

Biochemical Analysis of Siddha Polyherbal Drug Sukku Kashayam III

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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 kinds of treatment procedure like yoga, varma, massage techniques, etc. According to varmam it contains manipulation, internal and external medicines to treat the different type of disease with a wide range of drugs. Among vatha diseases Azhal keel vayu is most common type of vatha disease. The aim of the study was qualitative analysis of Sukku kashayam - III to treat the Azhal keel vayu. The Biochemical analysis of the trial drug indicates the presence of sulphate, chloride, starch, ferrous iron, phosphate, reducing sugar, amino acid revealed the effectiveness of therapeutic action in vatha disease especially in Azhal keel vayu.

Keywords: Azhal keel vayu, biochemical analysis, siddha medicine, sukku kashayam III.

1. Introduction

Osteoarthritis is a joint degenerative disease particularly in weight bearing joint (Eg. knee). There is a focal loss of chondrocytes and in other place there is a proliferation of chondrocytes leads to narrowing of joint space. It is characterized by joint stiffness, diminished mobility, discomfort and pain. Siddhar Yugimuni have classified vatha diseases into 80 types in the classical text Yugi vaithya chinthamani 800. Osteoarthritis symptoms are comparable to Azhal keel vayu. In varma marunthu seimuraigal text, Sukku kashayam III is indicated for vatha diseases. So Sukku kashayam III is taken into study for the research in Osteoarthritis.

2. Materials and Methods

Table 1
Represent drugs in Sukku kashayam III

S.no	Drugs	Botanical name	Parts used	Quantity
1.	Sukku	Zingiber officinale	Dried rhizome	1 part
2.	Athimathuram	Glycyrrhiza glabra	Dried root	1 part

1) Source of Drug Ingredients

The required raw drugs for preparations of Sukku kashayam III 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.

2) Methods of Purification and Preparations

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.

3) Biochemical analysis

Screening the drug Sukku kashayam III to identify the Biochemical properties present in the ingredient.

4) Chemicals and drugs

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

5) 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 up to 100ml with distilled water. This fluid was taken for analysis.

3. Results and Discussion

The biochemical analysis of the trial drug Sukku kashayam III was tabulated above in table.

The trial drug, Sukku kashayam III contains,

1. Sulphate
2. Chloride
3. Starch
4. Ferrous iron
5. Phosphate
6. Reducing sugar
7. Amino acid

Mode of action of the trial drug Sukku kashayam III which acts as building blocks of cartilage, bone mineralisation. May be due to the presence of sulphate, chloride, reducing sugar, amino acid.

Table 2
Represent Qualitative analysis of Sukku kashayam III

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% Barrium chloride solution.	A white precipitate is formed	Indicates the presence of sulphate
3.	Test for chloride The extract is treated with silver nitrate solution	A white precipitate is formed	Indicates the presence of chloride
4.	Test for carbonate The substance is treated with concentrated Hcl	No brisk effervescence formed	Absence of carbonate
5.	Test for starch The extract is added with weak iodine solution	Blue colour is formed	Indicated the presence of starch
6.	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
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 unsaturated compound
8.	Test for phosphate The extract is treated with ammonium molybdate and concentrated nitric acid	Yellow precipitate is formed	Indicates the presence of phosphate
9.	Test for albumin The extract is treated with Eschach's reagent	No yellow precipitate is formed	Absence of albumin
10.	Test or tannic acid The extract is treated with ferric chloride	No blue black precipitated is formed	Absence of tannic acid
11.	Test for unsaturation Potassium permanganate solution is added to 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	Indicated the presence of reducing sugar
13.	Test for amino acid One or two drops o 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	Indicated 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

4. Conclusion

Sukku kashayam III is a Siddha drug taken from Siddha literature used in the treatment of vatha diseases. The drug is screened for its bio chemical properties. Further, comprehensive pharmacological analysis is needed to evaluate its potency and the drug has its own potency to undergo further research.

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