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Enxiolytic Activity of Ethanolic Leaf Extract of Cycas Revoluta

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ABSTRACT

Aim; Enxiolytic activity of ethanolic leaf extract of Cycas revoluta.

Methods; The ethanolic leaf extract of the plant Cycas revoluta was used in this study. Enxiolytic activity was evaluated by using elevated plus maze methods.

Result; The result showed that ethanolic extract of Cycas revoluta possessed significant Enxiolytic activity, due to the presence of Alkaloids in the extracts.

Conclusion; The study provides evidences Cycas revoluta gives Enxiolytic activity. This might contribute in Part to its usage in ethnomedicine.

Keywords Cycas revoluta, Cycas revoluta, King sago, Leaf extract, Elevated plus maze methods.

INTRODUCTION

Cycas revoluta have a long therapeutic history over thousands of years and are still considered to be a potential source of medicine in the traditional health care system. Cycas revoluta occurs in Division, Cycadophyta; Class, Cycadopsida; Family, Cycadaceae; Genus, Cycas. Some species of this family have been studied in Australia, China, Japan, New Zealand. It is mainly valued for its starch contains and it is also used as fiber to construct cloth and ropes. It countains number of phytochemical constituents alkaloids, flavonoids, lipids, glycosides, amino acid, and essential oil. It has several medicinal properties. So, it's different parts are used for treatment of various disease. The Aim of this study is the evaluation of Enxiolytic activity of leaf extract of Cycas revoluta.

MATERIALS AND METHODS

Collection of plant material

Leaves of Cycas revoluta were collected in the month of July, 2022 from Department of plant science M.J.P. Rohilkhand University, Bareilly.

Identification and authentication

The identification and authentication of the plant done by Dr. Alok Srivastava, Professor, Department of Plant Science, M.J.P. Rohilkhand University, Bareilly.

Preparation of extracts

Extract was prepared by maceration methods. Firstly clean leaves of Cycas revoluta with distilled water for removal of dust and ether material present in leaves. After that leaves are dry under shade for 30-45 days. Next step leaves crusted and converted into powder. Take 250g of powder and macerated in ethanol and filtered. After filtration solution obtained was permit to dry in dark at room temperature.

Animal

Albino wistra rats of either sex weighting 150-200g will be used for this study. All the animal experiment protocol will be approved by the Institutional Animal Ethics Committee and the experiment on the animal will be done in accordance with the committee for the purpose of Control and Supervision of experiment on animal (CPCSEA) approval no 1884/GO/Re/S/16/CPCSE guidelines. Experiment will we performed on albino wistra rat procured from the central animal facility of the University. Handling of the animals was carried out as par international guidelines for handling and care of experimental animals.

Study of Enxiolytic activity

Elevated plus maze Method, are used Anxiolytic Activity. The mice were divided randomly to four groups (n=6). Normal saline was administered to 1st group (10 ml/kg). Group 2 was administered Diazepam (1 mg/kg). The test groups (3rd and 4th) at dose of 100 and 200 mg/kg, p.o., respectively. The time spends in open arm and number of entry in open arm by the animal in apparatus is notes down. On the basis of following data graph is plotted.

Statistical analysis

The data is expressed as mean ± Standard Deviation. Results were analyzed using one-way ANOVA followed by Dunnet's test. Differences were considered as statistically significant at $P < 0.05$, when compared with control.

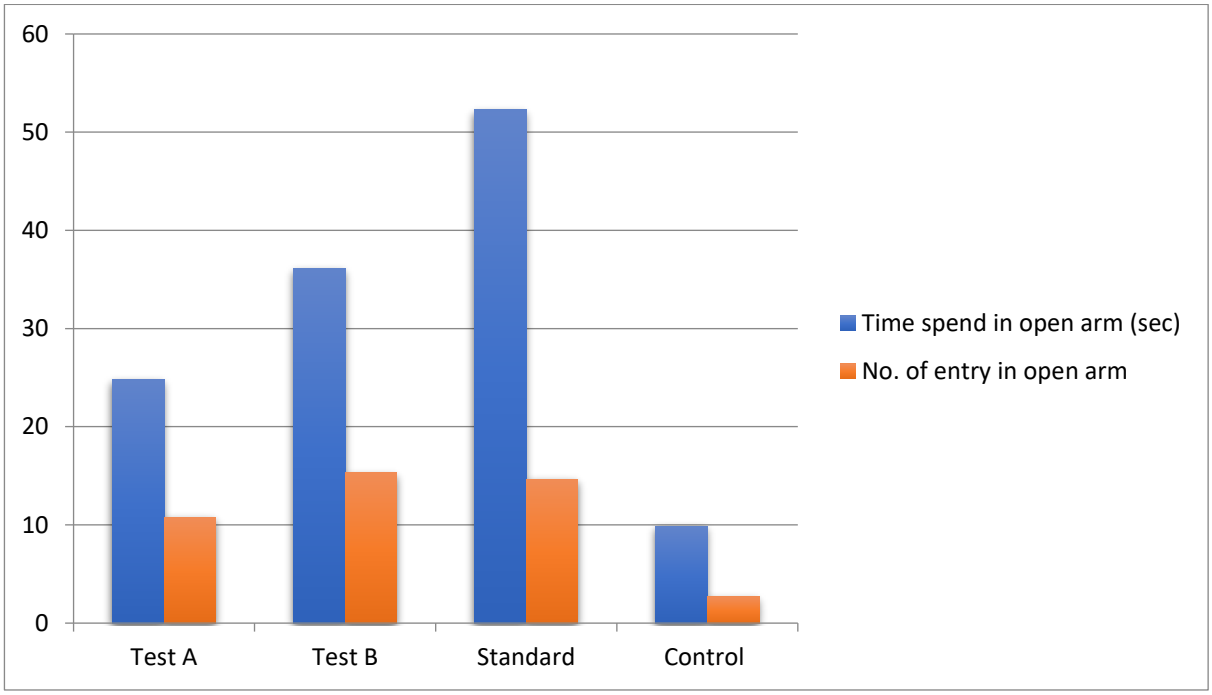
RESULTS

Table-1; Enxiolytic effects of Cycas revoluta leaves extract.

S.N	Treatment	Time spend in open arm (sec)	No of entry in open arm
1	**Test 1**	24.76±4.35	10.77±0.33
2	**Test 2**	36.12±3.46	15.33±0.23
3	**Std.**	52.27±3.12	14.67±0.61
4	**Control**	9.86±2.16	2.67±0.52

Mean±S.E.M. (n=6); statistically significant p<0.05;

compared to control and standard groups



Fig; Elevated plus maze apparatus

DISCUSSION & CONCLUSION

This study shows that Cycas revoluta has phytoconstituents that gives Enxiolytic activity. which is comparable to diazepam, a standard drug. The Enxiolytics activity observed due to the presence of Alkaloids. It is therefore recommended that active constituents isolated for further study.

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