A Study of High Density Lipids in Albino Rat; Effect of Gymnema silvestris Extract and its Chemical Products, in Comparison to routine Allopathic Drugs.

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Present study is carried to observe the effect of Gymnema silvestris extract on the serum cholesterol in albino mice. Gymnemic acid content is separated from the leaves by using ethyl and methyl alcohol. The standard methods are applied to prepare the analogues. Mice are treated by applying intravenous injections of certain concentrations of the prepared products and observed the results on treatment of 2, 4, 6, 8 and 10 weeks. The various observations indicated that the level of cholesterol depletes on treatment of the extract.

Introduction

The Indian materica medica contains a number of drugs originated from the terrestrial flora. Such plants were mostly cultivated and grown in the country. The medicinal use of plants is well known since the time of Rigveda. However, our knowledge of plants has been traditionally inherited from the ancestors. Now a day's the traditional Vaidu's are not aware of technical identification and chemical constituents of the plants, but they only knew the use of plants for curing certain diseases. It is most essential that the knowledge of such medicinal plants to be documented in the sense of pharmacology, organic analysis of these plants must be carried out.
These green natural resources forms a new platform for the researchers since last decades, however, millions of analogues are prepared and tried to improve these resources.

In recent year, the research on chemical and biochemical sciences has undergone revolutionary changes. The advances in all science streams have resulted in a much better understanding of physiology, biochemistry and cytology on molecular level. So it resulted in to ease of further line of studies in drug designing.

Abnormal deposition of cholesterol in the body tissues mainly originate the obesity, vessel blockage, diabetes and associated diseases in the human beings. On the other hand it proves the cause for many fatal disorders.

The ancient practitioners knew much more medicinal values of maximum plants and most of concerning knowledge is destroyed with the flow of time. Only the tribal peoples had transfer the knowledge of herbal medicine from generation to generation. The fact is that the gradual extinction of medicinal plants and their knowledge impacts the Ayurvedic medicine system. However, with changing environmental conditions on earth and deflection in immune systems of man, it is necessary to prepare certain analogue from the extracts of medicinal plants, so that to try for the betterment of organisms on earth.

Materials and Methods

The extract of Gymnecia silvestra plant prepared by using the ethyl and methyl alcohol to separate the gymnemic acid. Standard methods are used to prepare the esterified, acetylated and benzoylated gymnemic acid. The standard doses are inserted intravenously in the body of albino mice. The lipid profiles are studied in experimental and control specimens. Estimation of serum triglycerides and cholesterols are performed. The results are compared with the values obtained from streptozotocin treated and gymnemic acid treated mice.

Result and Discussion

The survey; of literature showed the many side effects due to extensive applications of synthetic allopathic preparations. Herbal medicines are the by-products synthesized by certain cell types in the plant body. In present investigation, the use of allopathic preparation streptozotocin is compared with the use of herbal preparation, Gymnemic acid and its derivatives.

The result of present study reveals that, six, eight and ten weeks Gymnemic acid treated mice showed the reduction in their serum HDL than normal specimens. However the ten weeks esterified derivative treated animals showed the slight decrease of serum HDL. The reduction of blood serum sugar indicates the high rate of oxidation of sugars in body tissues, which intern affect the lipid synthesis process in the body of mice. Antidiabetic action