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Therapeutic study of palash beej (seed of butea monosperma) in the management of krimi w.s.r to intestinal worm.

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ABSTRACT

Palash is *Buteamonosperma Lam. Kuntze*. It is a medium sized deciduous tree which is widely distributed throughout the greater part of India. *Palash* belongs to family *Fabaceae* and is popularly known as 'flame of the forest' is being used in traditional medicines. It has been found to have antimicrobial, wound healing, antifungal, anti diarrheal, hypoglycemic, It contains butrin, isobutrin, butin, palasitrin, and butein. . The widespread uses of *Palash* in traditional system of medicine have resulted in their extensive chemical analysis for their bioactive principles. This article briefly reviews the pharmacology of *Palash a*nd its effect on *krimi*.

Keywords: *Ayurveda*, *Palash*, *Buteamonosperma*, Fabaceae,

INTRODUCTION

Palash (Buteamonosperma Lam. Kuntze) is a commonly used herb in *Ayurvedic* medicine.

The literary review of the *Palash* was started right from the *Vedas* up to recent research works to obtain thorough knowledge ofdrug. On comprehensive review of *Ayurvedic* classics it was found that *Palash* is described in *Vedas, Upanisads, CarakaSamhita, Susruta Samhita* and both *Astanga Sangraha* and *Astanga Hrdaya.* In *Susruta Samhita, Palash* is described in *Rodhradi, Muskakadi, Ambasthadi* and *Nyagrodhadi Gana*[1]. In *Astanga Hrdaya, Vagbhata* mentioned *Palash*in *Asanadigana* and like *Susruta Samhita,* he hasmentioned *Palash in Rodhradi, Muskakadi, Ambasthadi*and *Nyagrodhadi Gana*[2]. Many of the *Nighantus* have described the properties of *Palash* i..e the rasa of *Palash*is *tikta* and *kasaya, Viryausna* but flower of *Palash*is *sita*in nature. The author of *DhanvantariNighantu*[3] mentioned properties *Palash Bija*as *Katu* in *rasa, Snigdha*in *guna, Usnavirya* and *kaphanasaka*.

Scientific Classification [4]
Kingdom: *Plantae*
Division: *Magnoliophyta* (*Spermatophyta*)
Class: *Magnoliopsida* (*Dicotyledons*)
Order: *Fabales* (*Rosales*)
Family: *Fabaceae*
Genus: *Butea*
Species: *monosperma*.

Vernacular names [5]

Hindi: *Dhak, Tesu*
English: *Bastard teak, Bengal kino,* Flame of the forest
Kannada: *Muttunga, Thoras*
Tamila: *Parasa, Pilasu*
Bengali: *Palas*
Gujarat: *Khakharo, Palaspappda*
Punjabi: *Chichra, Dhak, Palas.*

Synonyms of *Palash*[6]

- *Palash*– The leaves are fleshy and beautiful.
- *Kinshuka*- Resembling parrot's beak.
- *Ksharashrestha*- The plant is one of the best among thesources of alkali.
- *Parna*- The Leaves are useful.
- *Brahmavrksa*- Used in religious rites and sacrifices.
- *Yajniya*- Used in `religious rituals.
- *Raktapuspa*- Flowers are red.
- *Vatapotha*- It pacifies vata.

In *Ayurveda*, parasitic infection and helminthic infections are included under *Krimi Roga*. Different varieties of *Krimi* are described in *Ayurvedic* literature.[7] General symptoms which mark the presence of worms in the system are fever, palenessof complexion, abdominal pain, cardiac troubles, lassitude, vertigo, aversion to food and diarrhea.[8] *Ayurvedic* classics explain the treatment as *Apakarashna* (extraction of worms with the help of *Sansodhana* therapy- *Vaman* (therapeutic vomiting or emesis), *Virechan* (purgation), *Vasti* (medicated enema), *Nasya* (elimination of toxins through the nose), *Prakriti Vighata* (utilizing *antihelminthic* drugs along with dietary regimen non-congenial to proliferation of helminthes)and *Nidan-parivarjana* (avoidance of all etiological factors of the *helminthiasis*).[9]

Material and methods

A. For literary review

Literary review of *Palash Seed* has explored from classical textsviz. *Carakaa Samhita, Sushruta Samhita, Ashtanga Sangraha, Ashtanga Hridaya, Chikitsa granthas* and *Nighantus* viz. *Raja nighantu, Dhanvantari nighantu, Bhaishajya Ratnavali* and articles published in various journals.

B. For phytochemical study:

Palash seed were collected by rural area of Patna identifiedby the teacher of *Dravyaguna* department in Faculty of *Ayurveda* in Patna. Macroscopic and microscopicevaluation was carried out with different parts of plant. Theywere pulverized in the mechanical grinder to a moderate finepowder to carry out microscopic studies and were stored in awell closed airtight vessel for further analysis.

C. For clinical study

Dose, Duration of Treatment and Follow up

The research study entitled "An open labeled randomized studyto assess the efficacy and safety of Palash beej churna was an observational clinical trial done.

Research Design

The study was a single open prospective randomized clinicaltrial conducted over a period of one week (follow up for 1months) to evaluate symptomatic and subjective improvement in patients of *Krimiroga*.

Inclusion Criteria

- Either sex ageing between 5-14 years
- Patients having classical symptoms of *Krimi roga* and

presence of Ova/cyst/worms in stool examination

Exclusion Criteria

1. Patients having severe illness or complication
2. Patients requiring immediate medical intervention
3. Participating in any other clinical trials.

Study Population

Total 20 patients of either sex with confirmed *Krimiroga* as per the sign and symptoms were enrolled in the study.

Criteria for Selection of Drug

Palashbeej churna presented in the powder form for oral administration.

Dose of Drug – 3-2-5gm BD with plain water.

Diagnostic Criteria

An elaborate case paper incorporating the points of historytaking, previous medication, past illness and physicalexamination was prepared. It mainly emphasized on signs and symptoms of *Krimiroga*. Routine laboratory investigation like CBC and Stoolexamination (Ova/cyst) was made to rule out the conditions.

Criteria for Assessment

The assessment was made before and after the treatment onscoring of signs and symptoms of *Krimiroga*. Scoring patternwas developed according to severity of symptoms. Resultswere analyzed statistically as per the assessment chart.

Subjective Parameters

Symptoms were evaluated on the basis of 0=Normal, 1-Mild,2-Moderate and 3-Severe.

- Fever
- Paleness of complexion
- Anal Itching
- Abdominal pain
- Lassitude
- Anorexia
- Nausea
- Vomiting
- Loose stool

Objective Parameters

- Evaluation of Stool examination – Presence of Ovaand cyst in microscopic examination was evaluated as:

Absent – 0, Present – 1.

Assessment of total effect: The total effect of therapy was assessed as follows:

Assessment Score

- Complete cure 100%
- Marked Relief > 75 to 99%
- Moderate Response > 50 to 75%
- Mild Improvement > 25 to 50%
- No response 0 to 25%

Observation

The effect of *Palash beej churna* was studied in 20 patients suffering from *Krimiroga*, fulfilling the inclusion criteria.

- ***Effect of Therapy:***

The effect of therapy on all subjective and objected parametershas been documented in tables. The effect of test drug on allcardinal symptoms is showing a highly significant result in analitching, abdominal pain, lassitude, anorexia and loose stoolafter completion of one week treatment. Stool examination forova and cyst showed a highly significant result.

- ***Overall Effect of Therapy***

The overall assessment considering all the parameters outlinedin the assessment criteria, the final result shows that 65% ofpatients had marked relief and 15% each had moderate andmild

improvement. 5% patient (one patient) was completelycured after treatment.

Table 1. Effect of palashbeejchurna on selected 20 patient

Symptoms	BT	AT	Differtial Mean	% Relief	SD	SE	T value	P value
Fever	.700	.300	.400	57.14	.521	.11	1.925	p>.01
Palenness	1.100	.450	.650	59.09	.420	.10	3.299	P<.01
Anal itching	2.250	.700	1.350	68.88	.623	.13	7.566	P<.001
Abdominal pain	1.800	.650	1.250	63.88	.312	.08	6.046	P<.001
Lassitude	1.600	.550	1.050	65.63	.301	.08	5.971	P<.001
Anorexia	1.400	.550	.850	60.71	.351	.112	4.834	P,<001
Nausea	1.000	.550	.400	40.00	.501	.092	2.179	P<.001
Vomiting	.570	.350	.200	36.36	.402	.114	1.265	p>.01
Loose stool	.750	.200	.500	73.33	.501	.112	3.584	P<.01

Table 2. Overall effect of Palash Beejchurna in 20 patients of Krimiroga

Result	Number of Patient	Percentage
No response	0	O
Mild improvement	04	15
Marked relief	12	65
Moderate response	03	15
Complete cure	01	5

DISCUSSION:

This study was conducted as 'An open labeled, randomized prospective study to assess the efficacy and safety of *Palash Beej churna*.' The results of this study demonstrate that most of thepatients got marked relief after completion of treatment.

The anthelminthic activity of alcohol and ethyl acetate extracts of *Palash (Buteamonosperma*) were noticed against earthworms (*Pheretimaposthuma*), roundworms (*Ascardiagalli*) and tapeworms (*Raillietinaspiralis*).[10]

The safety and tolerability of study medications was assessedbased on adverse events reported by patients or observed by theinvestigator during evaluation. No clinically significant adverseeffect neither reported by the patients nor observed by theresearcher during the study.

CONCLUSION:

*PalashBeejchurna*provided better result in all the cardinal symptoms of the disease and on the stool examination. The present study has shown positive

results on *Krimi roga* through *Palash Beej churna* preparations. These drugs were very much effective inclearing the intestinal parasites,

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