Anthelmintic activity of methanolic extract of roots of *Jussiaea suffruticosa* Linn.

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Objectives

The plant *Jussiaea suffruticosa* possess various medicinal properties such as anthelmintic, antiseptic, purgative, antipyretic and vermifuge. The present investigation was aimed to substantiate the anthelmintic activity of the roots of *Jussiaea suffruticosa* by invitro method.

Materials & Methods

Roots of *Jussiaea suffruticosa* was collected from the local areas of Chennai and authenticated by the Botanist, Presidency College, Chennai. The roots were washed, dried under shade and pulverized to 40# mesh size. It is then exhaustively extracted with methanol in a soxhlet apparatus and concentrated under reduced pressure to a semisolid mass (Yield 3.86%). The worms *Pheritima posthima* and *Ascaris lumbricoides* (earth worms and round worms respectively) were procured from the local aquarium and used for the studies. The extract at different concentrations (1%, 2%, 3%, 4% and 5%) were prepared with distilled water and 0.75% solution of piperazine citrate was used as a standard drug for comparison. Saline 5% solution was used as control. Ten of earthworms and round worms were selected for each concentration of the extract and two groups for control and standard were also chosen. For washing the worms Heden Fleigh solution was used according to Sillaman, 1918 and Grind, 1968. The worms were

placed in all the petri dishes containing either extract or control or standard solution and observed for paralysis and death of the worms. Number of worms died at 30, 60, 90, and 120minutes was observed.

Results and Discussion

The extract at 5% concentration produced significant anthelmintic activity in both types of worms. This concentration produced 100% mortality of the earth worms and 90% mortality with that of round worms whereas the 3% concentration produced less significant activity i.e. 80% mortality with earth worms and 60% mortality with round worms which was compared to the standard drug piperazine citrate(100%). Three replicates were performed in order to observe the reproduceability. From this investigation it can be concluded that the methanolic extract of *Jussiaea suffruticosa* roots possess anthelmintic activity against tested types of worms. This may be further confirmed by carrying out the activity against other types of worms and also the invivo screening on experimental animals.

Conclusion

This study led the further researchers to carry out an elaborate study and to isolate the anthelmintic principle responsible for the identified action.

References

1. Chopra R.N., S.L.Nayar, I.C.Chopra, 1966, Glossary of Indian Medicinal Plants, C.S.I.R., New Delhi, pg. 436.
2. Sillaman, 1918, Chapter 4, Brunner and Suddharth's, Medical Surgical Textbook, Eigth edition, pg. 1314.