ABSTRACT

Worldwide, depression is a very common illness, it was estimated that 350 million people are affected from this illness. Depression is one of the serious health conditions. Suicides can be result of the depression. It has been estimated that every year, approximately 1 million deaths occurs due to depression. Depression is commonly treated with antidepressant medications. The main side effects of antidepressants found with SSRIs and SNRIs are, Agitation, Nausea, Headache, Sleeplessness or drowsiness, reduced sex drive, problems having and enjoying sex that can be persist men and women, both. Side effects like Blurred vision, Bladder problem, Constipation, Drowsiness, Dry mouth, Sexual problems are associated with tricyclic antidepressants.

From centuries, the herb St. John (an herbal product) was used as folk and herbal remedies. It is being effected for the treatment of depression. In traditionally green tea used to improving mental processes and health. Dating back more than 4,000 years, as per Chinese tradition, Chinese green tea can cure anything from depression, body aches, headaches, pains to constipation.

In the present study, plant parts of Camellia Sinensis (Tea, Chia) have been be evaluated for antidepressant activity. As literature shows that traditionally this plant is being use in the treatment of depression.

The plants materials C. Sinensis used for the present studies were commercially procured from local market of Indore, India. The leaves, fruits, marketed tea, flowers and roots were dried, reduced to coarse powder and extracted successively with petroleum ether, chloroform, and ethanol using soxhlet apparatus. The dried mark of these three parts were macerated with warm distilled water and filtered. The extractives were evaporated under reduced pressure. Water extractives were obtained by evaporation of water extractives on hot plate in china dish.

Different extractives of leaves, fruits, marketed tea, flowers and roots were subjected to physical evaluation to detect their colours, chemical constituents and antidepressant activity.
Albino mice were used for the antidepressant activity. The animals were selected at random (male and female). The Pet. ether, CH₃Cl, C₂H₅OH & H₂O extractives are subjected to antidepressant studies obtained from leaves, fruits, marketed tea, flower and roots of C. sinensis. Dried extractives were suspended Tween 80 (2-5%) and then were suspended in distilled water. The Imipramine was taken as the standard drug.

The Porsolt swim test (PST) or forces swim T (FST) and T. Susp.T. were utilized for testing of antidepressant drugs. The reference drug, imipramine (10 m.g./kg, orally) and various extractives in the values of 100, 200, 300 & 400 mg./kg were administrated 30 minute prior to the experiment.

The experiments consisted of a group of minimum six animals. The data is expressed as average immobility time ± Standard Error of Average. All the extractives were compared with control and imipramine (standard) separately using ANOVA followed by Dunnet's Method. Results at PR<0.001 were FOUND statistically very Important.

Ethanol extractives of leaves, fruits and marketed tea have shown significant reduction in total motionless T (Second) in mice in both the animal models at the values of 100, 200, 300 and 400 mg./kg. However, antidepressant activity was as follows, in leaves extractives > marketed tea extractives > fruits extract. Ethanolic extractives of leaves shown antidepressant effectiveness was nearly equal to standard drug i.e. Imipiramine (10 mg./kg).

As reported earlier, tea plant contains more than 4000 bioactive compounds. The major parts of these compounds are flavonoids, polyphenols and catechins. All these are the biologically active compounds. Other compounds are amino acids, carbohydrates, chlorophyll, alkaloidal drugs (cafeine, theophyline and theobromine), fluoride, polypeptides, volatile organic chemicals, aluminum, other metallic mixtures and trace elements. Polyphenolic cohemicals present in leaves of tea are mostly flavonoids. The polyphenols, group contains catechins. The health benefits of the tea may be due to presence of flavonoids and catechins.

Major catechins are epigallocatechin gallate, epicatechin, epicatechin gallate and epigallocatechin. Green tea contains most abundant and active catechin as
epigallocatechin – 3 – gallate. Green tea contains relatively higher contents of these cateichins as compare to black tea.

The antidepressant activity of the deferent extractives may be due to polyphenols (flavonoids and cateichin) compounds.