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EVALUATION OF INVITRO ANTI INFLAMMATORY ACTIVITY OF SANGAMVER THYLAM - A PORYHERBAL SIDDHA FORMULATION

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ABSTART:

Aim: The present study is conducted to evaluate the In vitro anti-inflammatory activity of Sangamver Thylam (SVT) against protein (albumin) denaturation methods. **Methods:** The test drug SVT at varying concentration ranges from 100-500 µg/ml is incubated and heated with egg albumin in controlled experimental condition. The percentage inhibition of the protein denaturation is calculated. Diclofenac sodium is used as reference standard drug. **Results:** This research study clearly indicates that the test drug SVT has the capacity to inhibit heat induced protein denaturation. A maximum percentage of inhibition of 51.8 ± 2.889/ was observed at 500 µg/ml when compared with the standard. **Conclusion:** From the result of the study it was concluded that the test drug SVT possess convincing anti-inflammatory property in protein denaturation assay.

Keyword: Siddha, Sangamver Thylam, Anti inflammatory activity, In vitro study

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1. INTRODUCTION.

Inflammation is defined as the local response of living tissues to injury from any agent like infections (bacteria, viruses, fungai, parastites), physical agents (cold, heat, radiation, mechanical trauma), Chemical agents (organic and inorganic portions) Immunological agents and other foreign bodies[(1)].

Inflammation is the response of vascularised tissue to infections and tissue damage, that brings cells and molecules of host defense from the circulation to the sites where they are needed in order to eliminate the offending agents [(2)] It is a process which is more complex than what we understood. Now it is recognised as the pathologic process involved in the onset of all pathologic process including acute inflammation and Chronic inflammationen [(3).] The four cardinal signs of inflammation are redness (rubor), swelling (tumor), heat (calor) and pain (dolor). Virchow added loss of function as fifth sign[(1)]

2.MATERIALS AND METHODS

2.1 Selection and Authentication of Drug

I have selected the trial drug Sangamver Thylam for this study from classical literature Athmarachamiratham ennum vaithiya sarasangiram. The raw drugs were procured from the raw drug shop R.N. Rajan and Co, Chennai. The cost of the trial medicines are relatively economical. After proper authentication by the Botanist, National Institute of Siddha, Tambaram Sanatorium Chennai, the preparation was made.

2.2.Ingredients of Sangamver Thylam:

1.Sangam kuppi ver (Azima tetracantha)	- 875 grams (1/4 Thulaam)
2.Milagu (Piper nigrum)	- 35g (1 palam)
3.Karuncheeragam (Nigella sativa)	-35g (1 palam)
4.Maasikkai (Quercus infectoria)	-35g (1 palam)
5.Ealam (Elettaria cardamomum)	-35g (1 palam)
6.Neer (Water)	- 21.5 lit (1 Dhuni)
7.Nallennai (Gingelly oil)	- 1.34 lit (2 Padi)
8.Paal (Milk)	- As per requirement

2.3 Method of Preparation :

Prepared decoction of Sangamver. Grinded other drugs with the use of milk and made it into karkam. Then the karkam is mixed with Sangamver decoction and add oil. Then boiled till it attain the suitable consistency and filter it.

2.4 Albumin Denaturation Assay Procedure

In-vitro anti-inflammatory activity of SVT as studied using albumin denaturation technique. The reaction mixture consisted of bovine serum albumin (5% aqueous solution) and test sample chloroform extract of SVT at varying concentration ranges from 100 to 500 µg/ml along with standard Diclofenac sodium at the concentration of100 µg /ml of final volume. pH was adjusted by using a small amount of 1N Hydrochloric acid. The samples were incubated at 37°C for 20 min and then heated at 57°C for 3 min. After

cooling the sample, 2.5 ml of phosphate buffer solution was added into each test tube. Turbidity developed was measured spectrophotometrically at 660 nm, for control distilled water was used instead of test sample while product control tests lacked bovine serum albumin. The experiment was performed in triplicate.[5]

The Percentage protection from denaturation is calculated by using the formulae

$$\left[\frac{(A)_{\text{control}} - (A)_{\text{sample}}}{(A)_{\text{control}}}\right] \times 100.$$

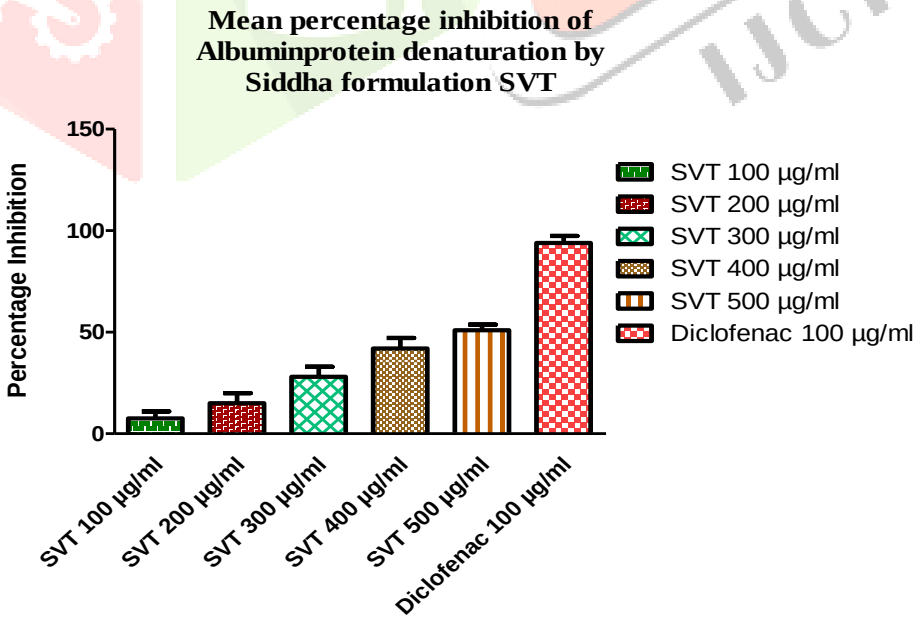
2.5 Statistical analysis

Results are expressed as Mean ± SD. The difference between experimental groups was compared by One-Way Analysis of Variance (ANOVA) followed by Dunnet Multiple comparison test.[6]

Table 1: Each value represents the mean ± SD. N=3

Concentration in µg/ml	Percentage Inhibition of Protein Denaturation
SVT 100	7.522 ± 3.573
SVT 200	15.03 ± 5.266
SVT 300	28.5 ± 5.878
SVT 400	42 ± 5.208
SVT 500	51.8 ± 2.889
Diclofenac sodium (100 µg)	94.94 ± 3.461

Figure 1: Percentage Inhibition of Protein Denaturation by SVT and Standard



RESULT & DISCUSSION:

The results obtained from the present study clearly indicates that the test drug Sangamver Thylam was effective in inhibiting heat induced albumin denaturation. The results for the various concentration of

the test drug Sangamver Thylam is given in Table 1 and the mean percentage inhibition of Albumin protein denaturation by siddha formulation Sangamver Thylam is given figure 1. . Maximum percentage inhibition of about 51.8 ± 2.889% was observed at 500µg/ml when compare to that of the Diclofenac sodium, a standard anti-inflammatory agent with the maximum inhibition 94.94 ± 3.461% at the concentration of 100 µg/ml.

This study is an attempt to establish the ant inflammatory activity of Siddha herbal formulation Sangemver Thylam. Further studies are required to broaden and substantiate the therapeutic use of this medicine.

Conclusion

From the result of the study it was concluded that the test drug SVT possess convincing anti-inflammatory property in protein denaturation assay. Siddha medicines have not been acknowledged and accepted as a evidence based science by modern science for a long time, Now many research papers have been published about Siddha medicines and people are getting awareness about the effectiveness of Siddha medicines. The author hopes that this study result takes siddha medicine one step ahead in it progress in this scientific world.

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