SUMMARY AND CONCLUSION

The present study started with a broad survey of literature pertaining to the adverse effects of insecticide on human health. It is by now the proven fact that the excessive use of insecticides for the intended constructive progress has boomeranged in a violent manner. The ill effects produced by the use of insecticides are very much evident from widespread epidemics and diseases have caused the constant deterioration of human health.

Looking back to the history of human civilization it is very much distinctively noticed that the human being since his very existence has been constantly struggling to find out the effective mechanisms to curb the menace of various disease. In this quest he has tried to exploit the naturally existing resources and consequently discovered several drugs, that were derived from the vegetables, plants and minerals. In the later stage of scientific developments the man has synthesised several compounds that could be used as the chemotherapeutic agents to combat diseases. These agents though as expected produced the curative effects, were also found to have their toxic side effects on the human health. The liver is the most vital part of the animal body that regularises the functioning of various metabolisms but at the same time it is also highly susceptible to the insecticide. In the present context, the use of insecticide has pervaded innumerable areas of human concern, such as agriculture, industry, household and defence. As such the possibility of liver getting affected has become alarmingly high. The liver on getting affected gets fatty and results in the malfunctioning of its bioconstituents. The paucity of data available on the ill effects of the insecticides and on the required curative measures, prompted us to undertake the present study. The cythion is one among most widely used organophosphorus insecticides into the every field of live. Its ill effects and curative measures to combat them has been thought to be the subject of immediate concern and therefore the study has been carried out by monitoring its effects on these species (Albino rats and mice) that have striking resemblance to the human physiology. The
choice of these species for the study stands justified by the very ease of their housing, maintenance, fecundity and handling. The reference from Ayurveda reveal that the Kutki and Shilajit are among the most effective curative medicines concerning the liver damages. Therefore they have been tried out in curing the imbalances produced by cythion on the test animals.

The material and methods employed in the present study comprises following categories.

i) Selection of animals, maintenance and their grouping.

ii) Administration of insecticide (cythion) for inducing changes.

iii) Administration of drugs (Kutki and Shilajit) for curative measures.

iv) Estimations of liver bio-constituents

v) Estimations of serum components.

vi) Estimations of fecal components.

In order to frame the various schemes of taking observations and results, the specimen animals were divided into four groups viz.

i) Control.

ii) Cythion treated.

iii) Cythion in conjugation with Kutki treated and

iv) Cythion in conjugation with Shilajit treated.

The animals of each group were sacrificed after 2, 4, 6, 8 and 10 weeks of exposure to cythion, Kutki and Shilajit to study the liver to body weight ratio and to observe the induced and curative changes caused by cythion and exogenous Ayurvedic pharmacological drugs. Simultaneously fecal estimations have also been carried out.

The liver lipid estimations were carried out to see the induced and curative effects in total lipids, phospholipids, total cholesterol, free cholesterol and free fatty acids. The increase in normal values of these constituents was observed as the result of cythion administration. At the same time curative effects leading towards normalcy were observed in Kutki and Shilajit treated animals.

The results of serum estimations in VLDL, LDL and HDL containing total lipids, proteins and lipoproteins reveal that there is a declining trend in the values of these constituents in cythion treated albino rats and mice. The administration of Kutki and Shilajit was found to result in restoring

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the balance towards normalcy.

The serum lipid components viz. triglycerides, phospholipids, cholesterol ester and free cholesterol have been found to be decreased in cythion treated animals. The curative effects of Ayurvedic drugs Kutki and Shilajit were quiet inspiring.

The values of serum enzymes such as SGOT, SGPT, Acpase and Alkpase have been to show ascending trend in cythion treated animals. The curative effects of present Ayurvedic drugs were convincingly pronounced.

The estimations of serum inorganic ions such as sodium, potassium, calcium, magnesium and phospholipids showed increase in their values and at the same time curative effect of the present drugs was remarkably noteworthy.

The faecal estimations suggested that the total cholesterol, cholic acid and deoxycholic acid have their values decreased in cythion administered animals. However, the Kutki and Shilajit were found to produced significant curative effects.

The humble endavour of the author seems to have yielded the fruitful results in investigating the possible hazardous effects of cythion on any mammal in general and human being in particular and at the same time in findings out the effective curative measures to curb them. The Ayurvedic drugs, even today, have been found to established their superiority in the curative process of the most sensitive organ like liver. Among the two Ayurvedic drugs employed in the present study, Kutki has been predominantly more effective than the other one (Shilajit) in producing hearting efficacy.

With all humility, the author would like to state that her efforts might not have been the total success in gaining the full insight into the subject but shall definitely count as the noteworthy, though small contribution to existing reservoir of literature devoted to reporting of the knowledge of human concern. Further elaborative study may helps to understand fully the curative effects of Ayurvedic pharmacological drugs.

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