

EXPLORATORY STUDY ON ROLE OF FRACTURE HEALING ACTIVITIES OF THELKIRI: A FUNDAMENTAL ANALYSIS SUPPORTING TRADITIONAL BENEFITS

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ABSTRACT

Sri Lankan Indigenous Medical System denotes a special place for Kedum Bidum Chikitsa. Telkiri is a unique preparation used for final stage of line of treatment in Kedum Bidum Chikitsa. Telkiri is a special drug preparation which is used for nourishes to the affected sandhi and bhagna. This exploratory study directed towards on different preparation methods and diverse applications of Telkiri to enhance the awareness of fracture healing properties and find out the possible other indications. Data collected from Traditional practitioner and by using Thalpathe Piliyam, Bhagna Chikitsa Hevath Kedum Bidum Vedakama and Paramparagatha Vattoru Veda Potha. In this study, collected 42 different formulae of Telkiri and 61 commonly

used herbal ingredients. The present study disclosed that Telkiri possesses Tikta Rasa (31%), Laghu Guna (35%), both Ushna and Sheeta Veerya (49%) and Katu in Vipaka (62%). Majority of the ingredients pacified Kapha-Vatahara action (34%). Telkiri are found to possess Vedana Sthapana (10%), Shothahara (10%), Vruna Ropana (8%), Vruna Shodhana (8%), Balakaraka (8%), Vishaghna (8%), Kushtaghna (7%) and Rakta Stambhana (7%) properties. In this study, 21 preparation methods and 16 types of applications methods were found. According to the analyzed of different preparation methods, commonly used coconut kernel (53%), not added water (100%), oils (50%) and dry powders (50%) and (73%) used for pour squeezed juice, heating method was Bhanu Paka. 85% were applied in the last stage of Bhagna Chikitsa and 12% as used as condition of Thelma. Telkiri used for six different actions and 30% for fixation of the joints. Finally, concluded that pharmacodynamic

properties, Dosha Karma and other properties support to quick rearrange of the supportive structures on affected site of the bhagna.

KEYWORDS:- Kedum Bidum, Pharmacodynamic properties, Telkiri, Vedana Sthapana.

INTRODUCTION

Sri Lanka has its own well established traditional orthopedic management system.^[1] It mainly focuses on two types of Bhagna; Sandhi (dislocations) and Khanda (fractures).^[2] Traditional management of fracture and dislocation includes setting the broken bone and splinting the injury, among other steps.^[3] The stiffness of joints and limitation of the range of motion may also result. Moreover, joints that become dislocated and later heal are more likely to become dislocated again. This ill-treated fractures or joints are called as “Avahandi” in Deshiya Chikitsa. Sri Lankan Traditional Medical Practitioners use various post-healing recovery treatments to avoid such unwanted effect of fracture or dislocation.^[4] Application of Thelkiri is one among these. Thelkiri is applied to prevent or minimize the stiffness and to help people maintain muscle strength.^[5] Thelkiri is claimed to be strengthened the loosened Peshi (muscles), Khandara (tendons) and Bandhani (ligaments).^[6]

Objectives of the study

- To identify commonly used ingredients and their Ayurveda pharmacodynamic properties of Thelkiri.
- To discover different preparation methods of Thelkiri.
- To explore different applications of Thelkiri.

Methodology of the study

Formulae of Thelkiri were collected from different traditional medical texts and sixty one (61) commonly used ingredients were found. Out of the 61 ingredients, Ayurveda pharmacodynamic properties have been found only for 45 ingredients. Sixteen (16) ingredients have been excluded from the data analysis since their properties had not mentioned in authentic texts. The information of the ingredients of Thelkiri was collected from some texts. Dosha Karma of the 45 ingredients and other properties were found. In the present study, twenty one (21) different preparation methods of Thelkiri were identified. Applications of Thelkiri and different actions of Thelkiri were found. The collected data were analyzed according to their Ayurveda pharmacodynamic properties, Dosha karma, other properties, preparation methods, applications and actions.

OBSERVATION AND RESULTS

Analysis of selected ingredients according to their pharmacodynamic properties

Among 6 types of Rasa, majority of the ingredients had Tikta Rasa (31%) and the least were Lavana Rasa (1%). Majority of the herbs had Laghu Guna (35%) while Shukshma Guna, Mrudu Guna was least. Ruksha Guna (29%), Guru Guna (13%) and Snigdha Guna (11%) also take a considerable amount. Selected ingredients had Sheeta Veerya (49%) and Ushna Veerya (49%) in same proportion. Majority of ingredients had Katu Vipaka (62%).

Analysis of selected ingredients according to other properties

The analysis of the ingredients indicate the following common properties

Analysis of ingredients according to other properties

Properties	Number of ingredients	Percentage
Varnya	7	3%
Daha Prashamana	11	5%
Kushtaghna	14	7%
Vruna Ropana	18	8%
Vruna Shodhana	15	8%
Vedana Sthapana	21	10%
Stambhana	8	4%
Vrunhana	3	1%
Balakaraka	18	8%
Nadi Balakaraka	4	2%
Shothahara	21	10%
Snehana	2	1%
Rakta Prasadana	2	1%
Rakta Stambhana	14	7%
Rakta Shodhana	10	5%
Vishaghna	18	8%
Kandughna	6	3%
Uttejaka	6	3%
Sandhaniya	5	2%
Lekhana	2	1%
Snigdhakara	3	1%
Tvak Dosha Nashaka	3	1%
Dhatu Vardhaka	3	1%

Analysis of the preparation methods of thelkiri

Twenty one (21) types of different methods can be observed methods of preparation of Thelkiri. Amounts of ingredients used for preparation of Thelkiri. Different types of coconut used for preparation of Thelkiri. Usage of water for preparation of Thelkiri. Types of

substances added to extracted juice. Different types of vessels for pour squeezed juice. Heating methods for preparation of Thelkiri were analyzed.

DISCUSSION

In this study, collected 42 different formulae of Thelkiri used in Sri Lankan Traditional Medicine. Eleven formulae found with the heading of Thelkiri and other 31 formulae collected from preparation method. Sixty one ingredients are included in these different formulae and properties have been found only for 45 ingredients. Sixteen ingredients have been excluded from the data analysis since their properties had not been found in the literature review. According to Ayurveda pharmacodynamic properties, the predominant Guna of ingredients of Thelkiri are Laghu Guna (light property) (35%) and Ruksha Guna (rough property) (29%). It promotes Vruna Ropana (wound healing) and reduces Shotha (swelling). The ingredients of Thelkiri has same proportion (49%) of hot (Ushna Veerya) and cold potency (Sheeta Veerya). According to selection of ingredients, Thelkiri can be effectively used for Vataja, Pittajaand Kaphaja diseases.

According to Dosha Karma, Thelkiri pacify vitiated Vata Dosha, Kapha Dosha and it can be used effectively in the management of Vata and Kapha involving diseases. The associated conditions of Bhagna Chikitsa such as Thelma and Ulukkuva which were involved in Vatavaha Srotas as well as Asthivaha Srotas can be efficiently managed with the Vedana Sthapana, Shothahara and Balakaraka properties.

In this study we found twenty one different types of preparation methods of Thelkiri. The most common method, which is also mentioned in Svadeshiya Bhaisajjya Vishvakoshaya, is grind the ingredients with king-coconut kernel and then boiling the squeezed juice under the sun. For the preparation of Thelkiri, different parts of the herbal plants are used. For examples, tender leaves, leaves, bark, tuber or whole plant are used in equal amount (78%) or in different proportions. Coconut is used in different ways, including fresh coconut pulp, dried coconut pulp or ripen coconut pulp. Pulp of the other varieties such as Thambili (king-coconut) and Navasi Pol are also used. Most common usage is coconut kernel (53%). Coconut have Madhura Rasa, Guru Guna, Snigdha Guna, Sheeta Veerya and Madhura Vipaka. These properties help to increased Kapha Dosha and nourishment of the Dhatu in the body.

In all these preparation methods, it is recommended that not to use water to extract the juice. In some preparation methods, dried powders such as Suduru, Asamodagam, Sadikka or oils such as Tila, Eranda are added to the extracted juice to trigger the action of the final product. Most formulae have prescribed to pour the squeezed juice into a tray (73%) and some of these mentioned the tray should be made of metal, copper, iron or clay. Most of these preparation methods mentioned Bhanu Paka (keep the mixture under the sun) (97%) as heating method and have not clearly defined the exact time to get the final product. Only one formula which is mentioned in Osuturu Visituru has indicated the time and according to that Bhanu Paka should be given only for 3 days.

The management of Kedum Bidum Chikitsa, oil massage alleviates aggravated Vata, nourish the body, enhance healing and strengthen muscles. Pakshaghata is a disease involved in Vata Vaha Srotas. According to Charaka Samhitha Chikitsa Sthana, Rupa of Pakshaghata are drying up the blood vessels and ligaments, pain and loss of motor functions, rigidity with piercing pain and distress. Characteristic features of Gridhrasi are stiffness, pain. Signs and symptoms of Majja Gata Vata are pain, diminution of muscle tissue and strength. It can be suggested that these conditions can also be effectively managed with the Vedana Sthapana and Balakaraka properties of Thelkiri.

CONCLUSION

Finally, concluded that pharmacodynamic properties, Dosha Karma and other properties also support to quick rearrange the supportive structures of affected site of the body.

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