



ORIGINAL RESEARCH PAPER

Siddha

BIOCHEMICAL ANALYSIS OF SIDDHA POLYHERBAL DRUG KEELVAYU NIVARANA CHOORANAM

KEY WORDS: Rheumatoid arthritis, Biochemical Analysis, Siddha Medicine, Keelvayu Nivarana Chooranam.

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ABSTRACT Siddha Medicine is one of the most ancient Medical System of India, which says that there are 4448 diseases affecting humans. The Siddha system is a treasure house of secret science. In human body joints are the important structure which helpful for normal stability, movement and activity. Siddha system deals the different type of arthritis with a wide range of drugs. Among arthritis "UTHIRA VATHA SURONITHAM" (Rheumatoid arthritis) is one of the type of arthritis. The aim of the study was qualitative analysis of Keel vayu nivarana chooranam, a Siddha polyherbal drug taken from a Siddha Literature. The Biochemical analysis of the trial drug indicates the presence of Sulphate, Starch, ferrous iron, unsaturated compound, reducing sugar, amino acid revealed the enhancement of therapeutic action in arthritis.

INTRODUCTION:

Siddha system is one of the India's ancient traditional Medicine which help for long life and better health. Siddha system is differ from the other system of medicine by giving physical mental and social well being of an individual by its various tools like medicine, meditation, yoga, varma and manage. Commonly herbs, minerals, metals and animal products were used to prepare medicines in treating lot of medical ailments. Nowadays scientific evaluation is needed to validate the preciousness of Siddha drugs. It help to ensure safety to the public and effective traditional treatment for diseases. On the basis of our Siddha text Rheumatoid arthritis is inter correlated with uthira vatha suronitham. The drug from Siddha literature (The Pharmacopocia of Siddha research medicine) Keelvayu Nivarana Chooranam is analysed for the biochemical composition.

MATERIALS AND METHODS

Keelvayu Nivarana Chooranam

INGREDIENTS

Table:1

S.No.	INGREDIENT	BOTANICAL NAME
1.	Nannari ver pattai	Hemidesmus indicus
2.	Parangipattai	Smilax china
3.	Seemai Amukkura	Withania somnifera
4.	Chitrarathai	Alpinia galanga

Collection, Identification and Authentication of the Drug: The required raw drugs were purchased from a well reputed

country shop. They were authenticated by Medicinal Botany Department 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 drug:

Purified dry drug is taken and powdered. Keep in airtight container

Biochemical analysis:

Screening the drug Keelvayu Nivarana Chooranam to identify the Biochemical properties present in the ingredient.

Chemicals and drugs:

And 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.

QUALITATIVE ANALYSIS

S.No.	EXPERIMENT	OBSERVATION	INFERENCE
1	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	Absence of calcium.
2	TEST FOR SULPHATE 2ml of the extract is added to 5% Barium Chloride solution	A white precipitate is formed	Indicates the presence of sulphate
3	TEST FOR CHLORIDE The extract is treated with silver nitrate solution.	No white precipitate is formed	Absence of chloride.
4	TEST FOR CARBONATE The substance is treated with concentrated Hcl.	No brisk effect vessece is formed	Absence of Carbonate
5	TEST FOR STARCH The extract is added with weak iodine solution	Blue Colour is formed.	Indicates the presence of Starch
6	TEST FOR FERRIC IRON The extract is acidified with Glacial acetic acid and potassium ferro cyanide.	No blue color is formed.	Absence of ferric iron

7	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.
8	TEST FOR PHOSPHATE The extract is treated with Ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of Phosphate
9	TEST FOR ALBUMIN The extract is treated with Esbach's reagent	No yellow precipitate is formed.	Absence of Albumin.
10	TEST FOR TANNIC ACID This extract is treated with ferric chloride.	No blue back precipitate is formed	Absence of Tannic acid.
11	TEST FOR UNSATURATION Potassium permanganate solution is added to the extract.	It gets decolorized	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	Indicates 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% Ninydrin 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 keelvayu nivarana chooranam was tabulated above in table 2.

The trial drug Keelvayu Nivarana Chooranam contains,

1. Sulphate
2. Starch
3. Ferrous Iron
4. Unsaturated compound
5. Reducing sugar
6. Amino Acid.

The mode of action of the trial drug Keelvayu Nivarana Chooranam which brings about the Bone Mineralisation osteoblastic and osteoclastic activity in body. May be due to the presence of Sulphate, Amino acid, Starch, Ferrous Iron in it.

CONCLUSION:

Keelvayu Nivarana Chooranam is a Siddha Drug taken from a Siddha literature used in the treatent of Rheumatoid arthritis. 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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