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Research article

Biochemical analysis of Siddha Monoherbal drug Kharun thulasi Karpam

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ABSTRACT

Siddhar yoga maruthuvam is a pride of siddha system of medicine. The term yoga means to join / to attach / to unite, which means yoga to connect the mind as well as our body. Yoga is a system of practices that encourages the harmony, peaceful mind, and healthy body. Yogasanam helps to regulate the nervous system, cardio vascular system, respiratory system and alter your mood and ensure longevity.

Bronchial asthma is a very common disease in society due to increasing exposure to air pollution and western life style. It is common in both sex but more prevalent among males while during adolescence it affects girls and women more. It is a chronic inflammatory disease which produces bronchial hypersensitivity characterized by reversible airway obstruction, mucosal oedema, constriction of the bronchial musculature and produce mucous plugs.

The plant ocimum sanctum (Kharun thulsai) comprises the several medicinal properties. The whole plant is known to possess therapeutic potentials like expectorant, anti histamine, anti asthmatic, anti oxidant property. The aim of the study was to evaluate the Biochemical analysis of the trial drug Kharun thulasi karpam and it indicates the presence of calcium, Sulphate, ferrous iron, unsaturation compound, aminoacid which revealed the enhancement of therapeutic action in Eraippu erumal (Bronchial asthma).

Keywords:

Eraippu erumal, Bronchial asthma, Biochemical Analysis, Siddhar yoga Maruthuvam, Kharun lthulasi karpam.

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INTRODUCTION

Bronchial asthma is a very common disease in society due to increasing exposure to air pollution and western life style. It is common in both sex but more prevalent among males while during adolescence it affects girls and women more. It is a chronic inflammatory disease which produces bronchial hypersensitivity characterized by reversible airway obstruction, mucosal oedema, constriction of the bronchial musculature and produce mucous plugs.

The prevalence of bronchial asthma has increased significantly since the 1970s. In worldwide, about 300 million people have asthma and by 2025 it has been estimated that a further 100 million will be affected. In India, it is estimated that 57000 deaths were attributed to bronchial asthma in 2004. In 2009, bronchial asthma caused 250000 globally.

MATERIALS AND METHODS

INGREDIENTS OF KHARUN THULASI KARPAM

DRUG	BOTANICAL NAME	FAMILY	PART USED	QUANTITY
Kharun Thulasi	*Ocimum sanctum*	Lamiaceae	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 Kharun thulasi are taken, dried and powdered. Then the powdered drug is kept in an air tight container.

Biochemical analysis:

Screening the drug Kharun thulasi 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, 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.

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	A white precipitate is formed	Indicates the presence of calcium
TEST FOR SULPHATE 2ml of the extract is added to 5% Barium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
TEST FOR CHLORIDE The extract is treated with silver nitrate solution	A white precipitate is formed	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	Absence of starch
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

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Expertiment	Observation	Inference
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.	No blue black precipitate is formed	Absence 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 again boil it for 2 minutes.	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

Table

RESULTS AND DISCUSSION

The Bio chemical analysis of the trial drug Kharun thulasi karpam was tabulated above in table 2. The trial drug Kharun thulasi karpam contains calcium, Sulphate, Ferrous ion, Unsaturated compound and Amino acid. Mode of action of the trial drug Kharun thulasi karpam which brings about the anti asthmatic, antihistamine activity in the body. May be due to the presence of calcium, Sulphate, chloride, starch, unsaturated compound, reducing sugar, Amino acid, Ferrous Iron in it.

CONCLUSION

Kharun thulasi karpam is a drug taken from a Siddha literature used in the treatment of eraippu erumal (bronchial asthma). 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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