



## Biochemical analysis of Siddha Polyherbal drug Karunkurinji Kudineer

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### ABSTRACT

*Siddha system* is the ancient and unique system of traditional medicinal systems. *Varmam* is the prime section of *Siddha* system which describes a number of points all over the body that holds vital importance in the holistic functioning of human. These *Varma* points are the connecting junction between the physical body and subtle body. *Varma* treatment have the potential of healing many diseases through different type of Manipulation techniques, Internal and external medicines to treat the diseases with a wide range of drugs. Among *vadha* diseases *Koarai Vatham* is the most common type of *vadha* diseases mentioned in *Vatha nithanam 42/250*) which may correlate with lumbar spondylosis. The aim of the study was qualitative analysis of *karunkurinji Kudineer* a *varma* internal medicine mentioned in the *varma maruthuvam* ( text book of *varmam*) for the treatment of *Koarai Vatham*. The Biochemical analysis of the trial drug indicates the presence of Calcium, Sulphate, Chloride, Starch, Unsaturated compound, Reducing sugar, Amino acid revealed the effectiveness of therapeutic action in *vadha* diseases especially in *Koarai Vatham*.

### Keywords:

*Karunkurinji kudineer, Koarai vatham, Lumbar spondylosis, Biochemical analysis,*

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## INTRODUCTION

Lumbar spondylosis is the term given to the occurrence of degenerative disc disease and osteoarthritic change in the lumbar spine. Within the literature, lumbar spondylosis encompasses numerous associated pathologies including spinal stenosis, degenerative spondylolisthesis. The lumbar spine carries most of the body's weight. therefore degenerative changes affect its structure causes pain with activity such as walking and standing ,lifting objects or after a long period of rest. The symptoms of *Koarai vatham* mentioned in *vantha nithanam* – 42/250 can be correlated to symptoms of Lumbar spondylosis.

*Varmam* is one of the special branch of Siddha system it have a wide range of Internal and External Medications also. Manipulation of *Varma* points only practiced by all the practitioners but usage of *Varma* medicine is very minimum in number among the practitioners .Though it has been practiced over years, Scientific validation has not been carried out so far. Here we discussed about Contents of *Varma* Medicine specially *Karunkurinji Kudineer* for *koarai vatham* ( Lumbar Spondylosis).

In *Varma maruthuvam* text, ***Karunkurinji Kudineer*** is indicated for *Koarai vatham* low back pain/ lumbar spine related problems. The symptoms of *Koarai*

## MATERIALS AND METHODS

### Collection, Identification and Authentication of the Drug:

The required raw drugs were purchased from a well reputed country shop. They were identified and authenticated by Botanist of Government Siddha Medical College, Palayamkottai.

### Purification of the Drug:

All the ingredients of this herbal formulation were purified according to the proper produce methods described in Siddha Classical Literature.

### Preparation of the Medicine:

The purified raw drugs are coarsely powdered and mixed in of each equal quantity. The decoction is made out from the above mixture as per the method available in Siddha literatures.

### Biochemical analysis:

Screening the drug *Karunkurinji Kudineer* to identify the Biochemical properties present in the ingredient.

### Chemicals and drugs:

The chemicals used in this study were of analytical grade obtain from Department of Biochemistry, Government Siddha Medical College, Palayamkottai.

### Methodology:

5 grams of the drug was weighed accurately and placed in a 250ml clean beaker. Then 50ml of distilled water added to it and dissolved well. Then it was boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made upto 100ml with distilled water. This fluid was taken for analysis.

**Table 1. Ingredients of Karunkueinji Kudineer**

DRUG	BOTANICAL NAME	FAMILY	PART USED	QUANTITY
Karunkurinji	<i>Ecbolium Linguistrum</i>	acanthacea	Root	1 part
Sitraamutti	<i>Pavonia zeylanica</i>	malvaceae	Root	1 part
Vellamanakku	<i>Ricinus communis</i>	Euphorbiaceae	Root	1 part
Sukku	<i>Zingiber officinale</i>	Zingiberaceae	Root	1 part
Sitrarathai	<i>Alphinia officinarum</i>	Zingiberaceae	Root	1 part
Nathai choori	<i>spermacose hispida</i>	Rubiaceae	Root	1 part
Vennochi	<i>Vitex negundo</i>	Verbenaceae	Root	1 part
Karunochi	<i>Vitex negundo</i>	Verbenaceae	Root	1 part
Vellulli	<i>Allium sativum</i>	Liliaceae	Bulb	1 part

Table 2. Biochemical analysis of Karunkurinji kudineer

EXPERIMENT	OBSERVATION	INFERENCE
<b>TEST FOR CALCIUM</b> 2ml of the above prepared extract is taken in a clean test tube. To this add 2ml of 4% Ammonium oxalate solution	A white precipitate is formed	Indicates the presence of calcium
<b>TEST FOR SULPHATE</b> 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
<b>TEST FOR CHLORIDE</b> The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
<b>TEST FOR CARBONATE</b> The substance is treated with concentrated Hcl.	No brisk effervescence is formed	Absence of carbonate
<b>TEST FOR STARCH</b> The extract is added with weak iodine solution	Blue colour is formed	Indicates the presence of starch
<b>TEST FOR FERRIC IRON</b> The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
<b>TEST FOR FERROUS IRON</b> The extract is treated with concentrated Nitric acid and Ammonium thiocyanate solution	Blood red colour is formed	Indicates the presence of ferrous iron
<b>TEST FOR PHOSPHATE</b> The extract is treated with Ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of phosphate
<b>TEST FOR ALBUMIN</b> The extract is treated with Esbach's reagent	No yellow precipitate is formed	Absence of albumin
<b>TEST FOR TANNIC ACID</b> The extract is treated with ferric chloride.	No blue black precipitate is formed	Indicates the presence of Tannic acid.
<b>TEST FOR UNSATURATION</b> Potassium permanganate solution is added to the extract	It gets decolourised	Indicates the presence of unsaturated compound
<b>TEST FOR THE REDUCING SUGAR</b> 5ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and add 8-10 drops of the extract and again boil it for 2 minutes.	Colour changes occur	Indicates the presence of reducing sugar
<b>TEST FOR AMINO ACID</b> One or two drops of the extract is placed on a filter paper and dried well. After drying, 1% Ninhydrin is sprayed over the same and dried it well.	Violet colour is formed	Indicates the presence of Amino acid
<b>TEST FOR ZINC</b> The extract is treated with Potassium Ferro cyanide.	No white precipitate is formed	Absence of zinc

## RESULTS AND DISCUSSION

The biochemical analysis of the Karunkurinji Kudineer is tabulated in above table 2. The drug contains Sulphate, chloride, starch, calcium, ferrous ion, unsaturated compound, amino acid, reducing sugar. Mode of action of the trial drug *Karunkurinji kudineer* which brings about the Bone Mineralisation, osteoblastic and osteoclastic activity in body. May be due to the presence of calcium, Sulphate, chloride, and Amino acid, in it. Can be used to treat *Koarai Vatham* (lumbar spondylosis)

## CONCLUSION

Karunkurinji kudineer is a Siddha Drug taken from a Siddha varmam literature used in the treatment of lumbar spondylosis. The drug is screened for its bio chemical properties. Further, comprehensive pharmacological analysis are needed to evaluate its potency and the drug has its own potency to undergo further research

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## REFERENCES

1. Anonymous Sarakku Suthi Muraigal, First Edition, Siddha Maruthuva Nool Veliyita Pirivu Indian Medicine and Homeopathy Department (2008), Chennai.
2. N.V.Bhagavan, Chung- Eun Ha, Essential of Medical Biochemistry, Elsevier Inc Metabolism of iron and heme (Chapter 27). 2<sup>nd</sup> Edition., 2015.
3. Anonymous Sarakku Suthi Muraigal, First Edition, Siddha Maruthuva Nool, Veliyita Pirivu Indian Medicine and Homeopathy Department (2008).