

EVALUATING THE UPSHAYATMAK EFFECT OF DASHMOOLA KWATHA ON VATIKA SHOTHA

Ayurveda

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ABSTRACT

Background: *Shotha* is a very common manifestation perhaps every individual comes across once in a life time. *Vatika Shotha* is one of the types of *Shotha* that can be correlated to cardiac oedema. *Acharya Chakrapani* described *Dashmoola Kwatha* in *Vatika Shotha* as an *Upshyatamak Aushadha*. This theory of Upshaya- anupshaya enlightens an important theory of both *Nidana* and *Chikitsa*. **Aims:** The aim of this study is to evaluate the Upshyatmak effect of *Dashmoola Kwatha* on *Vatika Shotha* along with *samprapti vighatan*. **Material and methods:** A total of 49 patients with classical symptom of *Vatika Shotha* were registered for this single group study. They were given *Dashmoola Kwatha* in a dosage of 40 ml twice a day for one and half months. **Results:** Patients with *Vatika Shotha* showed good results with moderate improvement after taking *Dashmoola Kwatha*. **Conclusion:** The administration of *Dashmoola Kwatha* in *Vatika Shotha*, as an *Upshyatamak Aushadha*, showed better results due to its impact on both *Hetu (Vata)* and *Vyadhi (Shotha)* at the very same time. It contributed to the *vighatan* of *samprapti ghatak* (constituents of pathogenesis) and reduced the dependency on modern medicine in patients.

KEYWORDS

Shotha, Vatika Shotha, Dashmoola, Samprapti vighatan, Upshaya

INTRODUCTION

The historical review of *Shotha* shows that this disease has its prevalence in *Vedic* period also. In our *Ayurvedic Samhitas* *Shotha* is described independently with its *Chikitsa*. Due to localization of *prakupita Tridosha* and *Rakta* in between *twaka* and *mamsa dhatu*, *utseha* develops that is called *Shotha* (swelling) which is correlated with edema in modern science. *Shotha* (edema) is a very common manifestation perhaps every individual comes across once or more in their lifetime. It usually manifested as a symptom in various vital organ diseases like cardiac, hepatic, renal, cerebral etc. and mostly seen on face, feet or whole body, it may be localized or generalized. Treatment approach depends on the basic pathology of edema. Therefore, it is crucial to determine the type of *Shotha* to provide the appropriate line of treatment in both *Ayurvedic* and modern science. Prior to management of *Shotha* thoroughly reviewing of *Nidana* (causes), *Lakshan* (symptoms), and *Samprapti* (pathogenesis) is mandatory.

Acharya Chakrapani described *Dashmoola Kwatha* as *ubhaya vipareeta Upshyatamak Aushadha* in *Vatika Shotha* under 18 types of *Upshaya*. In this study patients of *Vatika Shotha* were registered and administered with *Dashmoola Kwatha* as *ubhaya- vipareeta Upshyatamaka Aushadha* and evaluate its efficacy as *Upshaya*.

MATERIAL AND METHODS

Selection of patients

Patients having sign and symptoms along with pragmatic diagnostic features of *Vatika Shotha* were selected irrespective of gender, religion, occupation from the OPD and IPD of Rog Nidana Department of Rishikul Campus, UAU, Haridwar. There was only a single group of registered patients. This study was approved by Institutional ethical committee vide letter no. UAU/RC/ IEC/2022/ PG/1-67 dated 27/05/2022, before starting the clinical trial, the study was also registered as interventional study in clinical trials registry of India vide, registration no. CTRI/2022/07/044195 registered on 21/07/2022.

Diagnosis criteria

It was based on the prepared Performa, including all clinical signs and symptoms of the disease, for which a detailed history was taken.

Inclusion criteria

Patients of age group 18 to 70 years either sex having classical sign and symptoms of *Vatika Shotha* were included in this trial.

Exclusion criteria

Patient having *Shotha* due to *Agantuja* (trauma or injury) and *Visaja* (allergic or drug reaction) cause or suffering from life threatening

chronic disorders such as renal disorders, chronic liver diseases, malignancy, diabetes mellitus and other endocrinal disorders were excluded. Patients on diuretics and Pregnancy induced oedema were also excluded.

Laboratory investigations

Routine haemogram, Blood Sugar (Fasting & PP), LFT - Total S. protein, A : G ratio, KFT - S. Creatinine, blood Urea, Urine - R / M, Chest X - ray PA view, ECG (if required) were done before and after therapy in all patients.

Preparation of trial drug

Dashmoola Kwatha described as *ubhaya vipareeta Upshyatamak Aushadha* in *Vatika Shotha* under 18 types of *Upshaya* by *Acharya Chakrapani* was selected. The ingredients were procured from authenticated herbal drug stockiest and validated from PG Department of Dravyaguna Rishikul Campus (UAU), Haridwar. They were stored in airtight containers in the form of *yavkut churna* form, in cool place and away from sunlight exposure. The list of the herbs is as mentioned in Table 1.

Table 1: Contents of Dashmoola Kwatha

Drug	Latin name	Part used	Quantity
Bilva	Aegle marmelos - Rutaceae	Stem bark	1 Part
Agnimantha	Premna mucronata - Verbenaceae	Stem bark	1 Part
Shyonaka	Oroxylum indicum - Bignoniaceae	Stem bark	1 Part
Patla	Stereospermum suaveolens - Bignoniaceae	Stem bark	1 Part
Gambhari	Gmelina arborea - Verbenaceae	Stem bark	1 Part
Brihati	Solanum indicum - Solanaceae	Root bark / whole plant	1 Part
Kantkari	Solanum surattense - Solanaceae	Root bark / whole plant	1 Part
Goksura	Tribulus terrestris - Zygophyllaceae	Root bark / whole plant	1 Part
Shalparni	Desmodium gangeticum - Leguminosae	Root bark / whole plant	1 Part
Prshniparni	Uraria picta - Leguminosae	Root bark / whole plant	1 Part

Methodology

300 gm of *yavkut churna* was packed in air tight bag, and the patient

was advised for method of *Kwatha* preparation, suggested how to prepare and how to administer *Kwatha*. One packet was given for 15 days to the patient of *Vatika Shotha* and repeat in next 2 follow-ups. Patient was advised to prepare *Kwatha* according to *Ayurvedic* classical text (AFI Vol.1, page no. 55 - B.R. 4/10). Dose of *Kwatha* and duration of therapy is shown on table 2.

Table 2 : Dose of Dashmoola Kwatha

Drug	Dose	Kala	Duration
Dashmoola Kwatha	40 ml BD	Before meal	45 days

Patients were assessed on every 15 days interval up to 45 days and follow up was done after 15 days of completion of the therapy to observe reoccurrence and any untoward effects of the drug. Sigma Stat software was used for statistical analysis. Wilcoxon signed rank test was used for subjective parameter's statistical analysis of result. The Paired't' test was used for analysis of objective parameters. The gradation adopted for the assessment of results is depicted in Table 3.

Table 3: Subjective parameters

Symptoms	Grading	Results
Utsedha (Protuberance)	0 1 2	Absent Occasionally Continuous
Sagauravam (heaviness of the affected area)	0 1 2	Absent Occasionally Continuous
Anavasthitam (irregular or on and off edema)	0 1 2	Absent Occasionally Continuous
Lomharsha (Horripilation)	0 1 2	Absent Occasionally Continuous
Ruja (Pain)	0 1 2	Absent Occasionally Continuous
Shunyata (swelling with numbness)	0 1 2	Absent Occasionally Continuous
Pronnamati prapidito	0 1 2	Absent Take less than 15 seconds to rebound after pits on pressure Take more than 15 seconds to rebound after pits on pressure

OBSERVATIONS

Total 49 patients were registered for the trial, out of that 45 patients completed the study while 4 patients dropped out due to irregular follow-up. Maximum no. of patients was females (71.43 %) from middle age group (46.94 %) and from middle socioeconomic status (61.22 %). On considering the nature of occupation, it was found that maximum no. of patients (55.1 %) were housewives, 24.49 % were in service, 14.29 % were labor and 6.12 % were in business. On the observation of diet maximum (51 %) patients were having vegetarian diet with moderate appetite (42.86 %) and had irregular dietetic habit (53 %). Maximum patients (55.1 %) were having irregular bowel habit it was either constipation or loose motion and had normal micturition, whereas 36.73% had abnormality in micturition.

The present study shows that 18.37 % patients were having alcohol addiction. According to the study maximum patients were menopausal (50 %). On the observations of *Dashvidha pariksha* most of the patients were of *Vata-Pittaja Prakriti* (40.82 %) and were having *madhyam Sara* (77.55 %), *Samhanan* (55.1 %), *Satva* (42.86 %), *Satmya* (73.47 %), *Aahar-shakti* (38.77%), *Jaran shakti* (55.1%) and *Vyayama shakti* (51.02%).

About 100% patients were present with *utsedha* and *pronnmati prapidito lakshan*, 93.88 % were having *sagauravam*, 30.61 % with *lomharsha*, 48.98% with *ruja*. 22.45% with *shunyata*.

RESULTS

The assessment was based on improvement in symptoms and progression in objective parameters that is shown in table 4 and table 5.

Upon observing the overall effect of therapy, 17.79 % exhibited moderate improvement while 71.1 % demonstrated mild improvement. Additionally, 11.11 % of patients showed no change in their previous symptoms.

Table 4 : Improvement in Subjective Parameters

Symptoms	Mean Score BT	AT	D	Relief %	w	p	Significance
Utsedha	1.68	0.44	1.24	73.68	-10 35	<0.00 1	HS
Sagauravam	1.58	0.62	0.95	60	-82 0.0	<0.00 1	HS
Anavasthitam	1.55	0.71	0.44	38.46	-19 0	<0.00 1	HS
Lomharsha	0.33	0.13	0.2	60	-36	0.008	S
Shotha with Ruja	0.844	0.288	0.5685	65.78	-26 0.0	<0.00 1	HS
Pronnamati prapidito	1.55	0.42	1.13	72.85	-86 1.0	0.001	HS
Shotha with Shunyata	0.24	0.13	0.11	45.45	-15. 0	0.063	NS

Table 5: Improvement in Objective Parameters

Objective criteria	Mean Score BT	AT	D	Relief.S.D. (%)	S.E.	t	P	S
Weight	72.2 4	69.13 3	3.111	4.30	1.735	0.259	12.029	< 0.001 HS
S.B.P.	135. 33	119.7 3	15.6 00	11.52	14.44 3	2.153	7.245	< 0.001 HS
D.B.P.	89.7 3	82.42 2	7.311	8.41	12.10 7	1.805	4.051	< 0.001 HS
S.protein	4.56	4.81	-0.25	5.54	0.603	0.089	-2.817	0.007 S
A/G ratio	1.38	1.37	0.01	1.16	0.306 0.04 57	0.045	0.306 0.0457	0.724 NS
Measurem ent of circumfere nce	23.2 6	20.71 1	2.55	10.98	0.813	0.121	21.076	< 0.001 HS
Protein in urine	95.5 5	62.55 9	32.8	11.86	62.83 5	9.367	3.511	0.001 S

DISCUSSION

Oedema is an alarming sign of underlying pathology, notably when vital organs are affected. In this study patients of *Vatika Shotha* were registered and *Upshyatamak* effect of *Dashmoola Kwatha* was assessed. Most patients were females and had menopause. A separate study suggests that development of idiopathic oedema is common in this age group of women. Socio economic status also reflects nutrition, worsening leads to malnutrition and edema. It was observed that most of the patients were house makers and from service and labour class with *Vata- Pittaja Prakriti*.

Most Studies showing that long periods of orthostatism cause a decrease in venous return , increasing risk of chronic venous disease and edema with heaviness and diffuse pain in lower limbs. Most patients had irregular dietetic habits and moderate appetite, both promoting vitiation of *Tridosha*, and *Vishmasan* especially vitiate *Vata* the main culprit in *Samprapti* of *Shotha*.

Aruchi is one of the complications of *Shotha* mentioned in classics. It is a well known fact that patients with anemia, congestive heart failure (CHF), liver disease and kidney diseases often have a poor appetite. Edema is one of the manifestations of these diseases.

In CHF breathlessness is likely to cause decreased appetite as patients may feel full, and breathlessness makes it difficult to eat. Many patients had irregular bowel habits possibly due to constipation or diarrhea. Most registered patients had normal micturition pattern, while some showed symptoms like oliguria, nocturia, burning micturition, increased frequency and dysuria.

Some of them were present with abnormal urine like frothy urine due to proteinuria. Features of *Vatika Shotha* can be correlated with CHF

and it may cause disturbances in micturition due to reduced cardiac output triggering sodium and water retention. Furthermore, Long-term alcohol consumption also causes peripheral edema by impairing the heart, liver, and kidneys.

Effect of *Dashmoola* on subjective and objective parameters showed moderate to mild improvement. Complete remission not found in any patient this may be due to involvement of more than one factor in pathogenesis of *Vatika Shotha*.

Probable mode of action of *Dashmoola Kwatha* is its *Tridoshamak* property, pacify *Vata* by *ushna virya*, *Pitta* by its *Kashaya* and *Tikta Rasa* and *Kapha* by its *Katu vipaka* and *ushna virya*. Effect of *Dashmoola Kwatha* is highly significant ($p < 0.001$) in *Utsedha*, *Sagauravam*, *Anavastitam*, *Pronnamati prapadito* and *Ruja lakshan* due to its anti-inflammatory and diuretic property while significant effects had shown on *Lomharsha* ($p=0.008$) due to *saman* of *Chal guna* of *Vata*. *Dashmoola* in models of acute inflammation hinted at the possibility of prostaglandin synthesis inhibition as the probable mechanism of action in reducing inflammation and pain.

There was no significant effect in *Shunyata* and *lakshan* of *Vatika Shotha* due to less no. of patients with these symptoms. On the other hand statistically highly significant result ($p < 0.001$) found in objective parameters included blood pressure, body weight and circumference of affected part. Total S. protein and quantity of protein in urine also showed statistically significant change. Anti inflammatory and diuretic property of *Dashmoola Dravya* plays important role in this significant change.

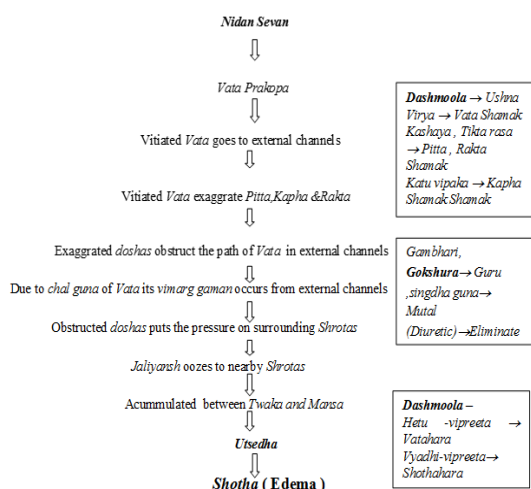
Probable mode of action of *Dashmoola Kwatha* in these parameters is having *mutral* (diuretic) property, elimination of excess fluid from the body on acting renal tubules; it reduces the volume of fluid in blood vessels and tissues which ultimately decreases the edema. *Gokshura* is a main *mutral dravya* among in *Dashmoola Kwatha* included in *Mutravirechaniya Mahakashaya*.

There is a proven study of diuretic action of *Gokshura* implies that *Gokshura* cause an increased amount of excreted urine volume and Na^+ , K^+ , and Cl^- excretion from kidney. In condition of proteinuria *Dashmoola dravya* shows rejuvenating property and also ACE inhibitor property by *Gokshura*.

There was not any significant change was found in A/G ratio, possibly A/G ratio hampered mainly in chronic liver diseases, excluded here. This trial was conducted for one and half months and in that time variation in amount of albumin and globulin was not possible.

There is a flow chart which shows *Samprapti vighatan* of *Vatika Shotha* by *Dashmoola Kwatha* (Flow chart 1)

CONCLUSION



Flow Chart 1: Probable mode of Samprapti Vighatan of Vatika Shotha by Dashmoola Kwatha

"*Upshayam Aushadh-aaharviharanamupyoga sukhavaham*" that means the medicine, diets and regimens which delighted the person and their action may directly against the cause, or to the disease itself or to the both (i.e.; to cause and disease) called *Upshaya*, also called *Satmya* by some *Acharya*.

In case of difficulty in a diagnosis of disease due to some hidden things or poor *vyadhibala* of disease in such circumstances *Upshaya* and *anupshaya* therapy helps to diagnose the condition and helps in *Samprapti vighatan* of disease.

Above study shows improvement in patients of *Vatika Shotha* after administration of *Dashmoola Kwatha* which shows good result of therapy due to its anti inflammatory and diuretic property. Considering the prevalence of *Shotha* among individuals and its impact on daily functioning, the application of *Upshaya* treatment offers an avenue for enhancing recovery prospects without introducing further complexities.

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