

Clinical Researches

Efficacy of Sri Lankan Traditional Decoction of *Katuwelbatu Deduru Katukadi* in treatment of *Kaphaja Shira Shula* (Chronic Sinusitis)

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Abstract

Kaphaja Shira Shula is one of the *Shiro Roga*. Chronic sinusitis is inflammation of the sinuses behind the forehead, cheeks, and eyes, which continues for a long time or keeps recurring. *Kaphaja Shira Shula* can be correlated with Chronic Sinusitis. The decoction of *Katuwelbatu Deduru Katuka* is mentioned in *Watika Prakaranaya*, a book on Sri Lankan Traditional Medicine. The ingredients of this decoction are *Solanum xanthocarpum*, *Cuminum cyminum*, *Nigella sativa*, *Picrohiza kurrota* and *Clerodendrum serratum*. But in this study *Saussurea lappa* is used instead of *C. serratum* with the experience of traditional physician, Weerasinghe. Aim of this study was to scientifically evaluate the efficacy of this decoction in *Kaphaja Shira Shula*. Eighty patients suffering from Chronic sinusitis were selected from Ayurveda Teaching Hospital, Borella, Sri Lanka and randomly divided into two groups. X-ray of Para nasal sinuses and total white cell count before treatment and after treatment were recorded. Group one was treated with 120 ml of decoction of *Katuwelbatu Deduru Katuka* and Group two with 120 ml of placebo twice a day for twenty one days. Partial and complete symptomatic relief and reduction in eosinophil count in the blood were observed in the treated group. It is observed that decoction of *Katuwelbatu Deduru Katukadiya* can be used in treatment of *Kaphaja Shira Shula* (Chronic sinusitis) effectively.

Key words: Decoction of *Katuwelbatu Deduru Katukadiya*, *Kaphaja Shira Shula*, Chronic Sinusitis.

Introduction

In *Ayurveda*, *Shira Shula* is mentioned under *Shiro Roga*. *Kaphaja Shira Shula* is one of the '*Shiro Roga*' which can be correlated with Chronic Sinusitis. Signs and symptoms of *Kaphaja Shira Shula* as described in *Ayurveda* texts are; '*Guru*' (Heaviness and fullness of head), '*Himam*' (Coldness in head), '*Shuna Akshi Kuta Vadanam*' (Swelling of the face especially around the eyes) and '*Shirobhitapah*' (Headache)^{1,2,3}. Chronic sinusitis is one of the very commonly prevalent chronic illnesses in the world. But, it is less prevalent than acute sinusitis. Chronic sinusitis may be defined as a chronic inflammation of the sinuses and maxillary sinus is mostly involved. Acute sinusitis often occurs with upper respiratory infections. Chronic sinusitis may produce less

severe symptoms than acute sinusitis, but it can damage the tissues of the sinuses. The signs and symptoms of chronic sinusitis are heaviness of the head, tenderness of the head, coldness of the head, headache, swelling of the face, itching in side the ear, itching in the throat and eyes, sneezing, nasal obstruction, nasal discharge, anorexia and drowsiness⁴.

The decoction of *Katuwelbatu Deduru Katukadiya* is mentioned in *Watika Prakaranaya*; a book on Sri Lankan Traditional Medicine, under the paste of *Sarkaradiya* as an Anupana for cough and bronchial asthma⁵. The ingredients of decoction of *Katuwelbatu Deduru Katukadiya* are *Solanum xanthocarpum* (Family: Solanaceae; Sanskrit name: *Kantakari*), *Cuminum cyminum* (Family: Umbeliferae; Sanskrit name: *Jeeraka*), *Nigella sativa* (Family: Ranunculaceae; Sanskrit name: *Krushnajeeraka*), *Picrohiza kurruva* (Family: Scrophulariaceae; Sanskrit name: *Katurohini*) and *Clerodendrum serratum* (Family: Verbenaceae; Sanskrit name: *Bharangi*)⁶. This decoction is used by traditional physician family Weerasinghe, by adding *Saussurea lappa* (Family: Compositae; Sanskrit name: *Kushtha*) instead of *C. serratum* to treat *Kaphaja Shira Shula* (chronic sinusitis) successfully. No known

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DOI: 10.4103/0974-8520.68208

scientific studies have been carried out so far, to evaluate the efficacy of this decoction. Hence the present study was carried out in order to scientifically evaluate the efficacy of decoction of *Katuwelbatu Deduru Katukadiya* in treatment of *Kaphaja Shira Shula*.

Material & Methods

Preparation of Decoction of *Katuwelbatu Deduru Katukadiya*: In this study decoction of *Katuwelbatu Deduru Katukadiya* is prepared according to the experience of traditional physician family Weerasinghe. 12 gm. each of dried entire plant of *S. xanthocarpum*, dried seeds of *C. cyminum* and *N. sativa*, dried roots of *P. kurroa* and *S. lappa* were cut into small pieces and boiled in 1920 ml. of water until the volume was reduced to 240 ml.

Preparation of placebo for Decoction of *Katuwelbatu Deduru Katukadiya*: Water was boiled and cooled. Permitted brown food coloring was added, and given as placebo for decoction of *Katuwelbatu Deduru Katukadiya*.

Clinical Study

Eighty patients suffering from *Kaphaja Shira Shula* (chronic sinusitis) were selected from *Ayurveda* Teaching Hospital, Borella, Sri Lanka. The clinical study was carried out on the basis of placebo controlled single blind study. They were randomly divided into two groups and named as group A and group B. Detailed history of the current disease was recorded. The degree of signs and symptoms in chronic sinusitis were recorded using a standard performa. Patient having acute respiratory disorders, especially acute sinusitis, allergic rhinitis and acute asthma were excluded from this study. The Group A was treated with 120 ml of decoction of *Katuwelbatu Deduru Katukadiya* twice a day, for twenty one days. Group B was treated with Placebo, 120 ml twice a day, for twenty one days. The response to the treatment was recorded using a scale graded according to the severity of symptoms. The therapeutic effect was evaluated through symptomatic relief of the patients. X-ray in Para Nasal Sinuses and Total White Blood Cell count before treatment and after treatment were recorded.

Observation & Results

In the present study, it was observed that patients suffering from *Kaphaja Shira Shula* (Chronic Sinusitis) have different habits such as intake of cold drinks and cold foods like ice cream, taking bath early in the morning and late evening, keeping awake in the night without sleeping. Most of the patients had the symptoms such as Headache, Heaviness of the head, Fullness of the head, Sneezing, Nasal discharge and Tearing of the eyes. The therapeutic effect was evaluated through symptomatic relief and the results are given in Table 1.

Laboratory investigations showed statistical significance of reduction in Eosinophil count in blood in the group treated with decoction of *Katuwelbatu Deduru Katukadiya* as given in Table 2. Some X-rays reported that prior to treatment, sinuses are unclear and have cloudy appearance. After treating with decoction of *Katuwelbatu Deduru Katukadiya*, X-ray reports in sinuses were clear and had reduced haziness. Some patients treated with decoction of *Katuwelbatu Deduru Katukadiya* complained of diarrhoea, impaired appetite and mild pain in the abdomen. Anosmia in 17% patients and Vertigo in 20% patients were unchanged when treated with decoction of *Katuwelbatu Deduru Katukadiya*.

Discussion

According to the basic doctrine of *Ayurveda*; *Rasa*, *Guna*, *Veerya*, *Vipaka* and *Prabhawa* are very important. As mentioned therein, all dravyas (medicinal ingredients) have particular individual characteristics and *Rasa*, *Guna*, *Veerya* properties which are specific to themselves. *Ayurveda* treatment is dependent on special basic theory which is called *Samanya* or homologous and *Vishesha* or heterologous theory. We can simplify and explain it as *Samanya*: an ingredient which has similar or homologous effect is given to the patient, so that it would stimulate or enrich the corresponding chemicals/metabolism/organs of the body or, *Vishesha*: an ingredient which has dissimilar or heterologous effect is given to the patient so that, it would suppress or deplete the counterpart chemicals / metabolism / organs of the body, in order to restore the correct natural balance.

As mentioned above, this decoction contains *Tikta*, *Katu Rasa*, *Laghu*, *Ruksha*, *Tikshna Guna*, *Ushna Veerya*, *Katu Vipaka* which are heterologous to properties of *Kapha Dosha* and *Madhura Rasa* which are heterologous to properties of *Vata Dosha*. Therefore vitiated and increased *Vata* and *Kapha* are decreased by decoction. Decoction of *Katuwelbatu Deduru Katukadiya* contains ingredients such as *S. xanthocarpum*, *C. cyminum*, *N. sativa* and *S. lappa* which pacify vitiated *Kapha* and *Vata Dosha*. Further, *P. kurroa* pacifies vitiated *Kapha* and *Pitta Dosha*. Hence, Decoction of *Katuwelbatu Deduru Katukadiya* pacifies vitiated *Vata*, *Pitta* and *Kapha Dosha*⁷. Since *Kaphaja Shira Shula* (Chronic sinusitis) is a disease originated by vitiated *Vata* and *Kapha Dosha*, decoction of *Katuwelbatu Deduru Katukadiya* is beneficial for *Kaphaja Shira Shula* (Chronic Sinusitis).

Conclusion

Most patients who were treated with decoction of *Katuwelbatu Deduru Katukadiya*, had complete or partial relief from the symptoms in *Kaphaja Shira Shula* (Chronic Sinusitis); especially Heaviness of head,

Table 1: Percentage of symptomatic relief during the treatment with Decoction of *Katuwelbatu Deduru Katukadiya* in *Kaphaja Shira shula* (Chronic sinusitis)

Symptoms	Control Group				Treated Group			
	C %	P %	U %	A %	C %	P %	U %	A %
Heaviness of Head (<i>Guru</i>)	00	30	70	00	86.5	10.8	2.7	00
Fullness of Head (<i>Prathishtabdha</i>)	00	40	60	00	85.2	11.8	03	00
Coldness of Head (<i>Himam</i>)	00	00	00	00	81.2	9.4	9.4	00
Swelling of the Face (<i>Shuna Akshi Kuta Vedanan</i>)	10	00	90	00	90.7	9.3	00	00
Swelling around the eye (<i>Shuna Akshi Kuta Vedanan</i>)	10	00	90	00	82.3	14.7	03	00
Swelling around the nose	10	00	90	00	93.8	6.2	00	00
Headache (<i>Shirobhithapak</i>)	00	15	75	10	76	20	02	02
Dull pain	00	00	00	00	94	06	00	00
Drowsiness (<i>Thandra</i>)	00	25	75	00	76	15	06	03
Lassitude (<i>Alasya</i>)	10	15	75	00	78	16	03	03
Anorexia (<i>Arochaka</i>)	20	20	60	00	78	16	00	06
Rigidity of Head (<i>Sthimitha</i>)	10	00	90	00	88	06	06	00
Itching inside the Ear (<i>Karna kandu</i>)	16	12	72	00	94	06	00	00
Itching throat	16	12	72	00	89	11	00	00
Sneezing	00	00	100	00	74	20	06	00
Itching the Eye	16	12	72	00	79	18	03	00
Tearing of Eye	00	00	00	00	82	12	06	00
Anosmia	00	10	80	10	79	04	17	00
Nasal obstruction	00	80	20	00	79	18	00	03
Nasal discharge	00	00	100	00	75	17	05	03
Vertigo	00	00	00	00	61	13	20	06

C=Completely relieved, U=Unchanged, P=Partially relieved, A=Aggravated.

Table 2: Change in White Blood Cells Count during the treatment with Decoction of *Katuwelbatu Deduru Katukadiya* in *Kaphaja Shira shula* (Chronic sinusitis)

Investigation	Control Group (Mean ± SE)		Treated Group (Mean ±SE)	
	Before treatment	After treatment	Before treatment	After treatment
Total WBC/DC	9046.55±305.44	9210.00± 77.64	8986.67±259.095	9444.00 ± 288.262
Eosinophil %	7.54 ± 0.98	7.8 ± 1.04	7.67 ± 0.849	2.00 ± 0.218 *
Neutrophil %	48.24 ± 4.06	50.12 ± 2.56	52.53 ± 3.07	56.20 ± 2.22
Lymphocyte%	39.05 ± 2.58	40.12 ± 2.35	38.07 ± 2.78	42.87 ± 1.84

* P<0.05, compared to control

Fullness of head, Swelling of the face and around the nose, Dull pain, Itching in side the ear, Itching throat and Nasal obstruction. According to this study reduction of eosinophil count was statistically significant. X-rays reported reduction of haziness and clearing of sinuses when treated with decoction of *Katuwelbatu Deduru Katukadiya*. It is concluded that decoction of *Katuwelbatu Deduru Katukadiya* is a Sri Lankan traditional decoction which, can successfully be used in treatment of *Kaphaja Shira Shula* (Chronic Sinusitis) since its ingredients have highly effective properties of pacifying the vitiated *Doshas*; while being especially effective in pacifying vitiated *Vata* and *Kapha Dosh*.

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हिन्दी सारांश

कफज शिरःशूल की चिकित्सा में श्रीलंकन पारंपरिक क्वाथ कटुवेलबतु देदुरु कटुकादि के प्रभाव का अध्ययन

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के.डी.सी.एम. वीरसिंघे

कफज शिरःशूल की तुलना क्रोनिक सायनुसायटिस के साथ की जा सकती है, जिसमें शिरोगौरव, शिरःशूल, शीतता एवं शोथ जैसे लक्षण पाये जाते हैं। प्रस्तुत अध्ययन में इस व्याधि पर श्रीलंकन पारंपरिक क्वाथ 'कटुवेलबतु देदुरु कटुकादि' के प्रभाव का विश्लेषण किया गया। कफज शिरःशूल से पीड़ित कुल ८० रुग्णों को दो समूहों में बाँटा गया। प्रथम समूह में उपरोक्त औषधि क्वाथ १२० मिली. एवं द्वितीय समूह में प्लासेबो क्वाथ १२० मिली. २१ दिनों तक दिया गया। परिणामों का अध्ययन करने पर, कटुवेलबतु देदुरु कटुकादि क्वाथ की चिकित्सा से उत्तम लाभ देखा गया।

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