

## **PATTU (PASTES) USED FOR BHAGNA CHIKITSA (TREATMENT FOR FRACTURES) IN SRI LANKAN TRADITIONAL MEDICINE – A CRITICAL REVIEW**

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Received: 04-02-2014; Revised: 13-03-2014; Accepted: 18-03-2014

### **Abstract**

Occurrence of fractures is very higher incidence at present and this tendency is likely to continue in future too. In the present era most of the people are turning towards traditional treatment for fractures. Fractures are called Bhagna in traditional medicine. Traditional physicians are in experience with highly effective treatments for fractures and they utilize their knowledge with modern techniques to establish their therapy without any defects. So studying this system in depth is a necessity. The present study is aims to explore these secondary data related to the literature about Pattu (Pastes) used for Bhagna Chikitsa in traditional medicine and evaluate the pharmacodynamic actions of selected formulations. For this study, more than 35 formulations of Pattu were collected from reputed traditional physicians and traditional text books and randomly ten formulations were selected to analyze subsequently the pharmacodynamic action based on the properties of the individual drugs in them. Analysis showed that different Pattus produced different results, depending on the herbs used in the formulations. The main pharmacodynamic actions of these Pattus are Shotahara (prevent oedema), Vedana sthapana (Analgesic), Pradahanashaka (Prevent inflammation), Sandhaneeya (Bone Healing), Vruna shodana (Wound purification), Daha prashamana (Prevent burning sensation of the affected area), Krimighna (Anti microbial activity), Vruna Ropana (Wound Healing) and Uththejaka (Stimulating). Due to these different actions towards the Bhagna, these Pattu can be used for different kind of Bhagna stages with associated symptoms.

**Key words:** Fractures; Bhagna; Pattu; Traditional medicine; Pharmacodynamics.

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### *Cite This Article*

Weerasekera KR, Malkanti IPK. Pattu (pastes) used for bhagna chikitsa (treatment for fractures) in Sri Lankan traditional medicine – A critical review. *Ayurpharm Int J Ayur Alli Sci.* 2014;3(3):79-90.

## INTRODUCTION

Fractures are common; the average person has two fractures during a lifetime.<sup>[1]</sup> A bone fracture can be the result of high force impact or stress, or trivial injury as a result of certain medical conditions that weaken the bones.<sup>[2]</sup> According to modern medicine, the word fracture literally means a break in the continuity of bone. The break can be only a crack or a complete shattering of one or more bones.<sup>[3]</sup> According to Ayurveda and Traditional Medicine, a fracture is correlated with Bhagna. And the meaning of the Bhagna is fracture (broke) and split (tear) of a bone. Traditional physicians descend from the veda parampara (Eminent traditional physician families) who have excellent knowledge and experience of Bhagna therapy and they use more specific words to recognize events under Kadum Bidum (Fractures and Dislocation), namely Kadeem (fracture), Bideem (tear), Abhareem (cramp), Paneem (dislocation), Keteem or Adeem (traction), Taleem (contusion), Keveem, Ulukku and Amatti (tear). A Traditional text book of Sarartha Samgraha define A Bhagna is a defect, either one bone or more bones and caused from hitting, falling from height.<sup>[4]</sup>

Sarartha Samgraha also mentioned two types of Bhagna such as Savruna (with a wound) and Avruna (without wound). Another classification also indicated as Kanda Bhagna (fractures) and Sandhi Bhagna (dislocations).<sup>[4]</sup> Also the book indicates magnificent treatments for complications of Bhagna such as Kadate lae baseema (blood accumulation in the pleural cavity), Usmurutava (flatulence), Jala mala Adassiya (anuria and constipation), Hrada-Mastishka Penahalu and Mutrashaya Talma (contusion of Heart, Brain, Lung and Bladder), Paenduwa (chronic oedema), Korabhavaya (stiffness of bones, joints and muscles), Tuwala and Odu (wound and fistula).

Traditional physicians are also in experience with hidden treatments for Bhagna and Avasandhi. They utilize their knowledge and old methods, which they gained from their generations, and modern techniques to establish their therapy effectively without any defects. For treatments, these physicians use various kinds of herbs, which is endemic for their treatments. Also they use different kinds of therapeutic measures and recipes such as Thumpe Handiya (cures within 3 hour), Hathpehandiya (cures within 7 hour), Bath Ethirena Handiya (cures within the time of cooking rice), Mallum (crushed ingredients with scraped coconut), Pattu (paste), Pani pahtu (pastes with honey), Kirimeti pathtuwa and Ankudupathtuwa (kinds of pastes), Thambuma (like rasam), Handi Taila (oil for Joints), Ulukku Taila (oils for tears), Telkira (kind of coconut milk product), Paturu Badeema (use of wood pieces and tie) and Bandana vidhi (bandages). Various Gurukulas (eminent medical generations) use same order treatments and normally it gives good results, first they do the Oil applying and there after use Mallum.

Mallum are used for 7 to 21 days. Next stage they use Pattu (medicated paste) and Panipattu (medicated paste with honey) for 7 to 14 days. After the Pattu application, fomentation therapy is done by Tavilli-Pottani with oil application and finally Thelkira (Medicated oil) is used. A Pattu is defined as any medicines in the form of a paste, used for external application.<sup>[5]</sup> It may be prepared with wet drugs or with dry drugs.

For example to prepare paste from dry drugs, little water should be added. In method of preparation (from dry drugs) of Pattu, the drugs are first made into a fine powder and then mixed with some liquid media like Water/Oil/ Ghee/ Swarasa/ Decoction/ Coconut milk or Honey to obtain the paste form. This paste is applied over the skin of the affected area.<sup>[5]</sup> Therefore this study is focused

on to analyse the 10 effective formulations of Pattu for Bhagna Chikitsa used in certain eminent medical generations existing in Sri Lanka.

### **Objectives**

This project aims to study the literature of Pattu and analyse their Pharmacodynamic activity from randomly selected 10 formulations of effective Pattu use for Bhagna Chikitsa in Traditional Medicine in Sri Lanka.

### **Methodology**

The study was done by using texts in Indigenous Medicine and from Traditional Physicians of Popular medical generations and 35 Pattus were collected. Then randomly selected 10 formulations from the above mentioned Pattu were used to analyse according to the pharmacodynamic action.

### **RESULTS AND OBSERVATIONS**

Selected ten Pattu with the ingredients and the Sinhalese name, Botanical name and their Pharmacodynamic actions are mentioned in Table 1 to 10. This Pattu has not mentioned in special names.

### **DISCUSSION**

According to the critical review on the pharmacodynamics of the formulations, the first Pattu was found to be effective for oedema (Shothahara) with symptoms of pain (Vedana sthapana), blood checking property (Sthambana) and purify wounds (Vruna shodana) and it is pacifies Kapha.

Second Pattu, may be effective to relieve oedema and pain, Skin diseases (Kushtagna), purify and to heal the wound (Vruna shodana and ropana) and it is pacifies Vata and Kapha.

Third Pattu may be effective for bone healing (Sandaneeya) and swelling with association of

symptoms of inflammation (Prdaha nashaka) and changes of skin (Kushtagna) and this Pattu pacifies all the three Doshas.

Fourth Pattu was found to be effective for oedema with pain and also causes changes in skin, purifies and heals the wounds. This Pattu also pacifies Vata and Kapha.

The special qualities of the fifth Pathtu is anti-oedematous action and healing of wounds in the affected area and controlling Kapha dosha and Pitta Dosha are the other benefits of this Pattu.

Prominent qualities of sixth Pattu are relieving oedema and healing the wounds. This Pattu pacifies the Kapha and Vata Dosha.

Seventh Pattu was effective for burning sensation (Daha prashamana) and has effect of wound healing and pacifies Vata.

Eighth one was effective for prevent burning sensation in the affected area, oedema and pacifies Vata, Pitta.

The special qualities of the ninth Pattu were anthelmintic (Krimigna) and also reduces the associated symptoms like oedema and pain. Controlling Pitta and Kapha doshas were other benefits of this Pattu.

Pattu number ten was effective in relieving pain, anti oedematic, nerve stimulat (Uttejaka), perspiration (Sweda janana) and anti-poison (Vishagna) and this Pattu also has Vata and Kapha pacifying actions.

### **CONCLUSION**

In Traditional Medicine various kinds of Pattu are used for Bhaghna Chikitsa. Every pattu has different actions towards the Bhagna with associated symptoms.

The main pharmacodynamic actions of selected 10 pattu are Shothahara (prevent

oedema), Vedana sthapana (Analgesic), Pradaha nashaka (Prevent inflammation), Sandhaneiya (Bone Healing), Vruna shodhana

(Wound purification), Daha prashamana (Prevent burning sensation of the affected area),

**Table 1: Selected Pattu 1**

Name of Ingredients	Rasa	Guna	Vīrya	Vipāka	Dosha Karma	Actions (External)
1 Madam <sup>[6]</sup> <i>Syzygium cumini</i> (L)	Kashaya Amla Madura	Lagu Ruksha	Sheeta	Katu	Kapha Pittashamaka Vata vardhaka	Sthambana, Daha prashamana Tvag doshahara Snehana, vruna
2 Hik <sup>[7]</sup> <i>Lannea coromandel</i> (H)	kashaya katu, Madura Lavana		Uahna	Katu	Kapha Vata shamaka	Ropana, shotahara, Vedana sthapana, Sthambana, Jantughna Krimihgna Shotahara, Rakta
3 Kotadimbuala <sup>[8]</sup> <i>Ficus hispida</i> (L)	Tikta Kashaya	Ruksha Lagu	Sheeta	Katu	Pitta Kapha Shamaka	Sthambana Sandhana, Kushtaghna Vranashodana Vidahi, Shotahara, Vedana Sthapana,
4 Murunga <sup>[9]</sup> <i>Moringa oleifera</i> (L)	Katuka	Lagu Tikshna, Sara Ruksha	Ushna	Katu	Kapha Vata Shamaka	Sweda Janana, Rakta janaka Sandhaniya, Shotahara
5 Pupula <sup>[10]</sup> <i>Vernonia zeylanica</i> (L)	Tikta, Katu		Ushna	Katu	Kapha Vata Shamaka	Vedana sthapana, Vrana shodana and Ropana
6 Bee Honey <sup>[11]</sup>	Madura Kashaya	Lagu Ruksha, vishada	Sheeta	Madura	Vata Vardhaka Kapha Pitta Shamaka	vrana shodana and ropana Krimighna, Dahahara, Kushtaghna, Varnya Shotahara 66.6%
Percentages	Kashaya 66.6% Madhura &Katu 50% Tikta 33.3% Amla & Lavana16.6%	Laghu 60% Ruksha 60% Tikshana, Sara & Vishada 20%	Ushna & Sheeta 50%	Katu 83.9% Madhura 16.16.1%	Kapha shamaka 100% Vata & Pitta shamaka 50%	Vedana sthapana, Stambana & Vruna shodana 50% Ropana & Sandhana 33.3% %

**Table 2: Selected Pattu 2**

Name of Ingredients	Rasa	Guna	Veerya	Vipak a	Dosha Karma	Actions(External)
1 Aba <sup>[12]</sup> <i>Brassica alba</i> (B)	Katu Tikta	Teekshna Ruksha	Ushna	Katu	Kapha Vata hara Pitta vardhaka	Shotahara, Lekhana, Kushtaghne, vispota janana, Snehana, vedanasthapana, Shonita uthkleshaka, Jantughna, Krimighna, Mansha stabdhakara, Varnya, Sheetaprashamana, Vruna Ropana, Uththejaka
2 Sudulunu <sup>[13]</sup> <i>Allium sativum</i> (L)	Madura Katu, Lavana Tikta, Amla	Snighda, Sara Teekshana Pichchila, Guru	Ushna	Katu	Kapha, Vata shamaka Pitta Kopaopa	Kushtaghna, Vedana sthapana, Shota hara, Vishahara, Raktothkhe
3 Inguru <sup>[14]</sup> <i>Zingiber officinale</i> (R)	Katu	Snighda Lagu	Ushna (Dry)	Katu	Kapha vata Shamaka	Sheeta prashamana, Vedana Stapana, Shotahara Snau Uththejaka, Pradahakaraka
4 Gammiris <sup>[15]</sup> <i>Piper nigrum</i> (L)	Tikta Katu	Lagu, Ruksha Teekshna	Ushna	Katu	Vata kapha nashaka	Lekhana, Raktothkleshaka, Uththajaka, Krimighna Shotahara, Kushtaghna, Sweda janana
5 Tippili <sup>[16]</sup> <i>Piper longum</i> (L)	Katu	Lagu Snighda Teekshna	Anushna	Madura	Kapha vata Shamaka	Raktothkleshaka, Shotahara, Kushtaghna, Vedana sthapana
6 Kurundu <sup>[17]</sup> <i>Cinnamomum zeylanicum</i> (B)	Katu Tikta Madura	Lagu Ruksha Theekshna	Ushna	Katu	Kapha Vata hara Pitta kopa	Vruna Shodana and vruna Ropana, Vishaghna, Vedana Sthapana, Shotahara
7 Rukattana <sup>[18]</sup> <i>Alstonia scholaris</i> (R)	Tikta Kashaya	Lagu Snighda	Ushna	Katu	Tridosha shamaka	Kushtaghna, vruna shodana and vruna Ropana, Vishaghna Vedana Sthapana, Shotahara
8 Lunuwarana <sup>[19]</sup> <i>Crateva adansonii</i> (D)	Tikta Madura Kashaya	Lagu Ruksha	Ushna	Katu	Kapha Vata hara Pitta Vardhaka	Rakta Uth kleshaka, Vedana stapana, Shotahara, Vruna shotahara, Vidradhi hara, Kandughna
9 Nika <sup>[20]</sup> <i>Vitex negundo</i>	Tikta, Katu Kashaya	Lagu Ruksha	Ushna	Katu	Kapha Vata hara	Vedana sthapanaa, Shota hara, vrana shodana & varna ropana, Jantughna, Kushtaghna, Kesya, Kandughna
10 Siyambala <sup>[21]</sup> <i>Tamarindus indica</i> (L.)	Amla	Guru Ruksha	Ushna	Amla	Vata hara Pitta shamaka	Shotahara, Vedana sthapana, Daha prashamana, Vruna Ropana & Shodana, kushtaghna, Poothinivaraka, Nadivrunahara, Stabhtatahara, Poothinivaraka
Percentages	Katu & Tikta 70% Kashaya & Madhura 30%	Laghu 70% Ruksha 60% Tikshna 50% Snigdha 40%	Ushna 90%	Katu 80%	Kapha Vata shamaka 100%	Shotahara 100%, Vedana sthapana 90%, Kushtagna 70%, Vruna shodana and Ropana 60%

**Table 3: Selected Pattu 3**

	Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1	Nawahandi <sup>[22]</sup> <i>Rhipsalis baccifera</i> Muvakiriya <sup>[23]</sup>	Katu Tikta		Sheeta	Katu	Tridosha Nashaka	Sandhaniya, Pradahanashaka, Shotahara
2	<i>Sarcostemma brunonianum</i> (W)	Katu Tikta		Sheeta	Katu	Tridosha nashaka	Sandhaniya, Pradahana shaka, shotahara
3	Kotadimbula <sup>[24]</sup> <i>Ficus hispida</i> (L)	Tikta Kashaya	Lagu Ruksha	Sheeta	Katu	Pitta Shamaka kaphahara	Shothaara, RaktaShambana, Sand hana, Kushtaghna, Vrunashodana Shotahara, Vishaghna,
4	Bimtabhuru <sup>[25]</sup> <i>Ipomoea pescaprae</i> (L)	Katu Kashaya	Guru Sheeta	Sheeta	Katu	VataPitta Shamaka	Kushtaghna, Vrunashotahara, Dahaprashamana, Vedanahara Krimighna, Sandhaniya
	Percentages	Katu 75%, Tikta 75%, Kashaya 50%	Laghu 50% Guru 50%	Sheeta 100%	Katu 100%	Tridoshhara 50%	Shotahara 100%, Sandhaneeya 100%, Pradaha nashaka 50%, Kushtagna 50%

**Table 4: Selected Pattu 4**

	Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1	Ankenda <sup>[26]</sup> <i>Acronychia pedunculata</i> (L)	Tikta, Kashaya Amla	Ruksha Ushna	Ushna	Katu/ Amla	VataKaphahara	Shotahara, Vimalapana, Vruna Ropana, Vedana hara, Shalya Apaharana, Vrunashota hara Jantughna, Krimighna, Vruna pachana, Vruna Ropana, Vruna shodhana, Pootihara,
2	Kohomba <sup>[27]</sup> <i>Azadirachta indica</i> (A.)	Tikta, Kashaya	Lagu	Sheeta	Katu	Pitta Kaphahara	Dahaprashamana Kandughna, Kushtaghna, Vedanastha pana, Shotahara, Vidradhihara, Nadivrunahara Shotahara, Vedanasthapanana, Dahaprashamana, Vruna ropana & shodhana, Kushtaghna, Pootinivaraka Nadivruna hara, Stabdhatihara
3	Siyambala <sup>[21]</sup> <i>Tamarindusindica</i> (L.)	Amla	Guru Ruksha	Ushna	Amla	Vata shamaka Pitta shamaka	
4	Aralu <sup>[28]</sup> <i>Terminalia chebula</i> (R)	Kashaya Amla, katu, Tikta, Madura	Lagu Ruksha	Ushna	Madura	Tridosha Shamana	Shotahara, Vedana sthapanana, Vruna ShodanaAnd Ropana.
5	Lunuwila <sup>[29]</sup> <i>Bacopa monnieri</i>	Tikta	Lagu Snighda	Ushna	Katu	Kapha Vata Nashaka	Shotahara, vedana sthapanana, Vishaghna, Kushtaghna Vruna Shota hara, Vimlapana
	Percentages	Tikta 80% Kashaya and Amla 60%	Ruksha & Laghu 60%	Ushna 80%	Katu 60%	Kapha & Vatahara 80%	Shotahara & Vedana sthapanana 100%, Kushtagna & Vruna ropana & Shodana 60%

**Table 5: Selected Pattu 5**

Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1 Hik <sup>[7]</sup> <i>Lannea coromendellca</i> (H)	Kashaya, katu madura		Uahna	Katu	Kapha vata shamaka	Snehana, Vruna Ropana, shotahara, Vedana sthapana, Sthambana, Jantughna Krimihgna
2 Madan <sup>[6]</sup> <i>Syzygium cumini</i> (L)	Kashaya, Madura, Amla	Lagu Ruksha	Sheeta	Katu	Kapha pitta shamaka Vatavardhaka	Sthambana, Daha prashamana, Tvag doshahara
3 Katakala <sup>[30]</sup> <i>Bridelia restusa</i> (L)					Vata Shamaka	Bhaghna Sandhana, Kushtaghna, Pradaha nashaka, Shoahara Vrana shot ahara
4 Bee honey <sup>[11]</sup>	Madura Kashaya	Lagu Ruksha Vishada	Sheeta	Madura	Vata vardhaka Kapha pitta Shamaka	Varnya, Kushtahara, Vruna shodana and Ropana, Krimighna Dahahara
5 Kotadimbuala <sup>[24]</sup> <i>Ficus hispida</i> (L)	Tikta Kashaya	Ruksha Lagu	Sheeta	Katu	Pitta kapha hara	Shotahara, Rakta Sthambana, Sandhana, Kushtaghna Vranashodana
6 Arulu <sup>[28]</sup> <i>Terminalia chebula</i> (R)	Kashaya Amla, Katu Tikta, madura	Lagu ruksha	Ushna	Madura	Tridosha Shamana	Shotahara, Vedana Sthapana, Vruna Shodana, Vruna Ropana
7 Siwanguru <sup>[31]</sup> (Oxide of Iron)	Kashaya Madura	snighda Vishada	Sheeta	Madura	Kapha Pitta Shamaka	Stambana, Vishaghna, Dana shaman, Kushta ghna, Vruna shodana
Percentages	Kashaya 86%, Madhura 71%	Laghu & Ruksha 57%	Sheeta 57%	Madhura & Katu 42%	Kapha shaman 86% Pittahara 71%	Shotahara & Vruna ropana 57%, Kushtagna & Rakta sthambana 42%

**Table 6: Selected Pattu 6**

Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1 Siyambala <sup>[21]</sup> <i>Tamarindusindica</i> (L).	Amla	Guru Ruksha	Ushna	Amla	Vata, Pitta Shamaka	Shotahara, Vedana Sthapana, Daha Prashamana, Vruna Ropana and shodana, Kushtaghna Pootinivaraka, Nadivrunahara, Stabdhatara
2 Ankenda <sup>[26]</sup> <i>Acronychia pedunculata</i> (L)	Tikta Kashaya Amla	Ruksha	Ushna	Katu/ Amla	VataKapha Shamaka	Shotahara, Vimalapana, Vruna Ropana, Vedana hara, ShalyaApaharana. Vrunashota hara

3	Erabadu <sup>[32]</sup> <i>Erythrina variegata</i> (L.) Thambili <sup>[33]</sup>	Tikta Katu	Lagu	Ushna	Katu	Kapha Vata Shamaka	Shotahara, Vrana Shodaka, Kushtaghna, Vrunashotahara
4	<i>Cocos nucifera</i> (L.) Kaha <sup>[34]</sup>	Madura	Guru Snighda	Sheeta	Madura	Vata Pitta Shamaka	Dahanashaka, Varnya, Keshya, Vruna ropana, Kushtaghna
5	<i>Curcuma longa</i> (L.) Kurakkan <sup>[35]</sup>	Katu Tikta	Lagu Ruksha	Ushna	Katu	Kapha Vata Shamaka	Shotahara, Vedana Sthapana, Varnya, Vruna Shodana and Ropana, Lekhana, Vishaghna, Krimighna, Rakta Stambhaka, Kandughna
6	<i>Eleusine coracana</i> (L.) Percentages	Madura Kashaya Tikta 50%	Ruksha Lagu Ruksha Laghu 50%	Sheeta Ushna 66.6%	Madura. Katu 50%	Vata vardhaka Kapha Pitta Shamaka Vata shamaka 85% Kapha shamaka 66.6%	Shotahara, Drudata hara Shotahara 85%, Vruna ropana 66.6%, Vedanasthapana, Kushtagna and Vruna shodana 50%

**Table 7: Selected Pattu 7**

	Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1	Goraka <sup>[36]</sup> <i>Garcinia quaesita</i> (P)	Madura Amla	Lagu Ruksha Teekshna	Ushna	Amla	Vata Kaphahara	Dahaprashamana, Vruna Ropana, Janatughna, Shotahara, Asthisandhana Tvak dosha hara, Nadivruna hara, Vishaghna, Vrunashota hara
2	Siyambala <sup>[21]</sup> <i>Tamarindus indica</i> (L)	Amla	Guru Ruksha	Ushna	Amla	Vata Pitta shamaka	Shotahara, Vedana Sthapana, Daha Prashamana, Nadivruna hara, Vruna Ropana and Shodana, Kushtaghna, Pootinivaraka, Stabdhatara
3	Puwak <sup>[37]</sup> <i>Areca catechu</i> (L)	Kashaya Madura	Guru Ruksha	Sheeta	Katu	Tridosha Shamaka	Vruna Ropana, Sthambhaka, vedanashamaka, Sandhaniya, Shotahara, vishaghna., Uththejaka, Krimighna
4	Amukaha <sup>[34]</sup> <i>Curcuma longa</i> (L)	Katu, Tikta	Lagu Ruksha	Ushna	Katu	Kapha Vata Shamaka	Shotahara, Vedana Sthapana, Varnya, Vruna shodana and Ropana, Lekhana, Vishaghna, Krimighna, Rakta Stambhaka, Kandughna, Durganadha nashaka
6	Egg <sup>[38]</sup>	Madura		Ushna			Dahashamana
7	Bee Honey <sup>[11]</sup>	Kahsaya Madura	Ruksha Vishada Lagu	Sheeta	Madura	Vata kophakara	Vruna shodana and ropana, Krimighna, Dahahara, Varnya
	Percentages	Madhura 57%	Ruksha 71%	Ushna 60% Sheeta 40%	Amla & Katu 28%	Vata shamaka 57%	Vruna ropana & Daha prashamana 57% Krimigna & Shotahara 42%



**Table 8: Selected Pattu 8**

Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1 Diya labu <sup>[39]</sup> <i>Lagenaria siceraria</i> (M)	Madura	Guru Sara Snighda	Sheeta	Madrua	Vata Pitta Shamaka	Daha prasahamana, Drudatahara, Vedanahara
2 Tana-Hal <sup>[40]</sup> <i>Setaria italica</i> (B)	Kashaya Madura	Lagu Ruksha	Ushna	Katu	Pitta, Kapha Shamaka Vata Kopaka	Shotahara
3 Ulu-hal <sup>[41]</sup> <i>Trigonella foenum</i>	Katu Tikta	Lagu Snighda Teekshna	Ushna	Katu	Kapha Vata Shamaka Pitta prakopa	Shotahara, Dahaprashamana, Kushtaghna
4 Kaha <sup>[34]</sup> <i>Curcuma longa</i> (L)	Katu Tikta	Lagu Ruksha	Ushna	Katu	KaphaVata Shamaka	Shotahara, Vedana Sthapana, Varnya, Kandughna, Vruna shodana and ropana, Lekhana, Vishaghna, Krimighna RaktaStambhaka. Durgandha nashaka
5 Hal <sup>[42]</sup> <i>Oryza sativa</i> (L)	Madura Kashaya	Snignda Lagu	Sheeta	Madura	Kapha vardhaka Pittaghna	Vishaghna, Vruna Ropana, Daha Prashamaka, Varnya
6 Pol <sup>[43]</sup> <i>Cocos nucifera</i> (L)	Madura	Guru Snighda	Sheeta	Madura	Vata Pitta Shamaka	Dahanashaka, Varnya, Keshya, Vruna Ropana, Kushtaghna.
Percentages	Madhura 66.6%	Snigdhha 66.6% Laghu & Guru 50%	Ushna & Sheeta 50%	Madhura & Katu 50%	Vata & Pitta shamaka 66.6%	Daha prashamana 66.6%, Shotahara 50%

**Table 9: Selected Pattu 9**

Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1 At-Demate <sup>[44]</sup> <i>Gmelinal arborea</i> (R)	Tikta Kashaya	Guru	Ushna	Katu	Tridosha Shamaka	Snehana, Daha shaman, Shotahara, Vedana stapana, Vishaghna
2 Magul Karanda <sup>[45]</sup> <i>Pongamia pinnata</i> (L)	Tikta Katu Kashaya	Lagu Teekshna	Ushna	Katu	Kapha Vata shamaka Pitta Vardhaka	Krimighna, Kandughna, Shotahara, Vedana sthapana Vruna shodhana
3 Kohomba <sup>[27]</sup> <i>Azadirachta indica</i> (A)	Tikta Kashaya	Lagu	Sheeta	Katu	PittaKapha Shamaka	Jantughna, Vrana pachana & Vrana ropana, Pootihara, Daha prashamana, Kandughna, Kushtaghna, Vedana stakpana, Shotahara, Krimighna, Vidradhi hara, Nadivrana hara, Vruna pachana

4	Waraka <sup>[46]</sup> <i>Artocarpus heterophyllus</i> (L)	Madura Kashaya	Guru Snighda	Sheeta	Madura	Kapha Vata Vardhaka, Pitta Shamaka	Vedana nashaka, Vishaghna, Kushtaghna, Rakta stambaka, Shotanashaka, Vranapachana, Krimighna
5	Wal-amba <sup>[47]</sup> <i>Mangifera indica</i> (L)	Kashaya	Lagu Ruksha	Sheeta	Katu	Kapha Pitta Nashaka	Rakta Sangrahaka, Vruna ropana, Stambana, Krimighna
6	Kaha <sup>[34]</sup> <i>Curcuma longa</i> (L)	Katu Tikta	Lagu Ruksha	Ushna	Katu	Kapha Vata Shamaka	Shota hara, Vedana sthapana, Varnya, Kandughna, Vruna Shodana, ropana, Lekhana, Vishaghna, Krimighna, Rakata stambhaka
7	Wee <sup>[48]</sup> <i>Oryza sativa</i> (L)	Madura Kashaya	Snighda Lagu	Sheeta	Madura	Kapha Vardhaka Pittaghna	Vishaghna, Vruna Ropana, Daha Prashamana, Varnya
	Percentages	Kashaya 57% Tikta 43%	Laghu 71%	Sheeta 57%	Katu 71%	Kapha Pitta Shamaka 71%	Krimighna 85%, Shotagna & Vedana sthapana 71%, Vruna ropana, Vishagna 57%

**Table 10: Selected Pattu 10**

	Name of Ingredients	Rasa	Guna	Veerya	Vipaka	Dosha	Actions(External)
1	Heen Aratta <sup>[49]</sup> <i>Alpinia galanga</i> (R)	Katu	Lagu Ruksha Teekshna	Ushna	Katu	Kapha Vata Shamaka	Sheeta prashamana, Shoolahara, Sweda hara, Vishaghna Lekhana, Uththejaka
2	Sapsanda <sup>[50]</sup> <i>Aristolochia indica</i> (L)	Katu Tikta Kashaya	Lagu Ruksha Teekshana	Ushna	Katu	Tridosahara	Vishaghana, Vruna ropana, Shotahara, Vedana Stapanana Sweda Janaka
3	Inguru <sup>[14]</sup> <i>Zingiber officinale</i> (R)	Katu	Snignda Lagu	Ushna	Katu	Kapha Vata shamaka	Sheeta prashamana, Vedana Stapanana, Shotahara, Snau Utthejaka, Pradaha karaka
	Percentages	Katu 100%	Laghu 100%, Ruksha 66.6%	Ushna 100%	Katu 100%	Kapha Vata Shamaka 100%	Sheeta prashamana, Vedana Stapanana, Shotahara, Snau Utthejaka, Sweda janana, Vishagna 66.6%

Krimighna (Anthelmintic), Vruna Ropana (Wound Healing) and Uththejaka (Nerve stimulate). According to this study the selected pattu can be used for different kinds of Bhagna stages with associated symptoms and

this kind of critical analysis on the review of its actions immensely serves the traditional physicians to select the appropriate Pattu according to the Bhagna stage.

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Source of Support: Nil

Conflict of Interest: None Declared