stress in rat brain.²²

Conceptual study

1.In this study efficacy of Sarvanga samhavan and shiropichu with ksheerbalataila is compare .this is concept based study ²³

2.Menopause is a Physiologically occurring process.As age advances dhatukshaya occurs by the result of increase in vata .Matrabasti with Ksheerbalataila for all the post menopausal women as a regular practice will be beneficial for the suppression of aggravated vata .Ksheerbalataila having phytoestrogens,analgesic,antioxidant,etc .and all other properties that when administered in basti form shows its systemic effect on the body ²⁴

Discussion : Ksheerabala Taila suppresses nerve inflammation due to its sheet property and promotes nerve regeneration and gives strength to muscles due to its balya and brimhana properties of its drug .It helps in the wear and tear of nervous and muscular tissues.

The action of ksheerbalataila could be analyzed according to the rasa panchaka of its ingredients.all the three ingredients having madhur rasa and vipaka ,which is vata and pittashamaka ,gives strength to tissues and is good for sense organs and pleasing to mind.It nourishes to body .It is said to have effects on all eighty chronic conditions of vata origin..Vata nanatmaja vikara such as Akshepaka ,vepathu,vishada,insomnia.In the treatment of epilepsy ,it is being utilized as a rasayana drug the continuous administration of this formulation prevents the release of abrupt electric discharges and improves the physical and mental condition of the patient.Recent researches has showed that it reduces oxidative stress in rat brain.and hence proven effect on neurotoxicity.Oxidative stress is the most

important mechanism in the development and progression of epilepsy and other diseases including Alzheimer's disease, chronic degenerative disorders, stroke, rheumatoid arthritis, diabetes and cancer. The presence of flavonoids in *Sida cordifolia* has been confirmed by phytochemical analysis and these as well as their glycosides exert anxiolytic, sedative and anticonvulsant effects on the central nervous system. The presence of antioxidants prevents the possible damage to neurons.

CONCLUSION :

Different methods of preparation of *ksheerbala taila* are described in many texts and numerous studies have been conducted regarding the clinical efficacy of *ksheerbalataila*. It reduces inflammation and pain in joints so it is beneficial in degenerative diseases such as osteoarthritis. It also provides strength to the muscles and increases their vitality. It provides required nutrition to muscles and bones. Therefore it prevents muscular wasting and it is very beneficial in wasting muscle, muscular atrophy and fibromyalgia. *Ksheerabalataila* is an important oil formulation and there is a need to conduct more scientific studies on *ksheerbalataila* in order to prove its efficacy on various neurological disorders as *basti*, *nasya*, *Abhyanga*, *pana*, *moordhataila*, *kaval*, etc. according to the need of patient.

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