



Kraani (Dysentery) – Not a symptom, but a disease

– The Siddhars' View

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ABSTRACT

Medicinal plants play a key role in maintaining holistic health care for Human. About 80% of the world population relies on the use of traditional medicine, which is predominantly based on plant material. Traditional Siddha medicine differs from Modern medicine in many ways. Siddha medicine has its own specialties in almost all spheres among which a notable thing is that it considers some symptoms of Modern medicine as individual disease entities. Examples are Diarrhea, Dysentery, Thirst, Fever, Hiccough etc.

According to Siddha system, Dysentery is a disease, which deprives the water and blood content significantly from our body leaving us tired and sick. This is because of the extreme loss of vital nutrients, minerals and essential flora from our intestines. The loss of fluids through dysentery cause severe dehydration and imbalance of electrolyte, which lead to tiredness etc., Though the prime aim of administering a drug is to control the loose stools, they should also act in such a way to energize the system by strengthening the seven *Udal Kattugal* (Seven Vitals), as told in Siddha system. The present review discusses types of dysentery, medicinal plants having anti-dysentery activity and their other therapeutic activities, etc.

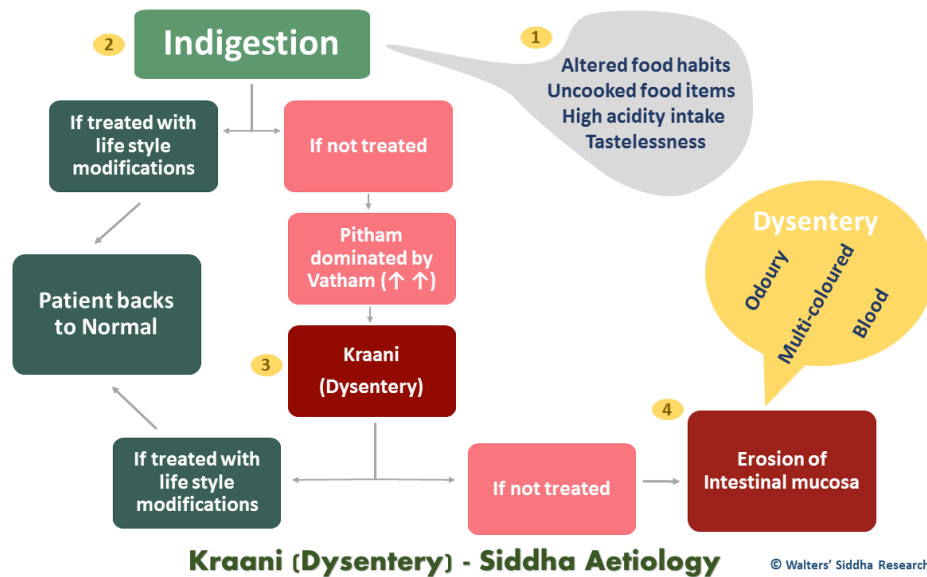
Key words

Kraani, Dysentery, Siddha medicine.

INTRODUCTION

Kraani in Siddha medicine can be correlated to Dysentery in Allopathic medicine. It is an intestinal inflammation, especially in the colon, that can lead to severe diarrhea with mucus or blood in the feces. In some cases, untreated dysentery can be life-threatening, especially if the infected person cannot replace lost fluids fast enough.

The most common disease in the world is the *Gastro – Intestinal Disease* and the common disease among India is *dysentery* which also comes under *Gastro – Intestinal Disease*. Synonyms for *Kraani* in Siddha are *Ninakalichal*, *Oonkalichal*, *Palanirakalichal*, *Seeda-rathakkalichal*. It is caused due to intestinal weakness. It is associated with Chronic Diarrhoea, Indigestion, and smell of meat in faeces.



Types of *Kraani*:

There are 11 types of *Kraani* according to Siddha

1. *Vali kraani (vatha kraani)*
2. *Azhal kraani (pitha kraani)*
3. *Iya kraani (kabha kraani or maamisa Kraani)*
4. *Muk-kutra kraani (thontha kraani)*
5. *Alarkaal kraani (ushnavayu kraani)*

6. *Merkudarkaal kraani (antharavayu kraani)*
7. *kezhkudarkaal kraani (moolavayu kraani)*
8. *Sool kraani (karpa kraani)*
9. *Ottu kraani*
10. *Gunma kraani*
11. *Erichal kraani (sangraga kraani)*

Table 1.1 information about Herbs effective in treating Dysentery

S.No	Tamil name / Common name	Botanical name / Family	Part used	Actions	Other than Dysentery, Uses in Siddha
1	<i>Saadikkai / Nut meg</i>	<i>Myristica fragrans / Myristaceae</i>	Seeds	Tonic, stimulant, carminative, aromatic, aphrodisiac, narcotic	Headache, Tuberculosis, asthma, rheumatic pain
2	<i>Kudasapalai / The kuruchi</i>	<i>Holarrhena pubescens / Apocynaceae</i>	Bark	Stomachic, febrifuge, Anthelmintic	Gut motility disorders, venereal disease, skin disorders
3	<i>Maa / Mango tree</i>	<i>Mangifera indica / Anacardiaceae</i>	Seeds	Anthelmintic, astringent, demulcent, nutritive	Stomach pain
4	<i>Sirunagapoo/ Ceylon loon wood</i>	<i>Mesua nagassarium / Calophyllaceae</i>	Flower	Astringent, haemostatic, diuretic, carminative	Menorrhea, cough, piles, scabies, pruritis
5	<i>Kaatathi / Fire- flame bush</i>	<i>Woodfordia fruticosa / Lythraceae</i>	Flower	Anthelmintic, astringent	Leucorrhoea, blood purifier.

6	<i>Korai /</i> Nut grass	<i>Cyperus rotundus /</i> Cyperaceae	Rhizome	Astringent, diaphoretic, demulcent, vermifuge, emmenagogue, diuretic	Acid Peptic Disease (APD), fever, arrests vomiting.
7	<i>Sundai /</i> night shade	<i>Solanum torvum /</i> Solanaceae	Seeds	Expectorant, germicide, stomachic	Piles, sinusitis
8	<i>Naaval /</i> Jambul	<i>Syzygium cumini /</i> Myrtaceae	Seeds	Stomachic, diuretic, tonic	Diabetes mellitus
9	<i>Vilvam /</i> Holy fruit tree	<i>Aegle marmelos /</i> Rutaceae	Fruit, root	Astringent, digestive, stomachic, laxative	Effective in Eye diseases, fever, vomiting & venereal disease
10	<i>Madulai /</i> Pomaganate	<i>Punica granatum/</i> Punicaceae	Rind of fruit, leafs, root bark	Astringent, stomachic	Fever, piles
11	<i>Athividayam/</i> Indian atis root	<i>Aconitum</i> <i>heterophyllum/</i> Ranunculaceae	Root tuber	Stomachic, astringent, febrifuge, aphrodisiac, tonic, anti- periodic	Viral fever, piles,
12	<i>Elavu /</i> Silk cotton tree	<i>Bombax malabaricum</i> / Malvaceae	Gum	Astringent, styptic, stimulant, tonic, demulcent, diuretic	Leucorrhoea
13	<i>Vendhayam/</i> Greek hayes	<i>Trigonella foenum</i> <i>graecum /</i> Apiaceae	Seeds	Diuretic, demulcent, emollient, aphrodisiac, carminative	Diabetes, cough, leucorrhoea, TB

14	<i>Kodiveli</i> / Ceylon lead wort	<i>Plumbago zeylanica</i> / Plumbaginaceae	Root	Stimulant, anti- periodic, diaphoretic	Cancer, sinusitis, venereal disease, skin disease, piles
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Experimental Pharmacology - a Data collection

The following passage contains compiled data of experimental pharmacology results done on individual herbs along with **their uses as per Siddha literature**.

1. *Myristica fragrans*

The seed contains the alkaloids myristicin, elemicin and safrole. The treatment of dysentery, cholera, muscular aches, rheumatism and skin diseases.

- a) Seed powder :3-4 gm twice a day,
- b) Seeds – 34 gm with water 700 ml is boiled for 10 min and the decoction is given 18-40 ml twice a day
- c) Main constituents of Katuvadi kuligai and Abini mathirai.

2. *Hollarrhena pubescens*

The bark contains the alkaloids regholarrhenine – A, B, C, D, E and F, pubescine, norhoadiene, kurchinin, kurchinine, kurchinidine, holarrifine, holadiene, kurchiidine, kurchamide, kurcholessine, kurchessine, conessine, cones- simile and isoconessimine and the steroidal compounds kurchinicin and holadyson. The treatment of dysentery, chronic amoebiasis, gastric problems and helminthic disorders. The alkaloids conimine and conessine inhibited the growth of salmonella enteritidis, shigella sonnei and S.flexneri strains in vitro.

- a) Bark powder-2g, athividayam-0.5g, vasambu-0.25g, palasu-2g mixed with water two times daily.
- b) Decoction of this bark with *Zinger juice* is prescribed in dysentery.
- c) Seeds are prescribed internally for amoebic dysentery.

d) Root is given in infusion with *Tinospora cardifolia* for 3 fevers of long standing. Its juice is also extracted and made into pills with aromatics as a remedy for diarrhoea & dysentery. e) Bark powder 2-4g, decoction 30-60ml twice a day.

3. *Mangifera indica*

The leaves contain the glucoside mangiferine. The mango bark contains tannin (16-20%), and mangiferine has been isolated. Gallotannin, glucogallin, alpha- and beta-amyrins and several sterols have been isolated in the seed kernel. The dried seed is used in chronic diarrhoea and dysentery.

- a) Seed powder with abini given in ratio of 4:1
- b) Seed powder given for 3-6 g orally twice a day
- c) These seeds, *Poppy seeds*, *Zinger*, *Trachysperum ammi* should be taken in equal quantity and powdered mixed with lemon juice and given at the dose of 325 – 650 mg twice a day.

4. *Mesua nagassarium*

It is used for dry stamens in gout, haemorrhagic disorders and diseases of the urinary bladder. The heartwood gave xanthenes—euxanthone, mesuaxanthenes A and B, which exhibit anti-inflammatory, CNS depressant and antimicrobial activities. The seed oil gave 4-phenyl coumarin analogues—mesuol, mammeigin, mesuagin, mammeisin and mesuone. Phenol-containing fraction of seed oil is antiasthmatic and anti-anaphylaxis. Stamens gave alpha- and beta-amyrin, beta-sitosterol, biflavonoids, mesuaferrones A and B, and mesuanic acid. Stamens constitute the drug Naagakeshar of Indian medicine, used as astringent, haemostatic, particularly in uterine bleeding and renal diseases.

5. *Woodfordia fruticosa*

The flowers yield a red dye. They contain a fairly high level of tannin. This flower is used in seminal weakness, administered in Menorrhagia, bowel complaints and hemorrhages. An extract of the plant was found to stimulate the contraction of the intestinal loop, and investigations have corroborated the clinical use of the drug in bowel complaints. The dried flower powder is used sprinkled over ulcers and wounds to diminish discharge and promote granulation. This flowers is used in alcohol-based syrups for fermentation (*saccharomyces cerevisiae*, a yeast strain, has been isolated).The flower is used for acute diarrhoea, haemorrhages, ulcerations and erysipelas. The flowers also enter into an ointment used on pustules of smallpox. In small doses the plant stimulates, while in large doses depresses the central nervous system. The flowers and leaves contains polyphenols included as ellagic acid, polystachoside and myricetin-3-galactoside.

a) Seeds powder: 3-6 g twice a day

b) Kaatathi poo, vilva ver, veli lothiram, yanai thipili prepared as decoction and given orally 30-60 ml twice a day.

6. *Cyperus rotundus*

It is used for intestinal problems, indigestion, sprue, diarrhoea, dysentery, vomiting and fever; also as a hypocholesterolaemic drug and in obesity. The tuber is rich in Cu, Fe, Mg and Ni. Beta-sitosterol, isolated from the tubers, exhibits significant antiinflammatory activity against carrageenan- and cotton pellet-induced oedema in rats; the activity is comparable to hydrocortisone and phenyl butazone when administered intraperitoneally. The alcoholic and aqueous extracts of the tubers possess lipolytic action and reduce obesity by releasing enhanced concentrations of biogenic amines from nerve terminals of the brain which suppress the appetite centre. Presence of eudalne group of sesquiterpenic compounds of sesquiterpene alcohol, isocyperol is said to play an important role in lipid metabolism. An alcoholic extract of the plant exhibits liver-protective activity against CCL4-induced liver damage in mice Methanolic extract of the plant stimulates the production of melanin in cultured melanocytes.

a) Tubers powder mixed with ginger and honey is given twice a day

b) Grind nut grass tuber and ginger juice with honey into pill forms (400-600mg) to taken orally in twice a day.

7. Solanum torvum

Unripe fruits and leaves contain the glycoalkaloid, solasonine (0.37% total alkaloids in air-dried fruits of the plant from Khasi and Jaintia hills). Hydrolysis of the neutral glucosidal fraction yields a steroidal sapogenin, chlorogenin, which is rare in *Solanum* sp. The fruits gave sitosterol-D-glucoside. Extracts of the plant affect the rat and amplitude of respiration, also blood pressure. They also contract isolated ileum of guinea-pig. Leaves contain no vitamin K or derivatives of naphthoquinone; their haemostatic action may be due to the oil or pectins or both.

a) Major constituent of Sundai vatral chooranam.

8. Syzygium cumini

The seed has been included among unapproved herbs by German commission E, as the blood sugar-lowering effect could not be established by several researchers. It is also used for diabetes, also in combination preparations for atonic and spastic constipation, diseases of the pancreas, gastric and pancreatic complaints. The bark is used for acute diarrhoea and haemorrhagic diseases; the seed in hyperglycaemia and polyuria. The aqueous alcoholic extract of the bark contains bergenin, gallic acid and ethyl gallate. The seeds contain tannin (about 19%), ellagic acid, gallic acid (1-2%), beta-sitosterol, 0.05% essential oil; myricyl alcohol is present in the unsaponifiable matter.

a) Seeds powder 3-5gm twice a day

b) Naaval manappagu 10- 20ml twice a day

9. Aegle marmelos

Both ripe and unripe fruit is regarded as an astringent and pectin is an effective important constituent. It helps in the healing of ulcerated intestinal surfaces. The plant parts contain alkaloids included as alpha-fagarine; flavonoids included as marmesin and rutin;

coumarins included asalioimperatorin methyl ether and xanthotoxol; sterols and essential oils. It possesses antiviral, and anti-inflammatory properties and has appreciable activity against *Vibrio cholera* and *Salmonella*. Root bark is used for palpitation of the heart and dysuria; stem bark is used for lipid disorders and diabetes; fruit is used for diarrhoea, dysentery and cholera due to its digestive and carminative properties.

a) vilva palam, karungali, madulampattai in equal quantity when mixed and made into a powder checks Diarrhoea at a dose of $\frac{1}{2}$ - 1 dr.

b) A decoction of the root of vilva bark is given with sugar and fried rice for checking Dysentery and gastric irritability in infants

c) Decoction of Bilva and Mango seed mixed with honey and sugar checks vomiting and Dysentery.

10. *Punica granatum*

The rind contains tannins and ursolic acid. The fruit rind and root bark extracts showed antibacterial activity. Rind of fruit is used for diarrhoea, dysentery, colitis, dyspepsia and uterine disorder. The fruit rind (dried) contains up to 26% tannin. The rind gave an ellagitannin (granatin B, leaves gave granatins A and B and punicafolin); punicalagin, punicalin and ellagic acid. Pentose glycosides of malvidin and pentunidin have also been isolated from the rind. Rind extract showed significant hypoglycaemic activity in mildly diabetic rats. Extracts of the whole fruit were highly active against *Micrococcus pyogenes* var. *aereus*, *E. coli* and *Pseudomonas aeruginosa* also very effective against intestinal pathogenic bacilli.

a) A decoction of the bark of pomegranate and kutasappalai mixed with honey was administered for dysentery.

b) Root & bark powder 1.5 -3gm. Bark decoction: 100 – 200ml

c) Bark of the tree and rind of the fruit are valuable in chronic diarrhoea and the advanced stages of dysentery.

d) The expressed juice of the leaves and the young fruit and the decoction of the bark are used in dysentery.

11. Aconitum heterophyllum

The roots contain five diterpene alkaloids, viz. vakognavine, vakatisine, vakatisinine, vakati and palmatisine. The roots yield 0.79% of total alkaloids, of which atisin is 0.4%. Atisine is much less toxic than aconitine and pseudoaconitine. The root is intensely bitter and is used in combination with longpepper for fever, pain in the bowels, diarrhea, and vomiting.

- a) Major constituent of Adhividaya kudineer twice a day
- b) Powder 5-10 g with honey given twice a day.

12. Bombax malabaricum

The bark on analysis, possesses tannins and non-tannins. It also contains lupeol, sitosterol and its D-glucoside. The bark is given as a demulcent, emetic and tonic. Its used as a styptic, and also for fomenting wounds in externally. The gum is credited with astringent, tonic, and demulcent properties and is used for dysentery, hemoptysis in pulmonary tuberculosis, influenza and menorrhagia. The gum contains gallic and tannic acids included as D-galactose, D-galacturonic acid, D-galactopyranose and L-arabinose.

- a) Bark and gum 3-5 gm twice a day
- b) Gums mixed with tender coconut water twice a day.

13. Trigonella foenum graecum

Fenugreek is a good source of nicotinic acid. The germinated seeds contain α -galactosidase. The young seeds of the plant contain small amounts of low-molecular weight carbohydrates and 30% proteins. This seeds contains lecithin, trigonelline is used prevents hair fall and promotes hair growth. The seeds contains two glycosides, two aglycones and two steroidal saponins. The presence of vitamin K in the leaves has been reported. Fenugreek has been reported to stimulate the liver microsomal cytochrome P450 dependent aryl hydroxylase and cytochrome b5 in rats; increased bile secretion has also been observed.

- a) Seed powder 3-5g, mixed with cold water 2-3 times a day.

14. *Plumbago zeylanica*

This root bark contains plumbagin (distributed in most of the secondary cortex and medullary ray cells), free glucose and fructose, and the enzymes protease and invertase. The root yielded naphthoquinone derivatives, plumbagin being the most important active principle. The root extract, after processing for plumbagin enhancement, has been used in a number of drug formulations for liver ailments. The chloroform extract of the root showed significant activity against penicillin-resistant (also non-penicillin resistant) strains of *N.gonorrhoea* (The root is used for treating sexually transmitted diseases in traditional Indian medicine.) In Siddha medicine, in Tamil Nadu, the plant is an ingredient in a number of drug formulations for treating cancers of the uterus, breast, lungs and oral cavity, in addition to haemorrhoids. Plumbagin is abortifacient, antiovaratory; causes selective testicular lesions in dogs; in lower doses it behaves like a spindle poison, in higher concentration exhibits radiomimetic nucleotoxic and cytotoxic effects.

- a) Major constituents of kodiveli chooranam twice a day
- b) kodiveli decotion 30-60ml twice a day.

Table 2. Siddha, Ayurveda, Unani Medicines for treating Dysentery

SIDDHA	AYURVEDA	UNANI
<i>Sundai vatral chooranam</i> (Base Powder)	<i>Thadimashtaga choorana & tab</i>	<i>Anoshtharu saada</i>
<i>Kapaada mathirai</i> (Pills)	<i>Kangadhara choorana & tab</i>	<i>Thava fasis</i>
<i>Maadhulai manappagu</i> (Syrup)	<i>Latscha choorana</i>	<i>Javarish- a- aamla</i>
<i>Kungiliya parpam</i> (Calx form)	<i>Sallmali choorana</i>	<i>Roob- a- aamla</i>
<i>Padikara parpam</i> (Calx of alum)	<i>Papulaarishtam</i>	<i>Sharbad- a- anarsireen</i>
<i>Padikara chendooram</i> (Containing alum)	<i>Kudajaarishtam</i>	<i>Sharbad- a – anard durch</i>
<i>Padiga linga chendooram</i>	<i>Musthaarishtam</i>	<i>Sharbad- a- belfal</i>

(Alum with cinnabar)		
<i>Kaadikara chendooram</i> (containing Silver nitrate)	<i>Ashtakshri kudiga</i>	<i>Sharbad-a- jaamun</i>
<i>Thayir chundi chooranam</i> (Base powder)	<i>Kudaja panitham</i>	<i>Arak-a ajvayin</i>
<i>Matha kaja kandeerava mathirai</i> (Pills)	<i>Pushyanuga soornam</i>	<i>Javarish-a-shangathana-a-murk</i>
<i>Jadikkai mezhugu</i>	<i>Kalagniruthra rasa</i>	<i>Maaheen-a-shangathana-murk</i>
<i>Linga mezhugu</i>	<i>Lakshmi Narayana rasa</i>	
<i>Naga parpam</i>	<i>Naga pasma</i>	
<i>Muthu parpam</i> (Calx form)	<i>Purannavazhi mandooram</i>	
<i>Pavala parpam</i> (Calx form)	<i>Sithapranesvara rasa</i>	
<i>Anabedi chendooram</i>	<i>Panjamirtha parpodee</i>	
<i>Nathai parpam</i> (Calx form)	<i>Karpurathi rasa</i>	
<i>Sowbakya sundi elagham</i> (Herbal Confectionery)		
<i>Kaasukkati chooranam</i> (Pills)		

CONCLUSION

When the Great Siddhars classify certain symptoms as separate disease entities, we are able to understand the importance being given to that particular entity. We are also able to understand the way such a disease is being dealt with – its etiology, signs & symptoms, pathology, line of treatment and exclusive treatment options. This is the right time to highlight and document such specialties being given to us by those spiritual scientists – Siddhars. Dysentery being such a disease having morbidity and even mortality can well be treated through the Siddhars way being documented in this review paper.

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