



**PHARMACEUTICAL STUDY OF GUNJA TAILA AND PATHYADI KWATHA- A POLY
HERBAL FORMULATIONS**

Dr. Swati Singh^{1*}, Dr. Vijayant Bhardwaj², Dr. Satish Sharma³, Dr. Seema Rani⁴ and Dr. Manoj Arya⁵

¹M.S. (ENT), Shalakya Tantra, R.G.G.P.G. Ayu. College & Hospital, Paprola (H.P.).

²Reader, R.G.G.P.G. Ayu. College & Hospital, Paprola (H.P.).

³Reader, R.G.G.P.G. Ayu. College & Hospital, Paprola (H.P.).

⁴M.S. (ENT), Shalakya Tantra, R.G.G.P.G. Ayu. College & Hospital, Paprola (H.P.).

⁵Assistant Professor, Shalakya Tantra, Ayuujyoti Ayu. College & Hospital, Sirsa (Haryana).

***Corresponding Author: Dr. Swati Singh**

M.S. (ENT), Shalakya Tantra, R.G.G.P.G. Ayu. College & Hospital, Paprola (H.P.).

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ABSTRACT

Acharya Sushruta has mentioned 11 types of Shiro-roga in Uttar Tantra. *He* has mentioned severe piercing and tearing pain in one half of the head associated with giddiness. These features appear every fortnightly or ten days or any time. *Acharya Charaka* has described the prominently involved sites as *Manya* (neck), *Bhru* (eyebrow), *Shankha* (Temporal region), *Karna* (ear), *Akshi* (eye) and *Lalata* (fore head). In addition, *Vagbhatta* mention one extra site i.e. *Ghata* (occipital region). Commentator *Indu* suggest *Krikatika* means occipital region and commentator *Arundatta* suggest *Shankhasya Upari Bhaga* i.e. parietal region for it. This can be correlated with Migraine. Physicochemical analysis of *Gunja Taila* shows loss on drying 0.32%, total solid content is 99.59%, refractive index is 1.4703, Sp gravity is 0.919.

Physicochemical analysis of *Pathyadi kwatha* shows loss on drying is 51.49%, total solid content is 48.51%, refractive index is 1.424, sp gravity is 1.252. So the present study was carried out to standardize the finished product *Gunja Taila* and *Pathyadi kwath* to confirm its identity, purity and quality.

KEYWORDS: Ardhavabhedaka, Gunja taila, Pathyadi kwath.

INTRODUCTION

According to Acharya Sushruta if one half of the head develops severe tearing and pricking pain, giddiness and piercing pain, suddenly after a fortnight or ten days. This should be diagnosed as *Ardhavabhedaka* caused by all the three doshas^[1], while Acharya Charaka mentioned that The vata, getting provoked by addiction to dry articles or excess of diet or eating on a loaded stomach, exposure of eastern wind and frost, suppression of natural urges, excessive sexual indulgence, exertion and exercise, either alone or in combination with *Kapha*, seizes the one half of head and causes acute neuralgic pain in the sides of the neck, eyebrow, temple, ear, eye or forehead of one side. This pain is very agonizing like that of churning rod (red hot needle). This disease is called *Ardhavabhedaka*. If the condition becomes aggravated, it may even impair the functions of the eye and ear.^[2] *Ayurvedic* classics explained *Nasa* as the only route to the head. So any medicine which is administered through the nose can influence the head directly. It may be due to anatomical and physical relations of nose and paranasal sinuses^[3], so the *Gunja taila* was used as *nasya* to

reduced aggravated vata and kapha dosha as taila does snehana to control vata dosha while *nasya* control increased kapha dosha and ingredients of *Pathyadi kwath* controls the Tridosha. It is said that *Ardhavabhedaka* is a tridoshaja disease with vata-kapha dominance. So the present study was carried out to analyze the physico-chemical properties of *Gunja taila*^[4] and *Pathyadi kwath*.^[5]

MATERIALS AND METHODS

Collection of the Drug

Raw drugs of *Gunja Taila* and *Pathyadi kwatha* were procured from and were Identified and Authenticated at Pharmacognosy laboratory.

Ingredients of Gunja taila

Sr. No	Name of Plant	Botanical name	Family	Part used	Quantity
1	Til Taila	<i>Sesamum indicum</i> Linn	Pedaliaceae	Seeds oil	5 lit.
2.	Kanji*	-	-	-	5 lit.
3.	Bhringraj swaras	<i>Eclipta alba</i> Hassk	Asteraceae	Whole plant	5 lit.
4	Gunja	<i>Abrus pectorius</i> Linn	Fabaceae	Seeds	2 kg

Ingredients of Til Taila murchana^[6]

Sr. No	Name of plant	Botanical Name	Family	Part used	Quantity
1.	Manjistha	<i>Rubia codifolia</i> Linn.	Rubiaceae	Root	2 parts
2.	Haritaki	<i>Terminalia chebula</i> Retz.	Combretaceae	Fruit	1 part
3.	Bibhitak	<i>Terminalia Bellirica</i> Roxb.	Combretaceae	Fruit	1 part
4	Amalaki	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Fruit	1 part
5	Haridra	<i>Curcuma longa</i> Linn.	Zingiberaceae	Stem	1 part
6	Lodhra	<i>Symplocos racemosa</i> Roxb.	Symplocaceae	Bark	1 part
7	Nagarmotha	<i>Cyperus rotundus</i> Linn.	Cyperaceae	Stem	1 part
8	Dalchini	<i>Cinnamomum zeylanicum</i>	Lauraceae	Bark	1 part
9	Kevda	<i>Pandanus odorotissimus</i> Linn.	Pandanaceae	Root	1 part
10	Vatt	<i>Ficus bengalensis</i> Linn.	Moraceae	Leafbud	1 part

Method of Preparation Of Tail

This process involves two steps. Firstly Murchana of Til Taila is carried out with the drugs mentioned in table above followed by Sneha Paaka of the Til Taila along with kanji and Gunja seeds kalka until the appearance of Lakshanas of Samyaka Sneha Siddhi.^[7] When the kanji

dried, again paaka with bhringraj swaras, when water content dried up just filter the taila. Then taila paka completed with all its examination allowed to cool and packing. Then taila is used as medicine for nasya purpose.

Ingredients of Pathyadi kwath

Name of Drugs	Botanical name	Family	Parts Used	Quantity
Haritaki	<i>Terminalia chebula</i> Retz.	Combretaceae	Pericarp	5 kg
Bibhitaki	<i>Terminalia bellirica</i>	Combretaceae	Pericarp	5 kg
Amalaki	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Pericarp	5 kg
Haridra	<i>Curcuma longa</i> Linn	Zingiberaceae	Rhizome	5 kg
Guduchi	<i>Tinospora cordifolia</i> Willd	Menispermaceae	Stem	5 kg
Bhunimba	<i>Andrographis paniculata</i>	Acanthaceae	Whole plant	5 kg
Nimba	<i>Azardiracta indica</i>	Meliaceae	Stem bark	5 kg
Purana guda	Jaggery	-	-	5 kg

Method of preparation of Kwatha

Coarsely powdered drug is boiled with 16 parts of water in an earthen pot, over a mild fire till the liquid is reduced to 1/8 of the original quantity. This liquid is known as Shrta, Qwath, Kasaya or Niryuha^[8]. This kwatha prepared by using 20grams kwatha dravya in 320ml of water and after boiling up to 40ml as par Kwatha Vidhi mentioned by Acharya Sarangdhara Samhita, Madhyam Khand.^[9]

soluble extractive^[13], methanol soluble extractive^[14] were recorded.

Determination of Specific gravity^[15]

The specific gravity of a liquid is the weight of a given volume of the liquid at 25 °C (Unless otherwise specified) compared with the weight of an equal volume of water at the same temperature, all weighing being taken in air.

Organoleptic Evaluation

Various parameters of the material such as colour, odour, touch and taste of the Gunja Taila and Pathyadi Kwath were observed and recorded.

Procedure

A Pycnometer of 25 ml, capacity is cleaned, dried and weighed. It is filled up to the mark with water at the required temperature and weighed. The Pycnometer is next filled up to the mark with the sample, at the same temperature and weighed. The specific gravity is determined by dividing the weight at the sample in grams by the weight of the water, expressed in gram.

Physico-chemical Analysis

Physico-chemical analysis was carried out by following the parameters. Physicochemical analysis like loss on drying at 110°C^[10], pH value^[11], ash value^[12], water

High Performance Thin Layer Chromatography^[16]

High performance thin layer chromatography (HPTLC) is an invaluable quality assessment tool for the evaluation of botanical materials. It allows for the analysis of a broad number of compounds both efficiently and cost effectively. Additionally, numerous samples can be run in a single analysis thereby dramatically reducing analytical time. With HPTLC, the same analysis can be viewed using different wavelengths of light thereby providing a more complete profile of the plant than is typically observed with more specific types of analyses.

Procedure

First of all, take a drop of sample and diluted with hexen (as per require) then application of the sample at the one end of the precoated plate through linomat V (150 µl/sec) then on the sample zone again applied 7% alcoholic KOH then leave for 10-15 minutes at 60-80°C in oven. The plate is then developed by the suitable mobile phase in a chromatographic chamber which was previously saturated with the mobile phase. Then after development it is visualized into day light, short UV (254nm) and / or by derivatization of the plate with suitable reagent. The Rf value and the colours of resolved bands and fingerprinting profiles are recorded.

OBSERVATIONS AND RESULTS**Organoleptic Evaluation**

Various parameters of the material such as colour, odour, touch and taste of the *Gunja Taila* and *Pathyadi kwath* were observed and recorded.

Organoleptic characters of *Gunja Taila*

S. no.	Properties	Observation
1.	Rupa(colour)	Reddish
2.	Gandha (odour)	Characterstic
3.	Rasa (Taste)	Tikta
4.	Sparsh (Touch)	Smooth

Organoleptic characters of *Pathyadi kwatha*

S. no.	Properties	Observation
1.	Rupa(colour)	Brown
2.	Gandha (odour)	Characterstic
3.	Rasa (Taste)	Bitter & sweetish
4.	Sparsh (Touch)	Smooth

Analytical Study

Results of the analytical study of *Gunja Taila* and *Pathyadi kwath* are as follows.

Physico-chemical Constants: The results are.

1. Physico-chemical Constants of *Gunja Taila*.

S. no.	Test	Result
1.	Loss on drying	0.32%
2.	R.I	1.470
3.	Sp. Gravity	0.919
4.	Total solid	99.59%

2. Physico-chemical Constants of *Pathyadi kwath*

S. no.	Test	Result
1.	Loss on drying	51.49%
2.	R.I	1.424
3.	Sp. Gravity	1.252
4.	Total solid	48.51%

High Performance Thin Layer Chromatography (HPTLC)**1. Chromatographic results of *Gunja taila***

Rf values	0.36, 0.50, 0.58, 0.66, 0.75, 0.86, 0.90, 0.25, 0.45, 0.53, 0.70, 0.82, 0.91
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2. Chromatographic results of *Pathyadi kwath*

Rf values	0.17, 0.25, 0.34, 0.43, 0.52, 0.72, 0.79, 0.89, 0.16, 0.24, 0.36, 0.54, 0.77, 0.88, 0.26, 0.36, 0.54
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CONCLUSION

Results obtained in Physiochemical parameters of *Gunja taila* and *Pathyadi kwath* are within limits mentioned by Ayurvedic Pharmacopoeia of India. This profile can be used for the identification of the medicinally important formulation of *Gunja taila* and *Pathyadi kwatha*. Present work can be considered as the first step towards identifying the following methods through HPTLC analysis. This is the preliminary analysis and meticulous nature along with depiction is to be carried out.

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