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Research article

Biochemical analysis of Siddha Monoherbal drug Ammaiyar Koonthal chooranam

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ABSTRACT

Siddha system is the most ancient system of medicine, it is a vast repository of internal and external medicines. There are 32 types of external therapies which includes ottradam ,thokkanam, pottanam etc...and there are 32 types of unique internal medicines the efficacy of the medicines are very high which based on the holistic nature of their approach to healing . *Ammaiyar koonthal chooranam* along with *ottradam* gives tremendous results in the treatment of thandaga vatham(lumbar spondylosis). The aim of the study was to evaluate the Biochemical analysis of the trial drug *Ammaiyar koonthal chooranam* and it indicates the presence of tannic acid , ferrous iron, unsaturation compound, aminoacid which revealed the enhancement of therapeutic action in *vadha* diseases especially in Thandaga vatham (lumbar spondylosis).

Keywords:

Ammaiyar koonthal chooranam, biochemical analysis, thandaga vatham, lumbar spondylosis..

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INTRODUCTION

In siddha system yugimunivar classified vatha disease-into 80 types. The disease Thandaga Vatham can be correlated with lumbar spondylosis.

Most of the symptoms of "LUMBAR SPONDYLOSIS" (pain in low back area, stiffness over lumbar area and restricted movements) may be correlated with the symptoms of Thandaga Vatham

Lumbar spondylosis is a degenerative changes in disc and lumbar spine .Disc degeneration is age related and starts in the 3rd decade.

Reduction in the molecular size of the proteoglycans of the Nucleus Pulposus, is associated with loss of viscol elastic properties, increased load bearing by the annulus is followed by focal damage and disc herniation in some cases.

Disc prolapse and osteophytosis can formed root compression and indirect ischemic neuronal damage. In GUNAPADAM MOOLIGAI VAGUPPU drug AMMAIYAR KOONTHAL CHOORNAM has been indicated for Vatha disease. this polyherbal formulation AMMAIYAR KOONTHAL CHOORNAM have the therapeutic efficacy in the treatment of "THANDAGAVATHAM" (LUMBAR SPONDYLOSIS).

MATERIALS AND METHODS

Table 1. Ingredients of Ammaiyar Koonthal Chooranam

DRUG	BOTANICAL NAME	FAMILY	PART USED	QUANTITY
Ammaiyar koonthal	*Cuscta reflexa*	*Convolvulaceae*	Whole plant	1 part

Collection, Identification and Authentication of the Drug:

The required raw drugs were collected from near nagercoil. They were identified and authenticated by Botanist of Government Siddha Medical College, Palayamkottai.

Purification of the Drug:

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

Preparation of the Medicine:

The clean *Ammaiyar koonthal* are taken, dried and powdered. Then the powdered drug is kept in an air tight container.

EXPERIMENT	OBSERVATION	INFERENCE
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	No white precipitate is formed	Indicates the Absence of calcium
TEST FOR SULPHATE 2ml of the extract is added to 5% Barium chloride solution.	No white precipitate is formed	Indicates the Absence of sulphate
TEST FOR CHLORIDE The extract is treated with silver nitrate solution	No white precipitate is formed	Indicates the Absence of chloride
TEST FOR CARBONATE The substance is treated with concentrated Hcl.	No brisk effervessence is formed	Absence of carbonate
TEST FOR STARCH The extract is added with weak iodine solution	Blue colour is formed	Indicates the presence of starch

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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
TEST FOR FERROUS IRON The extract is treated with concentrated Nitric acid and Ammonium thiocyanate solution	Blood red colour is formed	Indicates the presence of ferrous iron
TEST FOR PHOSPHATE The extract is treated with Ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of phosphate
TEST FOR ALBUMIN The extract is treated with Esbach's reagent	No yellow precipitate is formed	Absence of albumin
TEST FOR TANNIC ACID The extract is treated with ferric chloride.	Blue black precipitate is formed	Indicate the presence of Tannic acid
TEST FOR UNSATURATION Potassium permanganate solution is added to the extract	It gets decolourised	Indicates the presence of unsaturated compound
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	Colour changes occur	Absence of reducing sugar
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
TEST FOR ZINC The extract is treated with Potassium Ferro cyanide.	No white precipitate is formed	Absence of zinc

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.

RESULTS AND DISCUSSION

The Bio chemical analysis of the trial drug Ammaiyar koonthal chooranam was tabulated above in table 2. The trial drug contains Ferrous iron, Tannic acid, Amino acid, and Unsaturated compound.

Mode of action of the trial drug *Ammaiyar koonthal chooranam,* which brings about the analgesic, anti inflammatory, anti pyretic, anti-cancerous activity in the body. It can be used to the treatment of lumbar spondylosis May be due to the presence of ferrous iron, tannic acid, unsaturated compound, Amino acid, in it.

CONCLUSION

Ammaiyar koonthal chooranam is a drug taken from a Siddha literature used in the treatment of Thandaga vatham(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, ElsevierInc Metabolism of iron and heme(Chapter27).2nd Edition.,2015.
3. Anonymous Sarakku Suthi Muraigal, First Edition, Siddha Maruthuva Nool, Veliyita Pirivu Indian Medicine and Homeopathy Department (2008).

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