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Review Article

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AN EFFECT OF SIDDHA HERBAL FORMULATION KARAPPAN NEI IN RECENT RESEARCHES OF BALA KARAPPAN (INFANTILE ECZEMA) IN CHILDREN – A REVIEW

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Abstract

Siddha medicine is a traditional medicine originating in Tamil Nadu. Health is defined by the world health organization as the "State of complete Physical, Mental and Social wall being and not merely the absence of disease and infirmity. Medicine plays a major part in this process. The world is endowed with many system of Medicines like Siddha, Ayurvedha, Unani, Allopathy, Homeopathy etc., The Siddha system is serving the mankind to all of its Physical and Mental, Social and Spiritual components of human being. Skin is the largest organ in human body. The skin forms protective covering of the body. The skin develops in the third week of fetal life. There are so many skin disease like Vitiligo, Lichen Planus, Psoriasis, Scabies, Pityriasis alba affecting the children. Most common child wood skin disease is eczema. Eczema is a chronic inflammatory skin disease. It is the most commonest disease affecting the school going children between the age of 3-7 year. Although there are many anti-inflammatory drugs in modern world till now but no complete recovery in eczema to children. The Siddha formulation drug is acting to mukkutram base. The ghee base drug acting to reduce the dry and oozing skin lesions. The Karappan Nei [1] is recommended for eczema in children. Hence it may be to cure the balakarappan (Infantile eczema). Further study is recommended.

Keywords: Karappan Nei, karappan, Siddha, Balakarappan, eczema

Introduction

Health is wealth" of all the wealth man can gain the most precious is being free from disease. Health is defined by the world health organization as the "State of complete Physical, Mental and Social wall being and not merely the absence of disease and infirmity. Medicine plays a major part in this process. The Siddha system is serving the mankind to all of its Physical and Mental, Social and Spiritual components of human being. The advantage and unique feature is the removal of root causes of the disease and perfect for body and mind. Siddha system of medicine was developed by 18 Siddhars and hence the name Siddha Medicine. Siddha system of medicine not only includes medicine, but also Astrology, Yoga, Pranayamam and Varmam in its treatment strategies. Eight fold Examination is a tool in

Siddha system of medicine used to determine Diagnosis, Etiology, Treatment and Prognosis of a disease.Skin is the largest organ in human body. Skin and its derivatives and appendages form the "Integumentary system". Skin derivatives include Nails, Hair and Several types of sweat and sebaceous glands. The skin forms protective covering of the body.There are so many skin disease like Vitiligo, Lichen Planus, Psoriasis, Scabies, Pityriasis alba affecting the children. Most common child wood skin disease is eczema. Eczema is a chronic inflammatory skin disease. It is the most commonest disease affecting the school going children between the age of 3-7 year . It is a worst disease which affect all over the body and also cause mental worries in both children and their parents. The prevalence of eczema about 13% of world population in 2017. In India it is ranged from 0.9% and 23.3%. Recent data shows that its prevalence is still increasing especially in low income countries. In our classical Siddha literature there are 18 types of Eczema (Karappan) have been described. Signs and symptoms of Eczema are nearly correlated to Bala Karappan mentioned in Siddha system to medicine (Balavagadam). According to the Siddha texts it is characterized by skin Rashes, Papules, Vesicles, Pustules, Fissures, Oozing, Ulceration, Swelling, Itching, Hyperpigmentation lesion. Siddha system plays a wide ranged role in the field of pediatrics. It ensures the health of the children with its astonishing herbal formulations. Lot of research has been developed in the field of pediatric dermatology. Siddha medicines are more effective for skin disease. According to Siddha text skin disease occures due to derangement of Vadham. Most of the ingredients present in karappan Nei having Kaippu (Bitter) and Kaarppu (Pungent) suvai which are the taste which can neutralize Vaatha humour. Hence it may be cure the Bala Karappan (Infantile eczema).Further study recommended.

Ingredients to Karappan nei:

Andrographis paniculata
Pterocarpus santalinus
Terminaliachebula
Cyperusr rotundus
Piper longum
Cedrus deodara
Murreya Koenigii
Strychnos potatorum
Curcuma langa
Cow's Milk
Cow's Ghee

Recent researches of Karappan nei:

1. நிலவேம்பு – *Andrographis paniculata* (Green chirettakalmegh)

Scientific classification:

Kingdom	: Plantae
Division	: Tracheophyta
Order	: Lamiales
Family	: Acanthaceal
Genus	: *Andrographis*
Species	: *paniculata*

வேறுபெயர்:

சிரட்குச்சி, காண்டக், கிராதம், கிரியாத்து, கிராகதி, நாட்டுநிலவேம்பு, அனாரியதித்தம், காண்டம், கோகணம்

Organoleptic Characters

Taste	:	Kaippu
Potency	:	Veppam(Heat)
Division	:	Kaarpu(Pungent)

Action: Stomachine, Tonic, Alterative, Stimulant

பொதுகுணம்

வாதசுரம் நீரேற்றம் மாற்றுஞ் சுரதோடே
காதமெனஓடக் கழயுங்காண் — மாதரசே!
பித்தமயக்கறுக்கும் பின்புதெளிவைக்கொடுக்கும்
சுத்தநிலவேம்பின் தொழில்.

Chemical constituents:

14 – deoxyandrographolide, 14 – deaxy – 12 – hydroxyan – drographolide, Andrographolide, β – sitosterol, slimasterd, chlorophyll a, 5,2' – dihydorxy – 7, 8 – dimethroxyflavone, β – sitosteryl fatty acid esters, lupeol, triacylglycerols.

Medicinal uses:

The whole plant has been used for several intermittent fevers, inflammation, pyrexia and External applications such as Anti-dote for snake-bite, poisonous stings for some insects.

The leaf extract is a remedy for the treatment of infectious disease, colicpain, loss of appetite irregular stools and diarshea.

Decoction of the aerial parts is used to treat hypertension, diabetes, cancer, malaria.

Recent Research:

Review article –Experimental and Clinical Pharmacology of *Andrographis paniculata* and Its Major Bioactive Phytoconstituent Andrographolide [2].

2.செஞ்சந்தனம் – *Pterocarpus santatlinus* (Red sandalwood)

Scientific classification

Kingdom	:	Plantae
Division	:	Tracheophyta
Order	:	Fabales
Family	:	Fabaceal
Genus	:	Pterocarpus
Species	:	Santalinus

வேறுபெயர்

செஞ்சந்தனம், சிவப்புச்சந்தனம்

Organoleptic Characters

Taste	:	Kaippu, Siruthuvarappu
Potency	:	Thatppam (Cooling), Veppam (Heat)
Division	:	Inippu, Kaarppu

Action

Alternative;
Diuretic
Diaphoretic
Stimulant
Disinfectant
Astringent
Cooling

பொதுகுணம்:

கோதில் சந்தனஞ் சீதோஷ்ணங் கொண்டிருக்கும் வாதபித்தம் ஐயம் மனப்பிரணம் — ஓதுசுரம் மேகம் தனித்தாகம் வெப்புசொறியும்போக்கும்ஆகந் தனக்குறுதியாம்.

Chemical constituents:

Santalin A, Santalin B, Pterocarpol, Pterocarpin, eudesmal (α, β and γ-isomers), Pterocarpin.

Medicinal uses

The wood used in the form of a powder (or) chips is anti inflammatory, astringent and tonic.

A paste of the wood is brewed as a tea in the treatment of chronic dysentery.

The wood paste is applied externally as a cooling application to boils, inflammatory disease of the skin, swollen limbs, ophthalmia, sore eyes and headache.

Recent Research:

Anti-bacterial activity of *Pterocarpus santalinus* [3].

3.கடுக்காய்– *Terminalia chebula* (Chebulicmyrobalan, Ink nut)

Scientific Classification

Kingdom	:	Plantae
Division	:	Angiosperm
Order	:	Myrtales
Family	:	Combretacea
Genus	:	*Terminalia*
Species	:	*chebula*

வேறுபெயர்

அக்கோடம், அங்கணம், அந்தன், அபரணம், அபையன், அமரிதம், அமலை, அமுதம், அம்மை, அம்ருதா,அரபி,அரிதகி,அயைன்,அவ்வியதா, இரேசகி, ரமவதி, ஐயவி, ஹைமவதி, கடு, காயஸுத்தா, சியிருதம், சிரயஹி, சிரோட்டம், சிவா, சேதகி, சேதநிகா, சேயா, திவ்யா,தேவி, நந்திரி, நெச்சி, பித்தியம், பாரியம், பிஷக்வார, புதனா, புதன், ப்ரபத்யா, ப்ராணதாமேகம், ஜீவ்யா, ஜெயா, வரிக்காய், வனதுர்க்கி, ரோகிணி.

Organoleptic Character

Taste	:	Kaippu
Potency	:	Veppam (Heat)
Division	:	Kaarpu (Pungent)

Action

Stomach Carminative Expectorant Anthelmintic Anti dysentery

பொதுகுணம்

தாடைகமுத்தக்கிதாலுகுறியிவிடப் பூடைசிலிபதமுற்பேதிமுடம் — ஆடையெட்டாத் துலமிடிபுண்வாதசோணிகாமாலையிரண் டுாலமிடிபோம்வரிக்காயால்.

Chemical Constituents:

Chebulin from flowers.Palmitic, stearic, oleic, linoleic, arachidic and behenic acids from fruit kernels. Fruits contain about 30% of an astringent substance; astringency is due to the charectersitic principle chebulnic acid. Also contain tannic acid 20-40%, gallic acid, resin etc. and a purgative glycoside of anthraquinone derivative. Chebulin exhibited antispanmodic action on smooth muscle similar to papaverine.

Medicinal Uses:

The fruits are astringent, sweet, acrid, bitter, sour, thermogenic, anodyne, anthelmintic, anti-inflammatory, vulnerary, alterant, stomachic, laxative, purgative, carminative, digestive, cardiotonic, aphrodisiac, antiseptic, diuretic, febrifuge, depurative and tonic. They are useful in vitiated conditions of tridosa, wounds ulcers, inflammations, gastropathy, anorexia, helminthiasis, flatulence, haemorrhoids, jaundice, hepatopathy, splenopathy, pharyngodynia, hiccough, cough, urophathy, versical and renal calculi, cephalalgia, epilepsy, ophthalmopathy, skin diseases, leprosy, intermittent fever, cardiac disorders, stomatitis, neuropathy and general debility.

Recent research:

Anti-inflammatory and Analgesic Activities of Methanol Extract of *Terminalia chebula*[4].

4.முத்தக்காசு – *Cyperus rotundus* (Nut grass)

Scientific classification

Kingdom	-	Plantae
Division	-	Angiosperms
Order	-	Poales
Family	-	Cyoeraceal
Genus	-	Cyperus
Species	-	Rotundus

வேறுபெயர்

கோரை

Organoleptic Characters

Taste	:	Kaippu
Potency	:	Thatppam (Cooling)
Division	:	Kaarpu (Pungent)

Action: Astringent, Stimulant, Tonic, Diuretic Diaphoretic, Demulunt, Emmenagogue, Vermifuge

பொதுகுணம்

சீதசுரந்தீர்க்குஞ் செம்புனல்பித் தம்போகும்
வாதசுரந்தணிக்கும் வையகத்தில் — வேதைசெய்யவந்தபிணியையெல்லாம்
வாட்டுமுத் தக்காசு கொந்துலவும் வார்குழலே!
கூறு அதிசாரம் பித்தம் அனற்றாகம் ஐயங்
குதிவாதஞ் சோபங் கொடிய–முதிர்வாந்தி
யாரைத் தொடர்ந்தாலும் அவ்வவர்க்கெலாங்
குளத்துக் கோரைக் கிழங்கைக் கொடு.

Chemical Constituents

Cyperene , Cyoerenone, Alpha–Cyperone, Alpha–rotunol, Beta-cyperone, Bela-pinene, Beta-rotunol, Beta-selinene, Calcium, Camphene, Copaene, Isocyperol, Kobusone, Isokobusone, D-gluoose, flavonoids, Linolenic-acid, Magnesium, Manganese, Sitosterol, Stearic-acid, Sugeonol, Oleanolic-acid-3-0-neohesperidoside, Myristic-acid

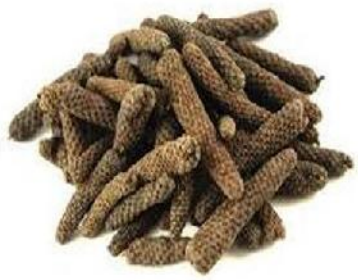
Medicinal uses

Astringent, diaphoretic, diuretic, analgesic, Antihacterial, Carminative, antitussive, aromatic, litholytic, stimulant, stomachic, vermifuge, tonic, sedative.

Recent Research:

Anti- inflammatory ,Anti-Arthritic, Analgesic anvd Anti-convulsant activity of *Cyperus rotundus* [5].

5.திப்பிலி – *Piper longum* (Long pepper)



Scientific classification

Kingdom	- Plantae
Division	- Magnoliophyta
Order	- Piperales
Family	- Piperaceal
Genus	- *Piper*
Species	- *longum*

வேறுபெயர்

ஆர்கதி, உண்சரம், உலவைநாசி, காமன், குடாரி, கோலகம், கோலி, கோழையறுக்கி, சரம், சாடி, துளவி, மாகதி, கனை, சௌண்டி, தண்டுலி, கணம், கலினி, பாணம், பிப்பிலி, வைதேகி, அம்பு, ஆதிமருந்து.

Organoleptic Characters

Taste	:	Kaaruppu (Pungent)
Potency	:	Thatppam (Cooling)
Pirivu	:	Inippu (Sweet)

Action

Stimulant
Carminative

பொதுகுணம்

ஈளை யிருமலிரைப்புப் பசப்பிணிகள்
மாளவொழியாமல் வாட்டுமே–யாளுமுறை
பாங்காயறிந்துசெய்வோர் பண்ழதத்தைப்
பண்டிதரே
வேங்கைவாய்ப் பான்கணைமெய்.

Chemical Constituents

Alkaloids, Piperine, Pipelongumine, Piperlonguminine, n-hexadecane, n-heptade-cane, n-octadecane, α-thiyene, terpinolene, zingiberene, p-cymene, didhydrocarveol, dihydrostigmastend, glycosider, Bracheyamide A, Brachyamide B, Brachystine.

Medicinal uses

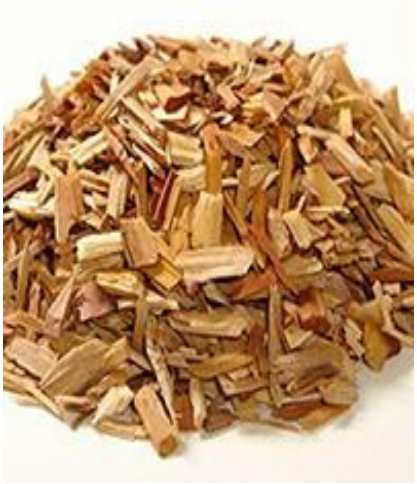
Powdered long pepper administered with honey will relieve cough, cold, asthma, hoarsenless and hiccup.

Anti asthamatic, immunosuppressant, piles, malcuial fever, romiting, sinusitis.

Recent Research:

Anti-oxidant Activity of *Piper longum* [6].

௬. தேவதாரு – *Cedrus deodara* (Himalayan cedar)



Scientific classification

Kingdom	-	Plantae
Division	-	Pinophyta
Order	-	Pinales
Family	-	Pinaceal
Genus	-	Cedrus
Species	-	Deodara

வேறுபெயர்

தேவதாரம், துண், இருதாரு, தாரு, தாரம், தேவதசுரர்மரம், பத்திரதாருகம்

Organoleptic Characters

Taste	:	Sirukaippu
Potency	:	Veppam (heat)
Pirivu	:	Karuppu

Action

Carminative

பொதுகுணம்

தேவதாரக்குணந்தான் சேர்ந்துவளர் பினிசத்தைக்
காவகத்திலோட்டுங் கரப்பலவே–மாவலவர்
சொலலும்புராணசுரமொடுந் ரேற்றத்தை
வெல்லுமனற்றணிக்குமெய
;

Chemical Constituents

Texifolin, Cedeodarin, ampelopsin, cedrin, cedrinoside, deodarin, himachalol, allohimachalol, himadarol, centdarol, dewardiol, isocentdarol, dihydromyricetin.

Medicinal uses

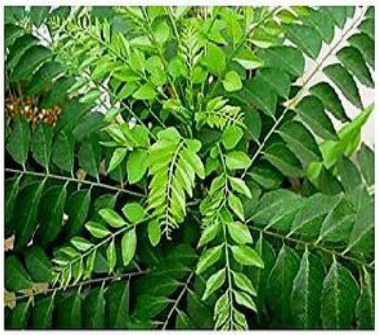
The leaves are bitter, acrid and thernigebic, and are useful in inflammation and tubercular glands.

The heartwood is bitter, acrid thermogenic, emollient, enodyne, anthelmintic, digestive, Carminative, Cardiotonic, galacto-purifier, anti-inflammatory, diuretic, antiseptic, laxative and it useful in inflammations skin diseases, insomnia, epilepsy, hiccough.

Recent Research:

Studies on the Anti-inflammatory And Analgesic Activity of *Cedrus deodara* [7].

7. கறிவேப்பிலை– *Murraya koenigii* (Curry leaf)



Scientific classification

Kingdom	-	Plantae
Division	-	Magnoliapsida
Order	-	Sapindales
Family	-	Rutaceal
Genus	-	*Murraya*
Species	-	*koenigii*

வேறுபெயர்

கறிவேப்பிலை, கருவேப்பிலை, கறியபிலை

Organoleptic Characters

Taste	:	Sirukaippu
Potency	:	Veppam (heat)
Pirivu	:	Karuppu (Pungent)

Action

Tonic
Stomachic

பொதுகுணம்

வாயினருசிவயிற்றுளைச்சனீடுசுரம்
பாயுகின்றபித்தமுலமன் பண்ணுங்கான் — துய
மருவேறுகாந்தளங்கைமாதே! ஊலகிற்
கருவேப் பிலையருந்திக் காண்

Chemical Constituents

α-pinene, Sabinene, β-pinene, β-caryophyllene, limonene, bornyl acetate, terpinen-4-01, γ-terpinene, α-humulene.

Medicinal uses

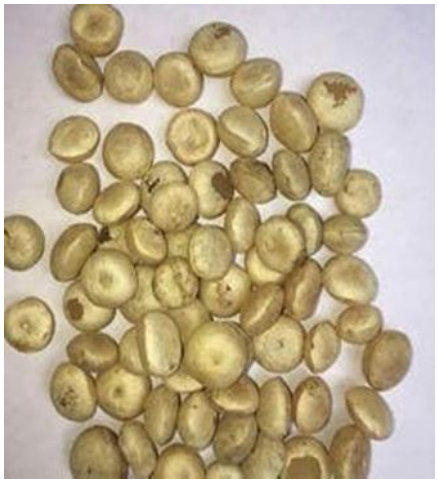
Fresh leaves, dried leaf powder and essential oil are widely used for flavouring soups, curries, fish and meat dishes, eggs dishes, traditional curry powder blends, seasoning and ready to use other fool preparations.

Whole (or) inparts as antiemetics, antidiarrheal, antifangal, depressant, anti-inflammatory, body aches for kidney pain and vomiting.

Recent research:

Anti-inflammatory And Analgesic Activity of Aqueous Extracts of dried Leaves of *Murraya koenigii* [8].

8. தேற்றான் விதை– *Strychnos potatorum* (Clearing nut)



Scientific classification

Kingdom	- Plantae
Division	- Angiosperms
Order	- Gentianales
Family	- Loganiaceac
Genus	- *Strychnos*
Species	- *potatorum*

வேறுபெயர்

இல்லம், கதகம், சில்லம், தேறு

Organoleptic Characters

Taste	:	Kaippu
Potency	:	Veppam (heat)
Division	:	Karuppu (Pungent)

Action

Alterative
Tonic
Stomachic

பொதுகுணம்

இல்லம் மலகமிரண்டுமயின்றானோ
யில்லாமலகமிருக்குமே — இல்லாமல்
வாழைக் கனியும் வடையுமிமுதுமுண்பான்
வாழைக் கனியுனடவைத் தவன்

Chemical constituents

Diaboline, Saponin glycoside having oleanolic acid and as aglycone and D-galactose and D-mannose as sugar moieties, chlorogenic acid, oleanolic acid, 3 β-autaxyoleanolic acid, β-Sitosterol, lupenediol, arachidic, lignoceric, palmitic, stearic, linoleic and oleis acid.

Medicinal uses

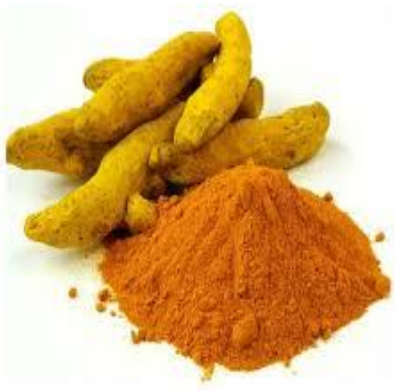
The seeds are bitter and used as an astringent, demulcent, emetic, diuretic, stomachic and also used to purify water and anti-inflammatory.

They are used in vitiated conditions of vata and kabha, hepatopathy, nephropathy, gonorrhea, leucorrhea, gestropathy, bronchitis, chronic diorrbea, dysentery, ulcers, other eye diseases, scleritis.

Recent research:

Studies on Hepatoprotective And Anti-oxidant actions of *Strychnos potatorum* seeds on CCI4-induced Acute injury in experimental rats[9].

9. மஞ்சள் – *Curcuma longa* (Turmeric)



Scientific classification

Kingdom	-	Plantae
Division	-	Angiosperms
Order	-	Zingiberales
Family	-	Zingiberaceal
Genus	-	*Curcuma*
Species	-	*longa*

10. பசும் பால் – Cow's Milk – Lactus

வேறுபெயர்

ஆரிசனம், கான்சனி,நிசி, ஊதம்

Organoleptic Characters

Taste	:	Karuppu (Pungent) Kaippu (Bitter)
Potency	:	Veppam (heat)
Pirivu	:	Karuppu (Pungent)

Action

Carminative
Stimulant
Hepatoprotective

பொதுகுணம்

பொன்னிறமாம் மேனிபுலானாற்றமும்போகும் மன்னுபுருடவசியமாம் — பின்னியெமும் வாந்தியபித்ததோடமையம் வாதம்போந் தீபனமாங் கூர்ந்தமஞ்சளின்கிழங்குக்கு.

Chemical constituents

The rhizome contains he pigment curcumin an essential oil of Sesquiterpenes, Zingiberene, D-phellandrene, turmerone, dehydroturmerone, α-alantolactone, curcumene and cineal.

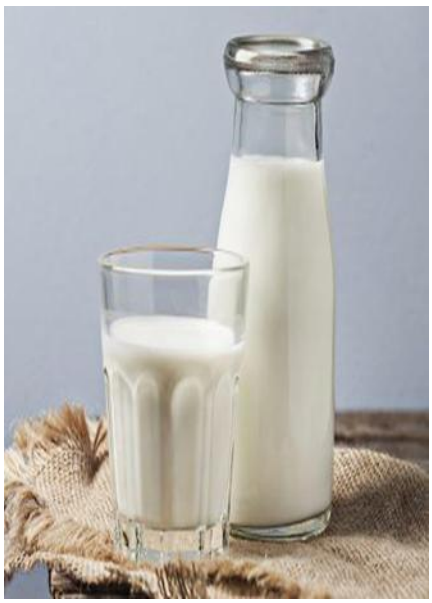
Medical uses

Aromatic, Stimulant, tonic, Carminative and antholmintic. The rhizome is useful in gastric ulcer, Anti-inflammatory, Anti fungal, anti viral and cholegogic properties.

It is prescribed in the therapy of gastric and duodenal ulcer and also for skin oilments.

Recent Research:

Comparative Evaluation of Anti-inflammatory Activity of Curcuminoids, Turmerones and Aqueous Extract of *Curcuma longa* [10].



வேறுபெயர்

பயம், கீரம், சுதை, பயசு, பாகு, அமுது, துத்தம், சாறு

பொதுகுணம்

பாலர் கிழவர் பழஞ்சுரத்தோர் புண்ணாளி சூலையர் மேகத்தோர் துர்பலத்தோர் ஏலுமிவர் எல்லார்க்குமாகும் இளைத்தவர்க்குஞ் சாதகமாய் நல்லாய் பசுவின்பால் நாட்டு

- **புதார்த்தகுணசிந்தாமணி**

Composition of Milk

Milk is a translucent white liquid produced by the mammary glands of mammals, a pH ranging from 6.4 to 6.8 making it slightly acidic.

Cow's Milk contains on a average 3.4% protein, 3.6% fat and 4.6% lactose 0.7% minerals and supplies 66 k cal of energy per 100 gms. The largest structure in the fluid protein of the milk is casein protein micelles.

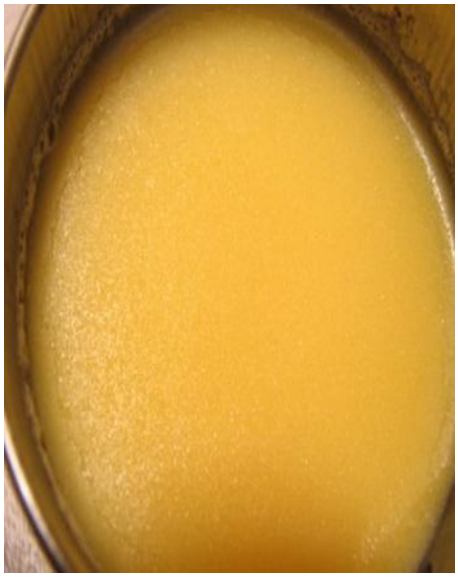
Cow's Milk is a rich source of vitamins including riboflavin, Vitamin E, Vitamin A, folate, thiamin, niacin, vitamin B6, vitamin B_{12}.

Health benefits of cow's Milk

Strengthens bones and teeth Milk has often been recommended as a remedy for everything from goul and arthritis to respiratory distress and burns on the skin

- Weight loss
- Growth and development
- Boosts immunity

11. பசுவெய – Cow's Ghee



பொதுகுணம்

தாகமுடிலைசுட்கம் வாந்திபித்தம் வாயுபிர மேகம் வயிற்றெரிவுவிக்ககலழல் — மாகாசங் குன்மம் வறட்சிகுடற்புரட்ட லஸ்திசுட்கஞ் சொன்மூலம் போக்குநிறைத் துப்பு

- **குணப்பாடம் தாது—சிவவகுப்பு**

It has been used in the treatment of Vomiting, Pitha disease, Stomach burning, hic-cough, peptic ulcer, dryness of sjin and irritable bowel syndrome.

Compositions of Ghee

Cows ghee abundant in saturated fatty acids. It contains approximately 8% saturated fatty acids, triglycerides, diglycerides, monoglyverides, phospholipids, beta carotene 600 IV and vitamin E which are known anti oxidants.

Discussion

Siddha poly herbal medicines of Karappan Nei is using for Infantile eczema. The base of Karappan Nei is ghee form. These Karappan Nei neutralizing the vatham, pitham, kapamkuttram and also reducing the eczema skin lesions like blisters, papaules, oozing, ulceration, itching. This medicated ghee have a Anti-inflammatory, Anti-bacterial effects. Karappan Nei used to Internal and External apply for affecting sites. This Medicated ghee is may good and no complications for children.

Conclusion

Karappan Nei is used in most of the infantile eczema Internally and Externally. Pharmacological activity of Karappan Nei having potent Anti-inflammatory activity by *In-vitro* studies. These medicated ghee may be given to children without any hesitations for the management of infantile eczema. The ingredients of karappan Nei cost effective. Further research works may be carried out in the large group of patients to explore this karappan Nei more scientifically.

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