



Research Article

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ROLE OF TULASI (*OCIMUM SANCTUM* LINN.) PATRA SWARASA ON KSHUDRA HIKKA WITH SPECIAL REFERENCE TO EKAL DRAVYA CHIKITSA

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ABSTRACT

Hikka and Shwasavyadhis are shighra pranaharak as compared to other vyadhis. It can be correlated with hiccups and belching syndrome mentioned by modern medicine. Vata and kaphadosha are major factors in samprapti of Hikka. This disease should be treated immediately to avoid further consequences as there is possibility of death of the patient in some cases. Acharya Charaka had also guided to treat hikka and shwasa as early as possible as it is difficult to treat and shighra pranaharaka. As no specific line of treatment available for hiccups in modern science. Ayurveda is one of the most preferable health sciences to give solution. It is observed many times that the disease like Hikka is relieved immediately by certain Ayurvedic drug. Ayurvedic classical texts had described different Kalpa as well as ekaldravya for the management of hikka. Present study was carried out to find out efficacy of single drug like Tulasi (*Ocimum sanctum* Linn.) patra on Kshudra Hikka. Aim was to explore principles of Ekal Draya Chikitsa (Single Drug Therapy) on clinical background. Student's t Test for paired data was applied to the data collected from 15 patients. In all symptoms of kshudrahikka, the paired t test has shown highly significant results. Further study under different circumstances is required. No adverse effects were observed during this study. It was concluded that Tulasi (*Ocimum sanctum* Linn.) patraswarasa is highly effective in reducing symptoms of Kshudrahikka and Ekaldravyachikitsa can save time and money of the patients.

Keywords: Kshudra Hikka, Annaja Hikka, Tulasi (*Ocimum sanctum* Linn.) patraswarasa, Ekal dravyachikitsa, Belching syndrome, Hiccups.

INTRODUCTION

Hikka and Shwasavyadhis are shighra pranaharak as compared to other vyadhis.¹ It can be correlated with 'hiccups' and 'belching syndrome' mentioned by modern medicine. The name Hikka is because during attack of the Hikka "hik-hik" sound is heard.² Vitiated vata along with kapha obstructs pranavaha, udakavaha and annavaha strotasa which results in Hikka.³ Semi voluntary swallowing of abnormal amount of air while eating and drinking results in increased intragastric volume of air and 'belching' occurs.⁴ A 'hiccup' is an involuntary contraction (myoclonic jerk) of the diaphragm that may repeat several times per minute.⁵ The patient of Hikka becomes helpless and presenting regular attacks of Hikka. Charaka had guided to treat hikka and shwasa as early as possible.⁶ It is clear that disease should be treated immediately to avoid further consequences as there is possibility of death of the patient in some cases. Acharya Charaka described five types of Hikkavyadhi viz. Maha, Gambhira, Vyapeta, Kshudra and Annaja.⁷ Yamala is mentioned by Madhavakara instead of Vyapeta.⁸ The

present study was aimed at management of Annaja and Kshudrahikka as other conditions like Maha, Gambhira, Vyapeta and Yamala are difficult to treat. Ayurvedic classical texts had described different Kalpa as well as ekaldravya for the management of hikka. According to modern medicine, management of belching syndrome is empirical and should search for physiological factor.⁴ In case of hiccups many drugs are being used but no particular treatment is known to be especially effective.⁹ But it is observed many times that the disease like Hikka is relieved immediately by certain Ayurvedic drug. So we focused to find out efficacy of single drug like Tulasi (*Ocimum sanctum* Linn.) Patra on Kshudra Hikka. Tulasi (*Ocimum sanctum* Linn.) patra is described as hikka-shwasa-kasahara by different texts.¹⁰⁻¹⁴ Tulasi (*Ocimum sanctum* Linn.) is useful in diseases of respiratory system.¹⁵ Patients generally avoid long treatment plans, also not willing to take many medicines at a time and even many patients cannot afford the cost of Ayurvedic medicines. To overcome all above challenges, 'Ekal dravya chikitsa', may play a vital role in current scenario. Tulasi (*Ocimum sanctum* Linn.) is a holy plant in Hindu

religion and easily available to almost all people. Everyone can easily use it as home remedy under guidance of Ayurvedic physician. Present study was aimed to explore principle of Ekal Draya Chikitsa (Single Drug Therapy) on clinical background. This study was carried out as pilot study hence control group was not involved. It is hoped that this study will give inspiration to students of Ayurveda to study this concept in other diseases also. It is proposed that such type of studies will definitely help patients to save money and time.

Aims and Objectives

- To study Role of Tulasi (*Ocimum sanctum* Linn.) patra Swarasa on Kshudra Hikka w. s. r. to Ekal Dravya Chikitsa.
- To study and explore principles of Ekal Dravya Chikitsa on clinical background.
- To study properties of Tulasi (*Ocimum sanctum* Linn.) patra Swarasa.
- To study Kshudra Hikka in different Ayurvedic Classical Texts.
- To observe action of Tulasi (*Ocimum sanctum* Linn.) patra Swarasa on Kshudra Hikka.

MATERIALS AND METHODS

Study Design

This was an open randomized clinical study. 15 patients of Kshudra hikka were selected by simple randomized sampling technique from Kayachikitsa OPD of SVNHT's Ayurved Mahavidyalaya and Rugnalaya, Rahuri Factory. Written consent was taken from each and every patient. Tulasi (*Ocimum sanctum* Linn.) patra swarasa was administered to all patients for 7 days. Before and after treatment, assessment was done and analyzed statistically using Student's t Test for paired data. Ethical Clearance for permission of clinical trials was issued by Institutional Ethical Committee (Ref. No. 06/PG/2014-15.)

Selection of patients

Inclusion Criteria

Patients showing signs and symptoms of Kshudra Hikka and Annaja Hikka of both sexes and age group between 12 to 60 years were selected irrespective of religion, socio economic status, addiction and nature of work.

Exclusion Criteria

Patients having age below 12 years and above 60 years, patients of Maha, Gambhira, Vyapeta and Yamala Hikka, patients suffering from major diseases like IHD, COPD, CCF, HIV etc and the patients not willing to participate in this study were excluded.

Drug Review

Sanskrit Name: Tulasi¹⁰⁻¹⁴

Latin Name: *Ocimum sanctum* Linn.¹⁶

Rasa: Katu, Tikta

Virya: Ushna

Vipaka: Katu

Guna: Laghu, Ruksha, Ushna

Karma: Hrudyā, Dipana, Jantughna, Krimighna, Ruchikara, Putigandha nashaka

Gana: Shwasahara (Charaka), Surasadi (Sushruta)

Effect on Dosha: Kaphaghna, Vataghna, Pittakara

Indications: Hikka, Kasa, Shrama, Shwasa, Parshwashool, Kushtha, Krimi

Preparation of Swarasa

Method for preparation of Swarasa used was as per mentioned in Sharangdhara Samhita.¹⁷ Patients were taught this method and instructed to prepare fresh swarasa every time as per schedule.

Administration of the drug

Details about administration of the drug are mentioned in Table 1.

Criteria of Assessment

Only subjective parameter i.e. the single symptom hikka in different aspects was assessed before and after treatment. Gradation of subjective parameter i.e. hikka is illustrated in Table 2. No objective parameters were included in this study.

Effect of Therapy

Grade 3 relief (Excellent Improvement): 75 % to 100 %

Grade 2 relief (Good Improvement): 50 % to 75 %

Grade 1 relief (Moderate Improvement): 25 % to 50 %

Grade 0 relief (Poor Improvement): 00 % to 25 %

Table 1: Details of Administration of Tulasi (*Ocimum sanctum* Linn.) patraswarasa

Name of the Drug	Tulasi (<i>Ocimum sanctum</i> Linn.) patra
Form of Drug	Swarasa
Route of Administration	Oral
Aushadha Sevana Kala	1. Vegakali (Muhurmuhu) 2. Samudga (PratahandSayam)
Matra	10 ml x BD
Anupana	KoshnaJala
Duration	60 days
Follow up	Day 4, Day 7

Table 2: Gradation of subjective parameters

S. No.	Hikkavega	Gradation
1	Vegasankhya	0 No Hikka 1 One to five attacks 2 Six to ten attacks 3 More than ten attacks
2	Vega avadhi	0 Vega subsides within 5 minutes 1 Vega persists for an hour 2 Vega persists for more than one hour
3	Vega Swarupa	0 Vega subsides without any medicine 1 Vega subsides after eating or drinking water 2 Some medicine has to be taken
4	Vega punaravartana	0 No punaravartana 1 Punaravartana once in a month 2 Punaravartana once in a week 3 Punaravartana more than twice in a week

Table 3: Maximum found frequencies related to basic information of the patients

S. No.	Observation	Maximum found	No. of patients	Percentage
1	Age group	40-49 years	05	33.33 %
2	Sex	Male	08	53.33 %
3	Drutabhojana	Yes	12	80.00 %
4	Vata-Raja-Shitasevana	Yes	15	100.00 %
5	Occupation	Housewife	08	53.33 %
6	Nature of work	Moderate	08	53.33 %
7	Addiction	No addiction	08	53.33 %
8	Agni	Manda	10	63.33 %
9	Prakruti	Vatakapha	07	46.66 %

Table 4: Statistical analysis by Student's t test for paired data

S. No.	Parameter	Paired t test analysis in patients of Kshudra Hikka				Result
		Diff in means	t value	P value	P <or P>	
1	Vega sankhya	1.600	12.22	0.000	P < 0.001	Highly significant
2	Vega avadhi	0.867	6.50	0.000	P < 0.001	Highly significant
3	Vega swarupa	0.933	7.90	0.000	P < 0.001	Highly significant
4	Punaravartana	1.242	9.28	0.000	P < 0.001	Highly significant

Table 5: Overall effect of the therapy

S. No.	Grade of Relief	Criteria	No. of Patients
1	Grade III (Excellent Improvement)	75 % - 100 %	14
2	Grade II (Good Improvement)	50 % - 75 %	01
3	Grade I (Moderate Improvement)	25 % - 50 %	00
4	Grade 0 (Poor Improvement)	00 % - 25 %	00
Total patients			15

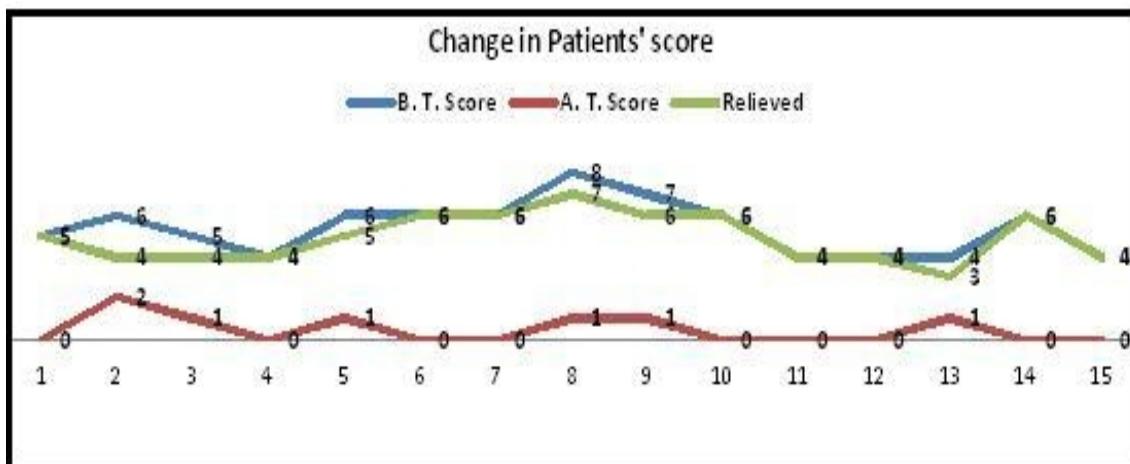


Figure 1: Change in Patients' score

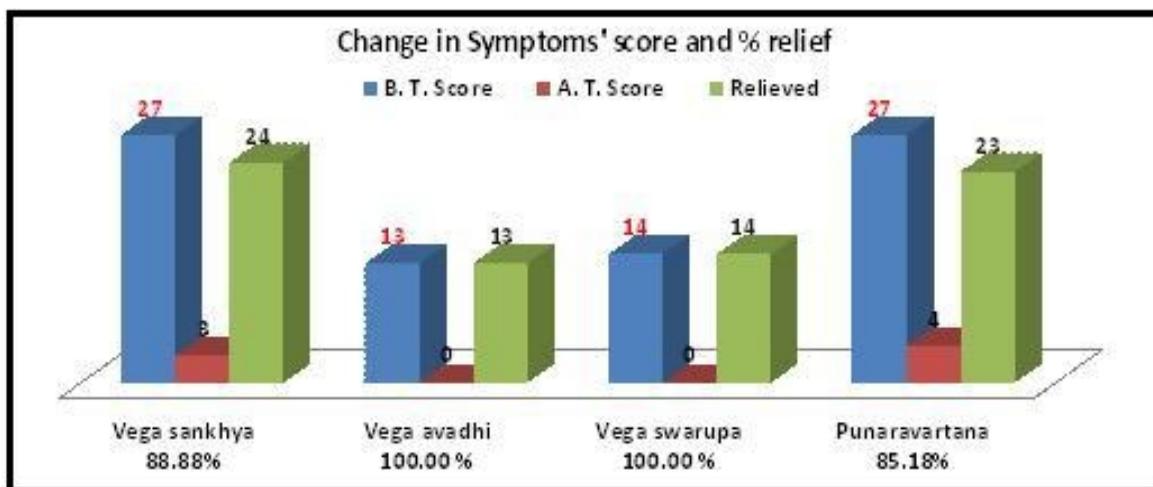


Figure 2: Change in Symptoms' score

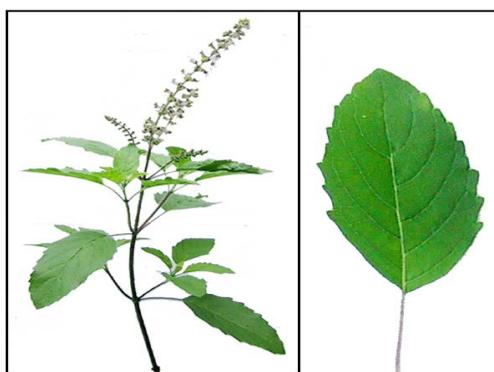


Figure 3: Herbarium Sample – Tulasi (*Ocimum sanctum* Linn)

RESULTS AND DISCUSSION

The Annaja Hikka patients were also included in present study because the symptoms of Annaja hikka¹⁸ resembles with those of Kshudra hikka.¹⁹ At the end of the study, collected data was classified in the form of tables and graphs. Among 15 patients of Kshudra hikka maximum frequencies of observations are mentioned in Table 3. More patients were male (53.33 %) and more patients were from age group 40-49 years, but it might be only by chance. All 15 patients history showed exposure to vata (wind), raja (dust particles) and shita (cold). Charaka has mentioned vata-raja-shita sevana is one of the hetu of Hikka.²⁰ Vata-kaphaprakruti patients (46.66 %) was found more prone to Khudrahikka. Likely it is found in texts that vata and kapha are major factors in samprapti of Hikka.³ Other maximum observations were mandaagni (63.33 %), housewife (53.33 %), moderate work (53.33 %) and no addiction (53.33 %). Statistical analysis by Student's t Test for paired data has shown highly significant difference between the means (before and after) in case of all symptoms of Kshudrahikka. P value is less than 0.001 in all symptoms. Difference between means, t value and P value of symptoms are enlisted in Table 4. Since value of P is less than 0.001 in case of all symptoms it can be concluded that Tulasi (*Ocimum*

sanctum Linn.) patraswarasa was responsible for these differences between the means. It means Tulasi (*Ocimum sanctum* Linn.) patraswarasa was found highly effective in reducing the symptoms of Kshudrahikka (Figure 1). As per the total effect of therapy (Table 5) 14 patients achieved Grade III relief i.e. excellent improvement, 1 patient achieved Grade II relief i.e. good improvement, while no patient was observed in moderate and poor improvement. All four symptoms achieved excellent improvement (Figure 2). The present study deals with the specific Ayurvedic chikitsapaddhati like Ekal Dravya Chikitsa. As Tulasi (*Ocimum sanctum* Linn.) is easily available to almost everyone in India, it was decided that Tulasi (*Ocimum sanctum* Linn.) patra swarasa to be administered in patients of Kshudra hikka. Hikka is vyadhi of pranavaha strotas. After hetusevana, vitiated vata along with kapha obstructs the marga of Prana, Anna and Udakavaha strotasa resulting in Hikka.³ Kapha-vataghna, ushna, vatanulomana; aushadha, pana andanna is advised in hikkashwasa by Acharya Charaka.²¹ It is clear that vataghna, kaphaghna, katu, tikta, ushna, laghu and vatanulomaka drug is perfect drug of choice in Hikka. Tulasi (*Ocimum sanctum* Linn.) is Shwasa-Hikkahar, vataghna, kaphaghna, ushna, laghu, ruksha, dipani and it helps to remove avarodha (obstruction) of kapha in the marga of prana, anna and udakavahastrotasa which

achieves anulomagati of vata and sampraptibhanga of Hikka. Sadhya types of hikka i.e. Kshudra and Annaja were considered in this study and this may be the reason for excellent results. In case of other hikka Tulasi (*Ocimum sanctum* Linn.) may not work so effectively. This study was carried out as pilot study so control group was not involved. Further scope is suggested to attempt clinical trials either using another kalpa along with Tulasi (*Ocimum sanctum* Linn.) patra or to study other drug in comparison with Tulasi (*Ocimum sanctum* Linn.) patra in hikka or to attempt clinical trials using control group to avoid conflicts.

CONCLUSION

It was observed that Tulasi (*Ocimum sanctum* Linn.) patra when used as Ekal dravya chikitsa; it effectively reduces symptoms in patients of kshudra and annajahikka. No adverse effects were observed in any patients during this study. It does not mean that Tulasi (*Ocimum sanctum* Linn.) patraswarasa will reduce the symptoms of other hikka like mahati, gambhira, vyapeta and yamala. Sadhya types of hikka like kshudra and annaja were included in this study. One can use single dravya for chikitsa but samprapti ghataka of the vyadhi and karmukatva of that dravya should be studied properly. Ekal dravya chikitsa can save money and time of patients. Further study under different circumstances is required.

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