

administration of vit.E and/or methionine as shown in the other groups (Table 3).

Table 2. Lead-Induced Change on WBC, Lymphocyte, neutrophil, and Platelets and control group

Groups	WBC ($\times 10^3/\mu\text{l}$)	Lymphocyte ($\times 10^3/\mu\text{l}$)	Neutrophil ($\times 10^3/\mu\text{l}$)	Platelets ($\times 10^3/\mu\text{l}$)
G1	6.550 \pm 0.161 ^a	3.500 \pm 0.141 ^a	1.833 \pm 0.276 ^a	188.667 \pm 1.745 ^b
G2	6.083 \pm 0.156 ^a	2.417 \pm 0.098 ^b	1.867 \pm 0.161 ^a	225.333 \pm 12.478 ^a
G3	6.467 \pm 0.338 ^a	3.833 \pm 0.343 ^a	1.367 \pm 0.042 ^{ab}	190.833 \pm 4.045 ^b
G4	6.383 \pm 0.421 ^a	4.100 \pm 0.545 ^a	1.117 \pm 0.172 ^b	202.000 \pm 10.132 ^b
G5	6.367 \pm 0.288 ^a	3.800 \pm 0.363 ^a	1.133 \pm 0.126 ^b	181.833 \pm 5.558 ^b

Different small letters horizontally denotes significant Differences between groups at P < 0.05

Table 3. Lead Induced Changes on Iron and Ferritin and in the control group

Groups	Iron ($\mu\text{g}/\text{dl}$)	Ferritin ($\mu\text{g}/\text{dl}$)
G1	193.250 \pm 6.564 ^b	2.200 \pm 0.157 ^a
G2	299.450 \pm 15.178 ^a	0.150 \pm 0.034 ^c
G3	211.050 \pm 7.362 ^{ab}	1.367 \pm 0.076 ^b
G4	226.900 \pm 10.662 ^{ab}	1.567 \pm 0.143 ^b
G5	270.333 \pm 8.693 ^a	1.667 \pm 0.115 ^b

Different small letters horizontally denotes significant Differences between groups at P < 0.05

Histopathological changes:

Examination of liver histopathological sections from rabbits received lead revealed a heavy deposition of iron blue-stained hemosidrine in periportal hepatocellular kupffer cells and portal tracts macrophages; while iron deposition was clear in the middle and periportal zone (Figure 1), when compare this picture with liver section of control rabbits (Figure 2).

This heavy deposition of iron was reduced into mild one in pan lobular hepatocyte, kupffer cells and portal tract macrophages in rabbits administering vit.E and/or methionine along with lead after 90 days of the experiment (Figures 3, 4 and 5).

Discussion

In the present study, the role of vitamin E and/or methionine on hematological changes in lead-administered male rabbits for 90 days was investigated. The dose and the sub-chronic exposure of adult male rabbits to lead acetate were designed to produce cumulative effects on hematological system. The main findings of the present study regarding the changes in RBCs

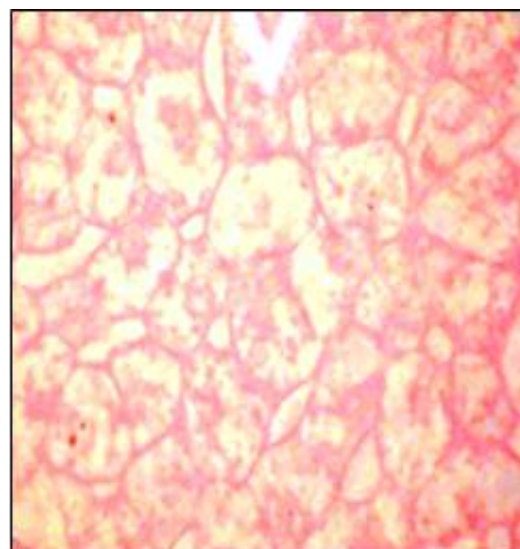


Fig. 1. Liver section from control rabbits, stained with Prussian blue showing no iron deposition (400 \times).

count, Hb concentration and Erythrocytes indices are showed in table 1.

The results referred to the type of anemia induced by lead, the most common form was microcytic-hypochromic. The significant reduction of MCH and MCHC caused by lead for