



Biochemical analysis of Siddha Polyherbal Drug Kuthikaal Vatha Kudineer

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ABSTRACT

Siddha system is a traditional system of healing medicine in southern part of the India. Siddha system deals with many kind of treatment procedure like yogam, varmam, massage techniques, Nanju noi maruthuvam etc. According to varmam it contains manipulation techniques, internal and external medicines to treat the different type of disease with a wide range of drugs. Among vatha diseases Kuthikaal vatham is most common type of vatha disease. The aim of the study was qualitative analysis of Kuthikaal vatha kudineer to treat the kuthikaal vatham. Siddha varmam drug taken from a varmam literature. The Biochemical analysis of the trial drug indicates the presence of sulphate, ferrous iron, unsaturation compound, amino acid revealed the effectiveness of therapeutic action in vatha disease especially in kuthikaal vatham.

Keywords:

Kuthikaal vatham, Calcaneal spur, Biochemical Analysis, *Siddha Medicine*, *Kuthikaal vatha kudineer*

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INTRODUCTION

Calcaneal spur is not a growth but a reaction to the local inflammation of the planter Fascia and ligaments with deposition of calcium at the site of the ligamentous attachments. The condition is caused by a spike of bone at the anterior edge of the calcaneum. The symptoms are not due to the spike per se but to the causative conditions. Pain is felt in the ball of the heel, which is more during long periods of standing. The severity of the pain is not proportional to the size of the spur.

In Vatha noi nithanam 800 text, Kuthikaal vatha kudineer is indicated for vatha diseases.

MATERIALS AND METHODS

KUTHIKAAL VATHA KUDINEERS

Source Of Drug Ingredients:

The required raw drugs for preparations of Kuthikaal vatha kudineer are purchased from a well reputed country shop. The purchased drugs are authenticated by The Faculty / Expert members of Medicinal Botanist of GSMCH-Palayamkottai.

Methods Of Purification And Preprations:

All the ingredients has been completely purified as per the siddha literature in the presence knowledge of Guide / Faculty members. 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

DRUGS	BOTANICAL NAME	PART USED
AMANAAKU	<i>Ricinus communis</i>	ROOT
AYIL	<i>Holoptelea integrifolia</i>	BARK
VENKODIVELI	<i>Plumbago Zeylanica</i>	ROOT
SUKKU	<i>Zingiber officinale</i>	DRIED RHIZOME
THAZHUTHA-ZHAI	<i>Cleodendrum phlomodis</i>	ROOT
SITRAAMUTTI	<i>Sida cordifolia</i>	ROOT
NILAPANAI	<i>Curculigo orchoides</i>	TUBERS
KADUKKAI	<i>Terminalia chebula</i>	DRIED FRUITS
KANCHORI	<i>Tragia involucrate</i>	ROOT
CHEVIYAM	<i>Piper nigrum</i>	ROOT
KARUNKURINJI	<i>Ecboium ligustrinum</i>	ROOT
DEVADARU	<i>Cedrus deodara</i>	KATTAI

Biochemical analysis:

Screening the drug Kuthikaal vatha kudineer to identify the Biochemical properties present in the ingredient.

Chemicals and drugs:

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

Table. 1 Qualitative analysis

S.no	Experiment	Observation	Inference
01	Test for calcium 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
02	Test for sulphate 2ml of the extract is added to 5% barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
03	Test for chloride The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
04	Test for carbonate The substance is treated with concentrated hcl.	No brisk effervescence is formed	Absence of carbonate

S.no	Experiment	Observation	Inference
05	Test for starch The extract is added with weak iodine solution	Blue colour is formed	Indicates the presence of starch
06	Test for ferric iron The extract is acidified with glacial acetic acid and potassium ferro cyanide.	No blue colour is formed	Absence of ferric iron
07	Test for ferrous iron The extract is treated with concentrated nitric acid and ammonium thiocyanate solution	No Blood red colour is formed	Indicates the absence of ferrous iron
08	Test for phosphate The extract is treated with ammonium molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of phosphate
09	Test for albumin The extract is treated with esbach's reagent	No yellow precipitate is formed	Absence of albumin
10	Test for tannic acid The extract is treated with ferric chloride.	blue black precipitate is formed	presence of tannic acid
11	Test for unsaturation Potassium permanganate solution is added to the extract	It gets decolourised	Indicates the presence of unsaturated compound
12	Test for the reducing sugar 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 change occurs	Indicate the presence of reducing sugar
13	Test for amino acid 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
14	Test for zinc The extract is treated with potassium ferro cyanide.	No white precipitate is formed	Absence of zinc

RESULTS AND DISCUSSION

The bio chemical analysis of the trial drug Chukku karpam was tabulated above in table. The trial drug , Chukku karpam contains,

- 1.Calcium
- 2.Sulphate & Tannic acid
- 3.Starch & 4.Chloride
- 5.Unsaturated compounds
6. Amino acids & reducing sugar
- 7.amino acid

CONCLUSION

Mode of action of the trial drug kadukkaikarpam 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 Thandagavatham (lumbarspondylosis)

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

RESULTS AND DISCUSSION

The Bio chemical analysis of the trial drug Kuthikaal vatha kudineer was tabulated above in table 2. The trial drug, Kuthikaal vatha kudineer contains,

1. Calcium
2. Starch
3. Sulphate
4. Chloride
5. Unsaturated compounds
6. Amino acid
7. Tannic acid
8. Reducing sugar

Mode of action of the trial drug Kuthikaal vatha kudineer which brings about the Bone Mineralisation osteoblastic and osteoclastic activity in body. May be due to the presence of Sulphate, Amino acid, calcium in it

CONCLUSION

Kuthikaal vatha kudineer is a Siddha Drug taken from a Siddha literature used in the treatment of vatha diseases. The drug is screened for its biochemical 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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