International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

ISSN:2347-6567

IJAMSCR |Volume 5 | Issue 1 | Jan - Mar – 2017
www.ijamscr.com

Research article *Medical research*

Vedanasthapak drugs and its importance in pain management

Jyotirupa Sarmah*[1], Bhabesh Das[2]

[1]*Ph.D. Scholar, Srimanta Sankaradeva University of Health Sciences, Guwahati, Assam - 781032/India*
[2]*Principal & HOD, Dept. of Shalya Tantra, Govt. Ayurvedic College, Guwahati, Assam - 781014/India*
***Corresponding author: Jyotirupa Sarmah**
Email: jyotirupasarmah198@gmail.com

ABSTRACT

In Ayurveda, 50 different groups of drugs are mentioned to be used in different conditions. Among these 50 groups, Vedanasthapak group is a class of drugs which eliminates physical pain and restores the body to its normal state. In this present study some of Vedanasthapak drugs mentioned in Charak Samhita will be discussed. Also some facts regarding a clinical trial to evaluate the analgesic action of some vedanasthapak drugs will be highlighted. . A study has been carried out to evaluate the effect of Vedanasthapak drugs in pain management. To study the analgesic effect of Vedanasthapak drugs, the pain mainly concerned with musculoskeletal system i.e joint pain associated with Osteoarthritis was considered. For this study 40 patients were selected having age group 15year to 70 years. The trial drug was prepared in the form of tablet 500 mg having equal proportion of the drugs Sala(Shorea robusta Gaertn.f), Kadamba(Anthocephalus indicus A.Rich), Sirisa (Albizzia lebbeck Benth),Ashoka(Saraca indica) and given in the dose of 1 gm thrice daily. A fine powder of all these drugs in equal proportion was prepared for local application. The analgesic effect is compared with the control drug Diclofenac sodium 50 mg and Diclofenac gel for local application. The results are encouraging with fewer side effects.

Keywords: *Ayurveda, Vedanasthapak, Analgesics, Joint pain, Osteoarthritis.*

INTRODUCTION

Ayurveda is a science of life which imparts knowledge about life with special reference to its four aspects i.e. useful, harmful, happy and unhappy life [1]. This indigenous science of life is mainly composed of eight branches of which the clinical part is mainly related with Shalya, Shalakya, Kayachikitsa [2], Prasutitantra and Kaumarvritta. In entire Ayurveda different types of diseases has been described and pain (vedana) is one of the important symptoms of almost all diseases [3].

The origin of pain has been considered with the origin of life. Ayurveda considering all aspects of life has given much emphasis to the pain and its consequences [4]. That is why at many places measure to pacify pain and establishment of pleasure has been described .References of ancient literature spell the scientific knowledge of pain and its consequences to our ancient scholars [5].

In Ayurveda, 50 different groups of drugs are mentioned to be used in different conditions. Among these 50 groups, Vedanasthapak (Ch/Su/4/8) group is a class of drugs which

eliminates physical pain and restores the body to its normal state [6-9].

In Ayurveda, 'Vedana' word has been used to indicate feeling or sensation. It is said to be of two type – Sukhatmak (pleasant feeling/ sensation) and Dukhatmaka (unpleasant feeling/pain). Those which remove Dukhatmaka vedana and maintaining well being are called as Vedanasthapak dravya [10-12].

The International Association for the study of pain (IASP) has defined pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. Pain is of two main types- (i) Nociceptive pain and (ii) Neuropathic pain .A drug that selectively relieves pain in acting in the CNS or on peripheral pain mechanisms, without significantly altering consciousness is known as analgesic [13-14].

Pharmacological pain management mainly includes use of Non opioid and opioid analgesic. But these also impart some side effect e.g. opioid may cause side effects like constipation, Dry mouth, Nausea [15], Vomiting, sedation etc. Again non opioids may cause gastric ulcer and bleeding. So there is a greater emphasis on Non pharmacological and complementary treatment [16].

In this present study some of Vedanasthapak drugs mentioned in Charak Samhita will be discussed [17-18]. Also some facts regarding a clinical trial to evaluate the analgesic action of some vedanasthapak drugs will be highlighted [18].

AIMS AND OBJECTIVES

1. To study some of the Vedanasthapak drugs.
2. To highlight some facts regarding a clinical trial to evaluate the analgesic action of Vedanasthapak drugs on Osteoarthritis pain

STUDY OF VEDANASTHAPAK DRUGS

This group includes the following drugs

1. Sala (Shorea robusta Gaertn.f)
2. Katphala (Myrica nagi Thunb)
3. Kadamba (Anthocephalus indicus A. Rich)
4. Padmaka (Prunus cerasoides D. Don)
5. Tumba (Xanthoxylon alalum Roxb)
6. Mocarasa (Resin of Salmalia malabarica Schott and Endl)
7. Sirisa (Albizzia lebbeck Benth)
8. Vanjula (Salix caprea Linn)
9. Elavaluka (Brunus cerasus Linn)
10. Asoka (Saraca Indica)

SHALA

Botanical name

Shorea robusta Roxb ex gaertn. F.

Natural order

Dipterocarpaceae.

Classical names

Shala, Salasara, Sarja, Shatyashambara etc.

Vernacular names

Eng. Sal, Sal tree, common sal, Indian dammer.
Hindi: Sal, Shal, Sakhu, Salwa, Sakoh, Ral, Dhuna, Dimar, Sakhua, Sakher, Bang-sal, Sakhu.

Botanical Description

Large sub-deciduous tree, 18-35 (-55) m high, 2-3 (-6) m in girth having smooth, grayish, reddish brown to dark brown bark which is deeply furrowed longitudinally. On tapping the tree exudes a white liquid on oleo-resin which turns brown on drying. Heartwood pale brown to dark reddish brown. Leaves large, 10-30 cm x 5-18 cm ovate oblong. Flowers pale yellow or cream colored. Fruit 1-1.5 cm long, ovoid, reddish to pale yellowish green, with wing like persistent sepals, 5-7 cm long, wings linear. 10 nerved, obtuse, seed one, ovoid. Flowering and fruiting time is January-June.

Distribution

The sal tree is widely distributed in India covering approx 13.3% of the total forest area in the country from the plains up to 900-1700 m attitude covering part of North East and central India. It is also distributed in Nepal and Bhutan.

Part used

Resin, Stem Bark, leaf, heart wood, fruit, flower.

Ayurvedic Properties

Rasa - Kashaya, Madhura
Guna - Ruksha

Virya -Sita
Vipak - Katu
Prabhav - Vedanasthapana
Doshaghnata -Pittakaphasamak

Doses

Gum resin- 1-3 gm
Heartwood –50-100ml
Flower-3-5 gm

Formulation & Preparation

Sarjaparpati, Ayaskriti, Salsaradi kwath, Sarjarasadi Malahara, Atasyadi lepa, Panchaguna taila, chandanadya taila.

KADAMBA

Botanical Name

Anthocephalus cadamba (Roxb) Miq.
Syn. Anthocephalus chinensis (Lamk) A. Rich ex Walp, Anthocephalus indicus A.Rich.
Natural order: Rubiaceae
Classical Name: Kadamba, Neepa, Priyanka, Halipriya

Vernacular Names

Eng . Kadam. Hindi- Kadam, Kadamba. Beng- Kadam..

Botanical description

A medium sized tree, about 15-20m high, dense and shady. Leaves are shiny with dark venation. Flowers are small, orange to yellow, in terminal, solitary globose heads. Fruits like small balls, hard and taste sweet and sour when ripe.

Varieties

3 Varieties are mentioned in Raja Nighantu Viz (1) Dhara Kadamba (its flower bloom in monsoon) (2) Dhooli Kadamba (its flowers bloom in spring) and Bhoomi kadamba (having small flowers).
Distribution

The tree is frequently found in moist and warm type of deciduous and evergreen forests. It is found in the Sub-Himalayan tract from Nepal eastwards on the lower hills of Darjeeling tarai in west Bengal, in Karnataka Kerala (on the west coast) and in the Western Ghats.

Part used

Bark, leaf, fruits, root.

.
Ayurvedic Properties
Rasa- Kashaya, Madhura, Lavana.
Guna- Ruksha
Virya-Sita
Vipak-Katu
Prabhava- Vedanasthapana
Doshaghnata- Vatapittasamak

Doses

Bark powder-3-6gm
Fruit Juice-10-20ml
Decoction-50-100ml
Formulations and Preparations
Nyagrodhadi kwath, Churna, Grahanimihira Taila.

SHIRISHA

Botanical Name: Albizia lebbeck (Linn) willd
Natural order: Mimosaceae
Classical names: Shirisha, Mridupushpa, Shukataru, Shukapriya, Kapitana, Bhandi, Bhandira, Mandila.
Vernacular names: Eng. Siris tree, Hindi- Siris, Siras, Beng-Sirish,.

BOTANICAL DESCRIPTION

This tree is big and tall and has a height of 17-20 meters. Leaves compound, unctuous and hairy. Leaflet-wide and there are 4 to 8 pairs. Flowers are white, fragrant and tender. Legune 15-30 cm long, 1.5 to 3cm wide, flat, tough and contains 6 to 10 seeds which rattle when died. Seeds are brownish in color, flat and circular. In winter the leaves shed. Flowering season is monsoon and fruits come in spring (Legume)

Types: Two types are

1) White
2) Black (dark)
   Out of these ,white is rare, its bark and stalk are white.
   Black Shirish is found abundantly and its bark is black.

Distribution

All over India, upto 900 m in the Himalayas.

Parts Used

Bark, flower, seed, leaf.

Ayurvedic Properties

Rasa- Madhura, Tikta, Kashaya
Guna- Laghu, Ruksha, Tikshna
Virya- Sita
Vipak- Katu
Doshaghnata- Tridoshasamak.
Doses : Bark Powder-3-6 gm
Seed Powder-1-2 gm
Leaf juice- 10-20ml
Decoction- 50-100ml

Formulations

Mahasirisa agada, Sirisarista.
Gana (Groups)
Vishaghna, Vedanasthapana, Sirovirechana, Kasayaskandha (Charaka Samhita) Satasaradi (Susruta Samhita)

ASHOKA

Botanical Name: Saraca asoca (Roxb) de wilde.
Natural Order: Caesalpiniaceae.
Classical Names: Ashoka, Hemapuspa, Tamrapallava, Vanjula, Kankeli, Pindapuspa etc.
Vernacular Names: Eng. Ashoka, Hindi-Asok, Asoka, Ashoka, Anganapriya, Beng-Asok.
Botanical Description: A medium sized evergreen tree, 6-8 m in height with numerous spreading and drooping glabrous branches. Leaves pinnate, leaflets 4-6 pairs, oblong or oblong lanceolate. Flowers orange or orange yellow in color. Seeds 4-8, ellipsoid oblong, compressed. The bark is dark brown to grey or black with a warty surface, fresh cut ends are pale yellowish red.

Distribution

It occurs about throughout India up to an altitude of 750m in the central and in the eastern Himalayas and Khasi, Garo and Lushai hills, wild in Chittagong, Bihar, Orissa, Konkan, Decan, Mysore, and Travancore.
Part Used: Stem bark, Flowers, seeds.

Ayurvedic Properties

Rasa-Kashya, Tikta
Guna- Laghu, Ruksha.
Virya- Sita
Vipak-Katu
Doshaghnata- Kaphapittashamaka.

Doses

Bark decoction-50-100ml
Seed powder -3-6gm
Flower powder- 3-6gm
Formulation and Preparations
Ashokarista, Ashoka Ghrita, Madhukadyavaleha, Devadarvyarishta, Mahamarichyadi taila, Pradarari rasa, Kasisadi Tail.

CLINICAL TRIAL TO EVALUATE ANALGESIC ACTION OF VEDANA STHAPAK DRUGS

A study has been carried out to evaluate the effect of Vedanasthapak drugs in pain management. To study the analgesic effect of Vedanasthapak drugs, the pain mainly concerned with musculoskeletal system i.e. joint pain associated with Osteoarthritis was considered. For this study 40 patients were selected having age group 15year to 70 years. The trial drug was prepared in the form of tablet 500 mg having equal proportion of the drugs Sala(Shorea robusta Gaertn.f), Kadamba(Anthocephalus indicus A.Rich), Sirisa (Albizzia lebbeck Benth),Ashoka(Saraca indica) and given in the dose of 1 gm thrice daily for 21day . A fine powder of all these drugs in equal proportion was prepared for local application.Follow up was done in the interval of 7 days. The analgesic effect is compared with the control drug Diclofenac sodium 50 mg and Diclofenac gel for local application. All the 40 patients were divided into two group A1 and A2. Group A1 was receiving control drug and Group A2 was receiving trial drug.

RESULTS

Evaluation of combined analgesic effect of vedanasthapak drugs orally and locally in joint pain management in osteoarthritis.

Table: 1 Data showing assessment of pain in Group – A1

Pain Assessment	Mean	N	Std. Deviation	Std. Error Mean	t-value	df	Significance
Before treatment	2.45	20	.686	.153	13.077	19	P<.01
Followup – 1	1.25	20	.851	.190			

Before treatment	2.45	20	.686	.153	14.419	19	P<.01
Followup – 2	.50	20	.607	.136			
Before treatment	2.45	20	.686	.153	17.962	19	P<.01
Followup – 3	.40	20	.503	.112			
Followup-1	1.25	20	.851	.190	5.252	19	P<.01
Followup-2	.50	20	.607	.136			
Followup-1	1.25	20	.851	.190	5.667	19	P<.01
Followup-3	.40	20	.503	.112			
Followup-2	.50	20	.607	.136	.809	19	P<.05
Followup-3	.40	20	.503	.112			

Pain

The above data shows that initial mean and ± SD for Group A1 is 2.45 ± 0.686 which after 21 days of treatment was reduced to 0.40 ± 0.503. The improvement of pain was statistically significant (P<0.01).

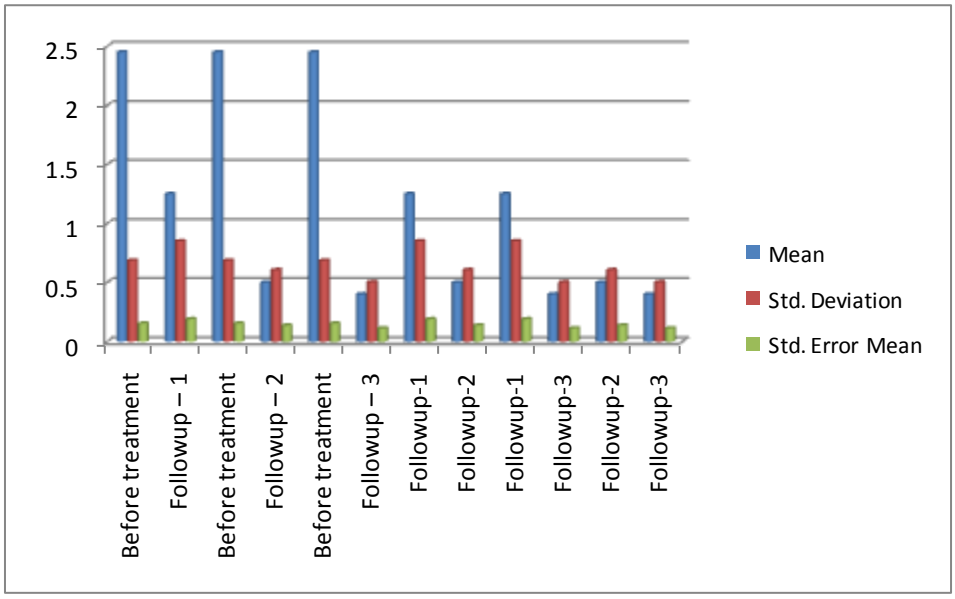

Fig.-1 Data showing assessment of pain Group A1

Table: 2 Data showing assessment of pain Group A2

	Mean	N	Std. Deviation	Std. Error Mean	t-value	df	Significance
Before treatment	2.35	20	.671	.150	10.376	19	P<.01
Followup – 1	1.50	20	.607	.136			
Before treatment	2.35	20	.671	.150	15.079	19	P<.01
Followup – 2	.70	20	.571	.128			
Before treatment	2.35	20	.671	.150	14.226	19	P<.01
Followup – 3	.60	20	.598	.134			
Followup-1	1.50	20	.607	.136	8.718	19	P<.01
Followup-2	.70	20	.571	.128			
Followup-1	1.50	20	.607	.136	7.285	19	P<.01
Followup-3	.60	20	.598	.134			
Followup-2	.70	20	.571	.128	1.453	19	P<.163
Followup-3	.60	20	.598	.134			

A2 TABLE

Again the above data shows that initial mean and ± SD for Group A2 was 2.35 ± 0.671 which after 21 days of treatment was reduced to 0.6 ± 0.598. The improvement of pain was statistically significant (P<0.01).

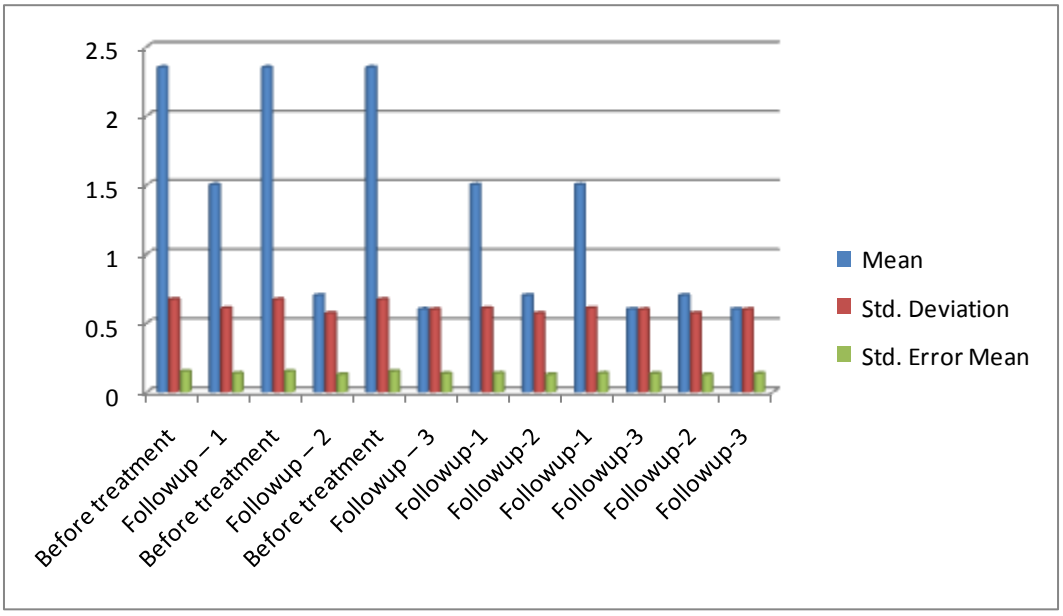

Fig.-2 Data showing assessment of pain Group A2

Comparison of Pain control between Group A1 and Group A2

	Category_A	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Difference	t	df	P
BT_PAIN	A1	20	2.45	.686	.153	0.100	.215	.466	38	P>0.01
	A2	20	2.35	.671	.150					
F.U. 1	A1	20	1.25	.851	.190	0.250	.234	1.07038		P>0.01
PAIN_AT	A2	20	1.50	.607	.136					
F.U. 2	A1	20	.50	.607	.136	0.200	.186	1.07338		P>0.01
PAIN_AT	A2	20	.70	.571	.128					
F.U. 3	A1	20	.40	.503	.112	0.200	.175	1.14538		P>.01
PAIN_AT	A2	20	.60	.598	.134					

When the effect was compared between both groups it was not found significant

CONCLUSION

The data obtained in the clinical study have been analyzed and conclusion can be made in following way. All total 40 Osteoarthritis patients were studied for pain control by control drug and trial drug. Out of the 40 patients maximum patients were found from age group 61-70years of female gender, Hindu religion. Maximum patients were housewives and from lower socio economic status and from rural area. Majority of cases were literate, married and not addicted to anything. Most of the cases were non-vegetarian and having moderate nourishment.

All the 40 patients selected for study manifested classical signs and symptoms of Osteoarthritis. In this study the prime focus was on pain control and both the drugs have shown significant effect on pain control. When the effect was compared

between control and trial drug insignificant difference was observed in pain control. Finally it can be concluded that the specific Vedanasthapak drugs selected in this study i.e. Sala, Kadamba, Sirish and Ashoka has analgesic action.

REFERANCES

[1]. Charaka Samhita, Eng.Translation by R.K. Sharma& Bhagawan Dash, Chowkhamba Sanskrit Series Office, 2009.
[2]. Susruta Samhita,Eng. Translation of text and Dalhan`s commentary along with critical notes by P.V. Sharma ,Chaukhambha Visvabharati, 2004.
[3]. Singh R.H (1998): The Holistic Principle of Ayurvedic Medicine, Pub Chaukhambha Surbharati, New Delhi.
[4]. Sharma P.V. (2003): Vagbhata Vivechan, Chaukhambha Visvabharati.
[5]. Gupta L.P. (1996): Essentials of Ayurveda, Chaukhamba Sanskrit Pratisthan, Delhi.
[6]. Srikantha Murthy K.R. (1995): Astanga Sangraha of Vagbhata, Chaukhambha Orientalia, Varanasi.
[7]. Ranade S.,Joshi R.,A Text Book of History of Ayurveda, Chaukhamba Sankrit Pratisthan, 2008.
[8]. .Sharma P.V. (1999): Ayurved Ka Vaijnanika Itihasa, Chaukhambha Orientalia.
[9]. Boon, N.A. College, N.R. & Walker, B.R. : *Davidsons Principles & Practice of Medicine*, 20th Ed. Edinburg London New York Philadelphia, Churchill Living stone.
[10]. Eugene Barunwald, Stephen I. Hauser Anthony S. Fauci, Dan L. Longo, Dennis L. Kasper and J. Larry Jameson (2003). *Harrisons Principle of Internal medicine*.
[11]. .Mishra, B.: *Bhavaprakash; Nighantu*, 11, 2007, Varanasi, Chaukhambha Sanskrit Bhavan.
[12]. Sarma, P.V.: 2001, *Dravya Guna Vigyan*, Varanasi, Chaukhamba Bharati Academy.
[13]. Sastri, A. : 2005, *Susruta Samhita*, 1st Ed. Gopal Mandir Lane, Varansi, Chaukhamba Bharati Academy
[14]. Sastri, K. Chturvedi, G.N.: 2001, *Charak Samhita*, 1st Ed. Gopal Mandir Lane, Varanasi, Chaukhambha Bharati Academy.
[15]. Sastry, J.L.N. *Dravya Guna Vigyan*, 2, 2005, Varanasi, Chaukhyamba Sanskrit Bhavan.
[16]. Singh, R.H.: *Ayurvedia Nidan Chikitsa*, 3, 2001, Varanasi, Chaukhamba, Amarbharati Prakashana.
[17]. Sukla, B. 2003: *Kaya Chikitsa*, Varanasi, Chaukhamba Surbharati Prakashan.
[18]. Tripathi Brahmanand (2003) *Astanga Hridayam* of Srimadvagbhatta, Chaukhamjba Sanskrit Pratisthan, Delhi.
[19]. Tripathi KD 1999: Essential of Medical Pharmacology, JP Brothers Medical Publishers (P) LTD.

How to cite this article: Jyotirupa Sarmah, Bhabesh Das. Vedanasthapak drugs and its importance in pain management. Int J of Allied Med Sci and Clin Res 2017; 5(1): 137-143.
Source of Support: Nil. **Conflict of Interest:** None declared.