GENERAI SUMMARY AND CONCLUSION

The spread use of pesticides is usually connected witlh serious problems of pollution and health hazards. As the many potential hazardous effects ot such chemicals, disfunction of liver, kidney, brain, pancreas, spleen and thymus gland. Male reproductive toxicity; feototoxicity and teratogenicity are of the special concern. Owing pesticides method of application as sprays, accidental and/or prolonged exposure to these agrochemicals cause great public health concern and economic losses. Unfortunately, very little is known about the possible adverse long term eftects of chronic exposure to these chemicals on male and female fertility and teratogenicity in animals and human.

The present study aimed to clarify some toxicological effects of the imidacloprid, lead and their mixture in male albino rats. Chemicals was used at 100 ppm in drinking water. Animals were weighed every 7 days and The blood samples were collected through heart punction under narcose until the death of the animal in EDTA (Ethylendiamine tetracetic acid) as anticoagulant for hemogram on day 30, 90, and 180 days after administration and 10, 30 and 60 days after chemicals withdrawn in recovery period.

Also, plasma were obtained by centrifugation of heparinized blood after decapitation of the tested animals. In addition, some interval organs were taken and weights recorded. Chemicals was used at 100 ppm within 30, 90 and 180 days. samples of blood were taken in EDTA for hemogram on days 30, 90, and 180 days from exposure. Also

heparinized plasma was obtained as previously desciibed and stored at (-80°C) till biochemical analysis for transaminases (ALT and AST), alkaline phosphatase, In addition, total protein status, albumin, lipid profile, cholesterol concentration, and glucose level were determined.

The obtained results could be summarized in the followings:

1. Effect on body and internal organs weights of experimental animals:

Data indicate that imidacloprid did not cause any significant change in body weight gain of treated rats after 30, 90 and 180 days from administration. But Lead induce significant decrease in liver, kidney and brain weight at 100 ppm on the 180 th day. Recovery occurred after withdrawal the tested compound within the recovery period, the withdrawal the tested compounds resulted in recovery to the normal levels.

2. Effect on water consumption of experimental animals:

Data indicate that imidacloprid induce significant increase in water consumption of treated rats after 30, 90 and 180 days from administration. Morever, lead caused significant decrease in water consumption. The same ocurred with their mixture in treated animals at 100 ppm on the 180 th day. After withdrawn the tested compound, the values resumed to the normal levels.

3.

4. Effect of imidacloprid, lead and their mixture as stressor agents:

The plasma total protein concentration were markedly decreased on the 90 and 180 days of treatment at 100 ppm of imidacloprid, lead

and their mixture.The same data was observed with liver, brain, spleen and thymus gland total protein, where the highest concentration (100 ppm) caused a significant decrease after 180 days of treatment with the imidacloprid, lead and their mixture. the withdrawal the tested compounds resulted in recovery to the normal levels. The same occurred with their plasma albumin in treated animals at 100 ppm on the 90 and 180 th day. Whereas, imidacloprid, lead and their mixture induce significant increase in kidney, pancreas total protein at dose 100 ppm on the 90 and 180 th day. After withdrawn the tested compound, the values resumed to the normal levels.

Data indicate that imidacloprid, lead and their mixture induce significant increase in plasma total lipids of treated rats after 30, 90, 180 days from administration. the withdrawal the tested compounds resulted in recovery to the normal levels. The same occurred with liver, brain and spleen total lipids.The contrary was observed with pancreas total lipids, data indicate that total lipids did not induce significant chang throughout the experiment, thymus gland total lipids were significantly increase at 100 ppm after 180 days with tested chemicals, but the effect onkidney total lipids, the imidacloprid lead to significant increase in total lipids, but lead caused significant decrease, and their mixture did not cause any significant change.

The total serum cholesterol concentration were markedly decrease on the 90 and 180 days of treatment at 100 ppm of imidacloprid, lead and their mixture.

Also, plasma glucose concentration was significantly decreased at different period throughout the experiment. After withdrawn the

tested compound, the values resumed to the normal levelsof untreated animals.

Data indicat imidacloprid, lead and their mixture induce significant decrease in activities of ALP at concentration 100 ppm of 30, 90 and 180 days of treatment, while the activity of GOT and GPT was significant reduced by the termination of experimental period 90 and 180 days. By the withdrawn the tested compound, the values of these biochemical aspect returned to the normal levels.

Concerning the lead content in different organs in treated rats with lead treatment, data indicated that lead content was significant increase in liver, kidney, brain and spleen of treated rats after 30, 90 and 180 days with 100 ppm from administration. The same occurred with imidacloprid content in the same organs with rats treated with imidacloprid.