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A CRITICAL REVIEW ON THE KSHEERA YOGA IN THE MANAGEMENT OF SHOTHA: A LITERARY REVIEW

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ABSTRACT

In general any kind of swelling over the body surface is termed as the shotha. Any kind of swelling or inflammation comes under the term *shot*ha. In detail description of the shotha is present in Ayurvedic literature. The *Yogaratnakar* mentioned that the milk processed with the Devadaru, Punarnava, and Shunthi is useful in the *Shotha*.

Keywords: *Shotha, Devadaru, Punarnava, Shunthi*, Milk.

INTRODUCTION

In Ayurvedic literature, the shotha has been described vividly in context with its causative factor, classification, symptomology, management, and prognosis. Shotha is a condition characterized by the Elevation of the body surface.[1] Shotha, Shwayathu, Shopha, and Utsedha are synonymous with the word Shotha. Due to different Aharaja and Viharaja Nidanas, Doshas get vitiated, and vitiated Vata takes Kapha, Rakta, and Pitta to Bahya Siras, as a result of which the passage gets obstructed which spreads to the nearby areas, thereby causing oedema (Shotha) characterized by swelling.[2] As per the causative factor and occurrence the shotha has been described in various types. In the Ayurvedic literature, the different preparations and principles are described for the management of shotha. The Yogaratnakar has described the one

preparation of milk in the management of Shotha. The milk processed with the Devadaru, Punarnava, and and Shunthi is beneficial in the management of Shotha.[3] The present work is a literary review about this ksheera yoga for the critical analysis of the ingredients of this preparation in relieving the shotha.

Aim and Objectives:

Aim: The critical analysis of the Ksheera, Devadaru, Punarnava, and Shunthi in relieving the shotha.

Objectives:

1. To review the classification of Shotha from Ayurvedic literature
2. To review the properties of the Ksheera, Devadaru, Punarnava, and Shunthi from Ayurvedic literature and recent research articles.

Materials and Method: The Classical Ayurvedic Literature viz., Charaka samhita, Sushruta samhita, Ashtang Hradaya, Madhavanidana, Yogaratnakar, Bhavaprakasha Nighantu and other Ayurvedic textbook**,** Online research papers, articles. Method: Literary study.

Observations:

The Shotha has been described in detail in Ayurvedic literature. The classification of shotha among the Ayurvedic literature is found as:

Charaka:[4] The many fold classification has been described in Charaka samhita, *Ekavidha* – As Swelling being the common symptom.

Dwividha - As per the causative factors the shotha is being classified into *Nija, and Agantuj*.

Trividha – i.e as per the involvement of doshas the three fold classification is described as *Vataj, Pittaj, Kaphaj*

ii. Urdwagata, Madhyagata, Adhogata, Chaturvidha - Vataj, Pittaj, Kaphaj, Agantuj

Saptavidha - Vataj, Pittaj, Kaphaj, Sannipataj, Vata Kaphaja, Pitta Kaphaja, Vata Pittaja

Asthavidha – Vataj, Pittaj, Kaphaj, Sannipataj, Vata Kaphaja, Pitta Kaphaja, Vata Pittaja, Agantu.

Vagbhata: [5] *Vataj, Pittaj, Kaphaj, Sannipataj, Vata Kaphaja, Pitta Kaphaja, Vata Pittaja Abhighataj, Vishaj*. Two-fold classification- *Sarvangaj, Ekangaj*.

Sushruta: [6]

Vataj, Pittaj, Kaphaj, Sannipataj, Vata Kaphaja, Pitta Kaphaja, Vata Pittaja, Vishaj.

The etiological factors of the shotha from the Ayurvedic literature are summarized below.[1,4,5,6] Neej Hetu of Shotha are classified as *1) Aharaj 2) Viharaj 3) Upadrava*

Samanya Hetu

Hetus as follows.

Rasapradhanya: Excessive Lavan and Amla rasas causes Kapha, Pitta and Rakta dushti.

Gunapradhanya: Excessive Guru (heavy and difficult to digest), excessive Ruksha (dry), Ushna anna, excessive Tikshna, Vidahi, Abhishyandi

The Yogaratnakar has mentioned that the milk processed with the Devadaru, Punarnava, and Shunthi is beneficial in the management of Shotha.[3]

Devadaru:[7,8]

Table no.1: Properties of Devdaru

Latin Name	Cedrus deodar (Roxb) Loud
Family	Pinaceae
Rasa	Tikta, Katu, Kashaya
Guna	Ruksha, Laghu
Virya	Ushna
Vipaka	Katu
Karma	Kaphavatahara, Deepana
Chemical composition	Essential oil from wood- p-methylacetophenone, atlantone, sesquiterpenes(alpha and beta himochalene, himachalol), steam bark- deodarin, toxifolin.

A total of 41 compounds were studied with the help of Gas chromatography-mass spectrometry (GC-MS). The components of Cedrus deodara are thujopsene (28.23%), α-cedrene (17.01%), and cedrol (15.55%). The active ingredients in Cedrus deodara essential oil have anti-inflammatory and antioxidant effects. This is an ideal additive for anti-inflammatory drugs.[9] The effect of *Cedrus deodara* wood oil on carrageenan-induced edema is significant in doses of 50 and 100 mg/kg. The anti-inflammatory effect of the extract was significant.[10]

Punarnava:[11,12]

Table no.2: Properties of Punarnava

Latin Name	Boerhavia diffusa Linn.
Family	Nyctaginaceae
Rasa	Madhura, Tikta, Kashaya
Guna	Laghu, Ruksha
Virya	Ushna
Vipaka	Katu
Karma	Kaphavatahara, Shothahara, Vayasthapana, Deepan
Chemical composition	Hentriacontane, beta sitosterol, oxalic acid, D- glucose, punarnavoside, punarnavine-1, punarnavine-2, boeravinones A B C

The analgesic property of aqueous extracts obtained from *B. diffusa*, mainly from the leaf juice of the plant. The mechanism underlying this analgesic effect remains unknown, but the aqueous extract obtained from leaf juice is endowed with an apparently morphinomimetic central analgesic property[13.] The aqueous and acetone extracts of the root, showed significant anti-inflammatory activity against carageenan-induced oedema and formaldehyde-induced arthritis in albino rats. The aqueous extract and an alkaloid significantly inhibited the increased serum amino transferase activity in arthritic animals similar to hydrocortisone [14] .The water-insoluble alcoholic extract of different parts of the plant viz., root, stem, leaves, and flowers and plant was studied for anti-inflammatory activity against carageenan-induced oedema in rats and for diuretic activity. The root and leaves were found to be the most active.[15] The effect of extract obtained from the root was studied on experimental acute pyelonephritis in rats. It reduced the inflammatory changes as well as the abscess formation in the kidneys of animals infected with inoculation of *Escherichia coli*. It also reduced the bacterial count in the urine samples of infected animals[16.]

Diuretic: *Boerhaavia diffusa* exhibited diuretic activity in toads. It depressed kidney tissue slice respiration but did not affect kidney phosphatase. It stimulated the activity of kidney d-amino acid oxidase.[17] "Punarnava" decoction showed good diuretic activity in rats in a dose of 1 mL 100 $g^{-1}$with normal saline on alternate days for over 15 days period.[18]

Shunthi:[19,20]

Table no.3: Properties of Shunthi

Latin Name	Zingiber Officinale
Family	Scitaminae
Rasa	Katu
Guna	Guru, Ruksha, Tikshna
Virya	Ushna
Vipaka	Madhura
Karma	Vata kapha hara, Dipana, Bhedana
Chemical composition	Alpha curcumene, beta- D- curcumene, beta bourbornene, d-borneal, citral, d- camphenecitronellol

Shunthi: The analgesic effects of ginger essential oil in the acetic acid writhing model showed that 100, 500, and 1000 mg/ kg ginger essential oil inhibited the writhing reflux by 13.1%, 70.64%, and 92.15%. The analgesic effects of 500 mg/kg ginger essential oil was comparable with 10 mg/kg aspirin. The antinociceptive effects of ginger essential oil are strong and are related to the inhibition of arachidonic acid metabolite synthesis by cyclooxygenase inhibition.[21] Evaluating the anti-inflammatory/analgesic effects of ginger essential oil (2%) in Male Sprague rats by Randall Selitto assay exhibited that ginger essential oil significantly increased the threshold of the hind paw for 1 h. Counting the c-Fos positive spinal neurons in rat's spinal cords showed ginger essential oil completely suppressed the pressure induced in the dorsal horn of the spinal cord, which implicating that the inhibitory effects of ginger essential oil on pain transmission in primary sensory neurons of the dorsal root ganglia or at the spinal cord level. The suppressor effects of ginger essential oil on Complete Freund's Adjuvants-induced-paw edema implicated in its anti-inflammatory effects[22]. The analgesic effects of ginger essential oil were investigated again in mice using a hot plate and acetic acid test. 0.25-1 g/kg ginger essential oil had significant analgesic effects in the hot plate and acetic acid test.[23]

Ksheera:[24,25]

Table no.4: Properties of Ksheera

Latin Name	
Family	
Rasa	Madhura
Guna	Guru, Snigdha
Virya	Sheeta
Vipaka	Madhura
Karma	Balya, Bruhana, Vayasthapan, Rasayan.

Milk:[26] The fat-soluble vitamins A, D, E, and K along with essential fatty acids such as linoleic and linolenic acid are found within the milk fat portion of the milk. Calcium, phosphate, magnesium, sodium, potassium, citrate, and chloride are all included and they typically occur at concentrations of 5–40 mm.

DISCUSSION

This yoga is a combination of guru, snigdha, laghu, ruksha, tikshna guna. Two drugs are having the ushna veerya madhura vipaka and one drug is having the Sheeta veerya, Katu vipaka. The Punarnava does the kledanirharana through its diuretic action. Shunthi does the aamapachana and rasayan minimizes the kleda production. Devadaru by its laghu ruksha properties does the depletion of kleda. By all these methods this combination Shunthi minimizes the production of kleda, Devadaru does the depletion of kleda, and Punarnava removes the kleda from the body, thus samprapti vighatana of shotha occurs. Therefore, this yoga is excellent in the management of shotha.

A recent study has also shown the different activities of these drugs. The Cedrus deodara has anti-inflammatory and antioxidant effects. The Boerrhavia Diffusa showed significant anti-inflammatory activity and diuretic activity. The Zingiber officinale showed anti-inflammatory and analgesic effects.

CONCLUSION

Shotha is a disorder described in all the Ayurvedic classics vividly. Shunthi minimizes the production of kleda, Devadaru does the depletion of kleda, and Punarnava removes out the kleda from the body, thus Sampraptivighatana of shotha occurs. Therefore, this yoga is excellent in the management of shotha. These drugs have shown the analgesic and anti-inflammatory effects. Thus, the milk processed with

the Devadaru, Punarnava, and Shunthi is beneficial in the shotha.

REFERENCES

1. Yadunandan Upadhyaya, Madhavanidana of Madhavakara, part II, Chaukhambha Sanskrit sansthan, Varanasi, 26th edition, 1996, Chapter 36, p.n. 46.
2. Jadavaji Trikamaji Acharya, Charakasamhita by Agnivesha, revised by Charaka and Dridhabala, Chaukhambha Sanskrit sansthana, Varanasi, fifth edition, 2001, Chikitsasthana, Chapter 12 p.n.482.
3. Brahmashankar Shastri, Yogaratnakar, by Laxmipati Shastri, Chaukhambha Sanskrit Sansthan, Varanasi, seventh edition 2002, *Uttarardha, Shotha Chikitsa*, p.n. 129
4. Jadavaji Trikamaji Acharya, Charakasamhita by Agnivesha, revised by Charaka and Dridhabala, Chaukhambha Sanskrit sansthana, Varanasi, fifth edition, 2001, Chikitsasthana, Chapter 12 p.n.483.
5. Yadunandan Upadhyaya, Ashtangahridayam of Vagbhata, Nidanasthana, Chapter 13, Chaukhambha prakashana, Varanasi, reprint 2019, p.n. 364,365
6. Ambikadatta Shastri, Sushruta Samhita, Part I, Chikitsasthana, Chapter 23, Chaukhambha Sanskrit sansthana, Varanasi, fourteenth edition, 2003, p.n. 103
7. Dr. J. L. N. Shastry, Dravyaguna Vignana, Vol II, Chaukhambha orientalia, Varanasi, reprint edition 2015,p.n.507
8. G.S. Pandey, Bhavaprakasha Nighantu of Bhavamishra, Chaukhambha Bharati Academy, Varanasi, ninth edition, 1993, p.n.196
9. Yu Chen et al., Essential Oils of *Cedrus deodara* Leaves Exerting Anti-inflammation on TPA-induced Ear Edema by Inhibiting COX-2/TNF-α/NF-κB Activation, Journal of Essential Oil-Bearing Plants, 23:3, 422-431
10. U. A Shinde et al, Studies on the anti-inflammatory and analgesic activity of *Cedrus deodara* (Roxb.) Loud. wood oil, Journal of ethnopharmacology, vol 65, issue 1, page 21-27
11. Dr. J. L. N. Shastry, Dravyaguna Vignana, Vol II, Chaukhambha orientalia, Varanasi, reprint edition 2015, p.n. 437
12. G.S. Pandey, Bhavaprakasha Nighantu of Bhavamishra, Chaukhambha Bharati Academy, Varanasi, ninth edition, 1993, p.n.423
13. Hiruma Lima et al., The juice of fresh leaves of *Boerhaavia diffusa* L. (Nyctaginaceae) Markedly reduces pain in mice. J. Ethnopharmacol., 71: 267-274.
14. Bhalla et al., Antiinflammatory and biochemical study on *Boerhaavia diffusa*, J. Res. Indian Med., 6:11-15
15. Mudgal V., Comparative studies on the anti-inflammatory and diuretic action with different parts of the plants *Boerhaavia diffusa* Linn. J. Res. Indian Med., 9:57-59
16. Singh et al., Effect of *Boerhaavia diffusa* L. in experimental acute pyelonephritis in albino rats. Indian drugs, 26:10-13
17. Chowdhury et al., Studies on *Boerhaavia diffusa* Linn. Effects on diuresis and some renal enzymes. Ann. Biochem. Exp. Med., 15:119-126
18. Singh et al., Recent approach in clinical and experimental evaluation of diuretic action of Punarnava (B. diffusa) with special reference to the nephritic syndrome. J. Res Educ. Indian Med., 11:29-36
19. Dr. J. L. N. Shastry, Dravyaguna Vignana, Vol II, Chaukhambha orientalia, Varanasi, reprint edition 2015, p.n. 519
20. G.S. Pandey, Bhavaprakasha Nighantu of Bhavamishra, Chaukhambha Bharati Academy, Varanasi, ninth edition, 1993, p.n. 13,14
21. Jeena K et al, Antioxidant, anti-inflammatory and antinociceptive activities of essential oil from ginger. Indian J Physiol Pharmacol. 2013;57(1):51–62.
22. Chiba N et al. Comparison of antinociceptive and anti-inflammatory/analgesic essential oils in an experimental animal model. Jpn J Phram lliat Care Sci. 2014;7:63–70.
23. Yong-Liang J et al. Analgesic and anti-inflammatory effects of ginger oil. Chinese Herbal Medicines. 2011;3(2):150–5.
24. G.S. Pandey, Bhavaprakasha Nighantu of Bhavamishra, Chaukhambha Bharati Academy, Varanasi, ninth edition, 1993, p.n. 759
25. Yadunandan Upadhyaya, Ashtangahradayam of Vagbhata, Nidanasthana, Chapter 13, Chaukhambha prakashana, Varanasi, reprint 2019, p.n. 53
26. https://en.wikipedia.org/wiki/Milk

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