Review Article

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# THERAPEUTIC POTENTIAL OF KARUNAI KIZHANGU AMONG TUBERS IN TREATING HEMORRHOIDS: AN OVERVIEW

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**ABSTRACT**

According to Siddha literature, ″Manparavu kizhangukalir karunayindri pusiyom″ is mentioned in Pini Anuga Vithi. Here, it says that while other tubers exacerbate Moolam (hemorrhoids), Karunai Kizhangu treats it. According to Siddha literature, Moolam is brought on by eating more other tubers than Karunai Kizhangu, as well as by sitting for extended periods, riding a horse, and climbing an elephant. According to Siddha literature, it can result in death if left untreated. Then, two types of medicine—internal and external—are used in Siddha to cure it. Accordingly, Karunai Kizhangu is a component in numerous Moolam internal medicine formulations. In Siddha medicine, Karunai Kizhangu is a frequently utilized tuber. It comes in three varieties and has several therapeutic applications. They have anti-inflammatory, antioxidant, and antihemorrhoidal activities. Karunai Kizhangu types have hemostatic, appetizer, analgesic, and astringent actions, and their therapeutic uses are hemorrhoids, constipation, and flatulence. Their phytochemicals are steroids, flavonoids, and saponins. Then, Karunai Kizhangu varieties fall under the yam category. Yam varieties have high crude fiber content. So, this review attempts to explore the therapeutic potential of Karunai Kizhangu among tubers in treating hemorrhoids.

**Keywords:** Karunai Kizhangu, Hemorrhoids, Crude fiber, Pini Anuga Vithi, Siddha.

## INTRODUCTION

The Siddha system of medicine, also known as Tamil Maruthuvam, is considered the foundational system of all medical practices. This system ensures that everyone can live a disease-free free healthy life. According to Yugi Muni, Moola Noi (Hemorrhoids) is classified into 21 types. These are Neer mulai, Sendu mulai, Azhi mulai, Thamaraga mulai, Kuzhi mulai, Kazhal mulai, Kutha mulai, Veli mulai, Surukku mulai, Savvu mulai, Vali mulai, Azhal mulai, Iya mulai, Mukkutra mulai, Vinai mulai, and Mega mulai. The risk factors of hemorrhoids in Siddha literature are increased consumption of other tubers compared with Karunai Kizhangu, consuming spicy foods, prolonged sitting, horse mounting, and elephant climbing.The common symptoms are burning sensation, itching, pain around the anus region, bleeding coming out of the anus, and mass coming out of the anus[1].

In the anal canal, hemorrhoids are cushions of submucosal vascular tissue that begin immediately proximal to the dentate line. The presence of these vascular cushions does not always signify hemorrhoidal illness because they are a typical anatomical feature of the anal canal. Symptoms of hemorrhoidal illness include bleeding, prolapse, discomfort, thrombosis, mucus discharge, and itching. Rectal bleeding is the most common symptom of hemorrhoidal disease. This bleeding is typically bright red and may appear on toilet tissue or drip into the toilet bowl. Hemorrhoids can be internal, external, or a combination of both. Internal hemorrhoids are classified into four grades: Grade I (first degree), Grade II (second degree), Grade III (third degree), and Grade IV (fourth degree)[2]. Hemorrhoidal disease affects approximately 11% of the adult population, with most cases being of mild severity[3].

In the Siddha system of medicine, internal medicines are classified into 32 types, and external medicines are classified into 32 types. In many of the internal moola noi preparations, Karunai Kizhangu is used as one of the ingredients.

Karunai kizhangu is a widely used tuber in Siddha medicine. It has 3 types, and they are edible. It has a lot of therapeutic uses, like hemorrhoids, constipation, anorexia, flatulence, bronchitis, etc. According to Siddha literature, Karunai kizhangu cures hemorrhoids compared to other tubers that affect Abanan (Keelnokku kal). Due to this, loss of appetite, indigestion, thirst, and tiredness symptoms occurred. And then, without proper medication, which may lead to death that as mentioned in Siddha literature. So this review aims to explore the significance of Karunai Kizhangu among tubers in treating hemorrhoids[4].

This article was prepared through a comprehensive review of both classical Siddha texts and modern scientific literature. Scientific data on pharmacological actions, phytoconstituents, and nutritional content of different varieties of Karunai Kizhangu were retrieved from published research articles, electronic databases, and relevant books. The collected information was analyzed and synthesized to explore the therapeutic potential of Karunai Kizhangu in the prevention and management of hemorrhoids.

**Table 1: Properties of three types of Karunai Kizhangu**

| Tamil Name | Botanical Name | Pharmacological Action | Activity | Family |
|---|---|---|---|---|
| Kara karunai | *Amorphophallus paeoniifolius* (Denns.) Nicolson. | Digestive, Appetizer, Anodyne[10] | Anti hemorrhoidal Anti inflammatory[11] | Araceae |
| Karu karunai | *Typhonium trilobatum* (Linn) Schott | Stimulant, Sedative | Antioxidant Anti spasmodic[12] | Araceae |
| Kattu karunai | *Tacca pinnatifida,* Forst | Carminative, Astringent | Antioxidant | Dioscoreaceae |

**Table 2: Phytoconstituents of three types of Karunai Kizhangu**

| Botanical name | Phytochemicals | Nutrients | Therapeutic uses in Siddha |
|---|---|---|---|
| *Amorphophallus paeoniifolius* (Denns.) Nicolson. | Steroids, Flavonoids[13] | Crude fiber, Crude protein, Crude fat, Iron, Calcium, Vitamin A | Iya noikal, Vali noikal, Kuruthi moolam[14] |
| *Typhonium trilobatum* (Linn) Schott | Beta sitosterol, Carotene | Folic acid, Niacin | Karappan, Podi sirangu, Sori, Kazhalai, Moolam[14] |
| *Tacca pinnatifida,* Forst | Alkaloids, Flavonoids, Saponins | Vitamin C and Vitamin E, Zinc, Copper, Iron | Valinoi, Vellai, Eruvai mulai, Suram[14] |

**Table 3: Siddha Medicines Prepared from Karunai Kizhangu**

| Internal medicine forms | Medicinal names | Indications |
|---|---|---|
| Chooranam | 1.KarunaiKizhangu chooranam[15] | Moolam, Vayitru vali, Vayitru porumal, Malakkattu, Pasiththee kuraivu |
| | 2.Moolanoyaarum theera chooranam[16] | Sagala Moolam |
| | 3.Sagalamoolathirkum kadukkai chooranam[16] | Ulmoolam, Velimoolam, Sagalamoolam |
| Leghiyam | 1.Karunai leghiyam[17] | Ulmoolam, Velimoolam, Seemoolam, Raththamoolam, Sootha moolam, Vaaivu moolam |
| | 2.Karunai ilagam[18] | Mulai noi |
| | 3.Moolanoi nivaarani leghiyam[19] | Raththa moolam, Seemoolam, Asanakaduppu, Moolakirani |
| | 4.Moolakiraanikku moolavaayuvukku leghiyam[20] | Moola kirani, Moola vaayu |
| | 5.Moolavaayu, moolam, unda asanam samiyathatharkkum kirumikkum leghiyam[20] | Moola vaayu, Moolam, Unda asana samiyaathatharkkum kirumikkum |

## DISCUSSION

There are 3 types of Karunai Kilangu. Their various names are Karakarunai *(Amorphophallus paeoniifolius),* Karukarunai *(Typhonium trilobatum),* and Kattu karunai *(Tacca pinnatifida)*[5]. These are coming under 2 different families. Karakarunai and Karukarunai belong to the Araceae family. Kattu karunai comes under the Dioscoreaceae family. These 2 families contain yam varieties, and then these karunai varieties are mostly used in siddha medicinal preparations for treating hemorrhoids. Yam varieties have increased crude fiber content. Especially Karakarunai, elephant foot yam, called the ' King of tuber crops', 'oal' or 'suran', contains 15.71 % of crude fiber content and 7.33 % of crude protein content[6].

And other tubers, like potatoes (*Solanum tuberosum* ) and sweet potatoes (*Ipomoea batatas*), contain 2.5% and 2.78% of crude fibers, respectively. Crude fibers are insoluble and contain hemicellulose, cellulose, lignin, and some mineral matter. Here, 60-80% of cellulose is present in crude fibers[7]. These fibers stimulate digestion and also encourage the production of important intestinal bacteria[8,] and then they provide the bulk necessary for proper peristaltic action in the intestinal tract[9], and these fibers treat or prevent constipation, hemorrhoids, diverticulosis, coronary heart disease, and some types of CA. Properties and phytoconstituents of three types of karunai kizhangu are mentioned in Tables 1 and 2 and Siddha medicines prepared from Karunai Kizhangu mentioned in Table 3.

## CONCLUSION

From this review, it reveals that Karunai Kizhangu types that are coming under Yam varieties contain high crude fiber content compared with other tubers. And then these Karunai types have anti-inflammatory and antioxidant activities that are used for preventing or treating hemorrhoids. With further clinical validation, Karunai Kizhangu can be established as an effective natural remedy for hemorrhoids.

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