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Research article

Biochemical analysis of Siddha Monoherbal Drug Chukku Karpam

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ABSTRACT

Siddha system is a traditional system of medicine in southern part of the India.It was founded by great eighteen saints called siddhars.Cervical spondylosis is a common spinal problem seen now a days. Though degeneration of cervical vertebrae is most commonly seen in elderly peoples but its prevalence is increasing in early and middle age peoples also. In the present case study, a diagnosed case of cervical spondylosis has been included and chukku karpam ,a siddha drug is taken for biochemical analysis for future study in cervical spondylosis

Keywords:

Cervical spondylosis,Biochemical Analysis, *siddha*medicine, Chukku karpam

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INTRODUCTION

Cervical spondylosis is natural ageing process involving cervical spine characterised by degeneration of the intervertebral discs, the protrusion and bony overgrowth of adjacent vertebral bodies causing narrowing of the vertebral canal and intervertebral foramina. It causes compression of the nerve roots and sometimes of the spinal cord. The condition is extremely common in middle-aged and older patients. It may present with non-specific neck pain or with symptoms of cervical radiculopathy/ myelopathy; and considerably affects the quality of life of the patient. siddhar yugimuni have classified vatha disease into 80 types in yugi vaithiya chinthamani 800.cervical spondylosis symptoms are comparable to Ceganavatham quoted by yugimunivar.

In Theraiyar segarappa text, Chukku karpam is indicated for vatha diseases. So,Chukku karpam is taken into study for the research in cervical spondylosis.

MATERIALS AND METHODS

Source of drug ingredients:

The required raw drugs for preparations of Chukku Karpam

DRUGS	BOTANICAL NAME	PART USED
CHUKKU	*Zingiber officinale*	Dried rhizome

are purchased from a well reputed country shop. The purchased drugs are authenticated by The Faculty / Expert members of Medicinal Botany and Gunapadam department at GSMCH-Palayamkottai..

Methods Of Purification And Preprations:

All the ingredients have been completely purified as per the siddha literature in the presence knowledge of Guide / Faculty members. Then the trail drug is prepared from the ingredients.

Biochemical analysis:

Screening the drug Chukku karpam 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& Hospital, 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 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 effervessence is formed	Absence of carbonate

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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.	No blue black precipitate is formed	Absence 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.	No Colour change occurs	Indicate the absence 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

3.Starch & 4.Chloride

5.Unsaturated compounds

6. Amino acids

7.amino acid

Mode of action of the trial drug Chukku karpam- 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

It is a siddha drug taken from a siddha literature used in the treatment of vatha diseases. 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.

CONFLICT OF INTEREST: None declared

SOURCE OF FUNDING: Nil

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