EFFECT OF INGESTING AFLATOXINS CONTAMINATED DIETS ON REPRODUCTIVE ASPECTS OF SOME FARM ANIMAL MALES

By

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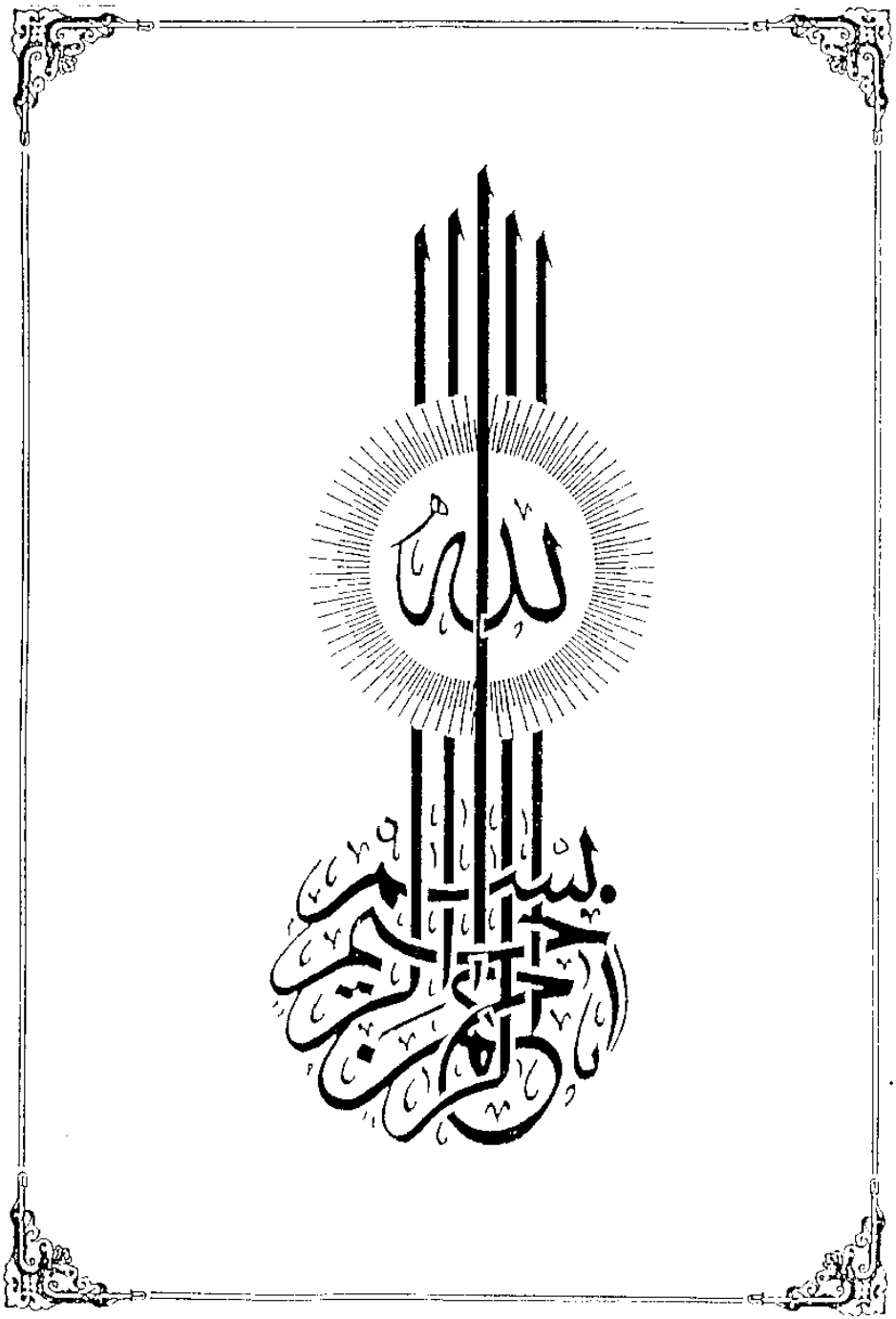

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ABSTRACT

This study was conducted to investigate the effects of orall administration of aflatoxins to rabbits on changes in body weight, some biochemical and seminal parameters, as well as some pathological changes.

Thirty one adult male New Zealand White rabbit bucks averaged 3.35 Kg body weight were used in this study. Three animals were slaughtered at the beginning of experiment. The rest of animals were divided randomly into four groups according to aflatoxins mixture dose.

I) Low Dose (5µg daily) for 30 days

II) High Dose (50 µg/kgBody weight daily) for 10 days

III) High Dose (50 µg/kgBody weight daily)for 17 days,

IV) The fourth group was kept as untreated control.

Biochemical parameters included total protein, total bilirubin, urea, alkaline phosphatase and tansaminase enzymes (GPT and GOT) were studied

Seminal parameters included ejaculate volume, semen colour, semen density, pH, mass and progressive motility, sperm cell concentration and concentration of seminal fructose. Also pathological changes were determined.

The treatment had a highly significant effect ($P<0.01$) on plasma levels of total protein, total Bilirubin, urea and enzymes of liver Function (ALP, GPT, GOT). Also the treatment had a highly significant effect ($P<0.01$) on ejaculate volume, semen density, sperm cell concentration, mass and advanced motility, while both pH and seminal Fructose concentration were not affected significantly by the aflatoxins treatment.

The histopathological study revealed that liver tissue showed vaculations, focal necrosis, haemorrhagic areas and multinucleated giant cells of hepatocytes. Also, Proliferation of bile ducts, periportal fibrosis were also seen. In addition testicular atrophy of the seminiferous tubules were observed. The amount of connective tissue in the interstitium increased,beside other pathological changes were recorded. Some of the histopathological signs were recovered within 94-114 days post treatment.The aflatoxins effects were related with dose and duration of expusure.

The aflatoxins administration induced mortalities in the two high dose groups at both pre-treatment period and the beginning of post-treatment period. Thenafter, the mortalities were stoped after with drawal of aflatoxins. during the treatment period and at the beginning of post-treatment period .

Key Words : Aflatoxins rabbit bucks, Heamatology, Semen, Total Protein, Total Bilirubin, Urea, GPT, GOT, Alkaline Phosphatase, Sperm Motility, Histopathology, Liver, testis, fibrosis, hepatocytes, hypertrophy, Infiltration, Proliferation.

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LD_{50}	The median lethal dose
LDH	Lactic dehydrogenase
min	Minutes
mg	Milligram
ml	Milliliter
nm	Nano meter
NZW	New Zealand White
OM	Organic Matter
PDA	Potato Dextrose Agar
pH	Hydrogen ion concentration
ppb	part per billion
ppm	part per million
Sci	Science
SE	Standard Error
SR	Sedimentation rate
TB	Total Bilirubin
TP	Total Protein
TLC	Thin Layer Chromatography
µl	Microliter
µg	Microgram
Univ.	University
UV	Ultraviolet
Wk(s)	Week (s)
Wt	Weight

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