SUMMARY

Special studies were done by ciprofloxacin drug on living (poultry) chicken weight one kg and apparently healthy and the studies were designed on to two parts:

Part I: - The effect of doses used in farms on chickens (blood chemistry, hematological and immunological studies).

The drug (ciprofloxacin) residues in serum was studied in different organs (Chest, muscles, thigh muscle, liver, kidney, heart and gizzard).

In liver function the enzyme activity (ALT, AST) concentration were the same in both treated and non treated group. The mean values of Alkaline phosphatase of treated group was relatively higher than the control one while, albumin decreased due to the reduced concentration of serum total protein. The marked increase in the concentration of serum total lipids may be attributed mainly to increased phospholipids synthesis. As regards serum cholesterol concentration significant elevation was observed in its some mean values. This elevation in serum cholesterol concentration seems mainly consequent to enhanced biosynthesis rate in liver cells and other tissues. The hypercholesterol erolemic effect of ciprofloxacin could be attributed to the destruction of cell membrane and enhanced release of cholesterol into the serum. Moreover, the disturbance in low density lipoprotein (LDL) receptors might impair cholesterol uptake by the target tissues resulting in its accumulation in the serum.

It was reported that the mean values of Uric acid level were not affected while, noticeable decrease in both Urea and Creatinine was observed.

The electrolytes (Na^+ and K^+) in the two groups were nearly similar.

It was noticed that treatment with ciprofloxacin elevated Calcium and Phosphorous of chicken.

There were a significant difference between the test and control samples in case of IgG as well as IgM ($P<0.05$) and there was no significant difference between the test and control samples in both phagocytic index and phagocytic percent.

The results of hematological parameters revealed highly significant decrement in the red blood cell (RBCs) count and hemoglobin (Hb). There were highly significant increments in the mean corpuscular volume (MCV) and the mean corpuscular hemoglobin (MCH), while there was highly significant decrement in the mean corpuscular hemoglobin concentration (MCHC).

Anemia may occur by suppression of bone marrow production or by peripheral disturbance (hemolysis). Hemolytic anemia is probably associated with many antibiotics.

Part II: - Study the effect of temperature on the chicken tissues and organs after storage under -18^{o}C for six month and the effect of boiling, roasting and frying on chicken tissues.

The ciprofloxacin residues in chest and thigh muscle decreased gradually until (0) in the 6th month.

The high concentration level of ciprofloxacin in liver decreased until the 5th month of storage but there was no reduction of residue limit in the 6th month.

The kidney and heart ciprofloxacin residue was reduced until the 3rd month and at the 4th month the drug residue was not detected (0 value).

The residue in gizzard reduced from the 2nd month till the 5th month while, there was no reduction at the 6th month.

Also the boiling, roasting and frying significantly affected the residues of ciprofloxacin.

So, it was recommended that the use of antibiotic must be restricted and the importance of the knowledge about the withdrawal time for each antibiotic or drug.

Some antibiotics are polymerized at higher temperature and produce toxic products.