Biochemical Analysis of Siddha Drug Seerabala Ennai

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Abstract: Siddha system is a complete science and it is a pride of traditional Indian medicine system, which is widely practicing in the southern part of India particularly in Tamilnadu. Lumbar spondylosis is a form of lower backpain and it is an important clinical, social, economic and public health problem affecting the worldwide population. It is a disorder with degenerative changes in disc and lumbar spine. Disc degeneration is age related and starts in the 3rd decade. In Classical Siddha Literature – Kumbamuni Vatha Nidhanam-800 indicates Seerabala Ennai for all Vatha diseases. Aim of the study is to record the biochemical analysis of the trail drug which will be effective in treating Lumbar Spondylosis.

Keywords: vatham, biochemical analysis, lumbar spondylosis, seerabala ennai.

1. Introduction

Lumbar Spondylosis is an age-related degeneration of the vertebrae and discs of the lower back. The common condition is marked by the breakdown of one or more of the discs that separate the bones of the spine which then leads to,

- pain in the lower back region,
- stiffness in the hip region,
- pain radiates to both lower limbs,
- associated with heaviness and numbness.

In Kumbamuni Vadha Nidhanam-800, Seerabala Ennai is indicated for all vatha diseases. So, Seerabala Ennai is taken into study for the research in lumbar spondylosis which is one of the types of vatha disease

1) Source of drug ingredients

The required raw drug for preparations of Seerabala Ennai are purchased from a well reputed country shop. The purchased drug is authenticated by Expert members of 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 and knowledge of guide/faculty members. Then the trail drug is prepared from the ingredient.

1) Biochemical analysis

Screening the drug Seerabala Ennai to identify the Biochemical properties present in the ingredient.

2) Chemicals and drugs

The chemicals used in this study were of analytical grade obtained from Noble Research Solutions, Perambur, Chennai-11.

3. Methodology

All the ingredients are boiled for 3 days and strained after it reaches waxy consistency. The process is repeated for 7 more times in which, each time gingely oil is replaced by the above prepared oil.

4. Results and Discussion

The Bio chemical analysis of the trial drug Seerabala Ennai was tabulated above in table.

The trial drug, Seerabala Ennai contains,
1. Sulphate
2. Carbonates
3. lead

A. Qualitative Analysis

Table 1
Seerabala Ennai

S.No.	Drug Name	Botanical Name	Family	Part Used	Quantity
01	Sitramutti Verthol	*Sida Cordifolia*	Malvaceae	Root	100gm
02	Poondu	*Allium Cepa*	Liliaceae	Bulb	100gm
03	Nal Ennai	*Sesamum Indicum*	Pedaliaceae	Seed Oil	1.2 Litre
04	Aavin Paal				1.2 Litre

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Table 1
Analytical investigation on test for acid radicals

S.No.	Test for Specific Acid Radical	Indication/Observation	Inference	Results
1.	**Test for Carbonates** To 1 ml of the test solution about 1 ml of concentration (conc.) HCL was added.	Formation of brisk effervescence indicates the presence of carbonates	Presence of brisk effervescence	Positive
2.	**Test for chlorides** To 2 ml of test solution, about 1 ml of silver nitrate solution was added.	Appearance of White precipitate indicates the presence of chlorides.	Absence of White precipitate	Negative
3.	**Test for sulfates** To 1 ml of the test sample add diluted H2SO4 till effervescence ceases followed by this about 1 ml of barium chloride solution was added.	Appearance of white precipitate indicates the presence of sulfates.	Presence e of white precipitate	Positive
4.	**Test for sulfides** To 1 ml of the test sample about 2 ml of HCL was added with slight warming the mixture.	Formation of colorless gas with the smell of rotten egg indicates the presence of sulfides.	Absence of rotten egg smell	Negative
5.	**Test for phosphates** To 2 ml of test solution treated with 2 ml of ammonium molybdate solution followed by addition of 2ml of concentrated nitric acid	Formation of yellow precipitate Indicates the presence of phosphates	Absence of yellow precipitate	Negative
6.	**Test for Fluoride and Oxalate** To 2 ml of the test solution about 2 ml of dil acetic acid and 2ml of calcium chloride solution was added	Formation of white precipitate Indicates the presence of Fluoride/Oxalate	Absence of white precipitate	Negative
7.	**Test for Borates** 2ml of the test solution was added with sulphuric acid and 95% alcohol followed by exposure to flame	Appearance of green flame Indicates the presence of Borates	Absence of green flame	Negative
8.	**Test for Nitrates** 0.5 ml of test solution heated with copper turning followed by addition of sulphuric acid	Appearance of reddish-brown gas Indicates the presence of Nitrates	Absence of reddish-brown color	Negative

Table 2
Analytical investigation on test for basic radicals

S.No.	Test for Specific Basic Radical	Indication/Observation	Inference	Results
1.	**Test for Lead** 1 ml of the test solution added with 2 ml of potassium chromate solution.	Formation of yellow precipitate indicates the presence of lead.	Presence of yellow precipitate	Positive
2.	**Test for Arsenic** 1 ml of the test solution added with 2 ml of 10% (2N) sodium hydroxide (NaOH) solution.	Formation of brownish red precipitate indicates the presence of Arsenic	Absence of brownish red precipitate	Negative
3.	**Test for Mercury** 1 ml of the test solution added with 2 ml of 10% (2N) sodium hydroxide (NaOH) solution.	Formation of yellow precipitate indicates the presence of mercury.	Absence of yellow precipitate	Negative
4.	**Test for Copper** 1 ml of the test solution added with 1 ml of Ammonium hydroxide (NH4OH) solution	Formation of blue precipitate indicates the presence of copper.	Absence of blue precipitate	Negative
5.	**Test for Ferric** To 1 ml of test solution, about 2 ml of potassium ferrocyanide was added.	Formation of blue precipitate indicates the presence of ferric.	Absence of blue precipitate	Negative
6.	**Test for Ferrous** To 1 ml of test solution, about 1 ml of potassium ferric cyanide solution was added.	Formation of blue precipitate indicates the presence of ferrous.	Absence of blue precipitate	Negative
7.	**Test for Zinc** 1 ml of the test solution added with 2 ml of sodium hydroxide (NaOH) drop wise until indication appears.	Formation of white precipitate indicates the presence of Zinc.	Absence of white precipitate	Negative
8.	**Test for Silver** 1 ml of the test solution was added with 1 ml of conc. HCL followed by appearance of curdy white precipitate. Boil the precipitate with water. It does not dissolve. Add NH4OH solution in it and add 1 ml dilute HNO3.	Formation of curdy white precipitate indicates the presence of silver.	Absence of curdy white precipitate	Negative
9.	**Test for Magnesium** 1 ml of the test solution added with 2 ml of sodium hydroxide (NaOH) drop wise until indication appears.	Formation of white precipitate indicates the presence of Magnesium.	Absence of white precipitate	Negative

5. Conclusion

Seerabala ennai is a Siddha drug taken from a siddha literature used in the treatment of lumbar spondylosis. The drug is screened for its biochemical properties further comprehensive pharmacological analysis are needed to evaluate its potency and the drug has its own potency to undergo further research.

References

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