SUMMERY
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In the present study, the mechanism underlying hepatotoxicity of aflatoxin is thoroughly reviewed. Methanolic extract of the roots of Achyranthes aspera was tested against aflatoxicosis. The root extract of A. aspera administered to rats tested to aflatoxicity revealed its efficacy in managing aflatoxicosis. In the present study aflatoxin (AF-B1, B2, and G1 and G2) was produced artificially by using rice kernel. Based on chromatographic evaluation, the presence of all the sub species of aflatoxin in the sample was confirmed. Supplementing food with aflatoxin and A. aspera to the rats indicated the hepatoprotective activity of A. aspera L. beyond doubt.

Hepatic enzymatic functioning and histological studies made on control, aflatoxin treated and aflatoxin with A. aspera treated exposed the potentiality of regaining the enzymatic function which was damaged by aflatoxicity. Histopathological changes in the liver and kidney of rats suffered with aflatoxicity improved after A. aspera treatment. The effectiveness of A. aspera was compared with a standard hepatoprotective drug silymarin. The comparative analysis revealed significant influence of A. aspera to protect the liver functioning like silymarin.

To analyse the role of A. aspera to setright hepatic enzymatic functions, like serum glutamate pyruvic transferase (SGPT), serum glutamate oxalo acetate transferase (SGOT), alkaline phosphatase (ALKP), lactate dehydrogenase (LDH), aspartate amino transferase (AST), alanine amino transferase (ALT), Lipid peroxidase (LPO), catalase (CAT), super oxide dismutase (SOD), glutathione peroxidase (GPx), glutathione reductase (GR), glucose 6 phosphate (G6PD), glutathione S transferase (GST), glutathione (GSH) and non enzymatic aniti oxidants Vitamin C (Vit-C), Vitamin E (Vit-E) and total bilirubin (T.Bil), experiments were conducted. Total
protein, albumin, inorganic phosphorous, calcium, uric acid, total cholesterol and glucose, RBC, haematocrit, MCV, Hb, MCH, MCHC, Thromocyte, WBC, Heterophil, Lymphocyte, monocyte, basophil and eosinophil were studied in control, aflatoxin treated, *A. aspera* extracts and silymarin given rats.

SGPT, SGOT, ALKP, T.Bil. Levels increased in aflatoxin treated groups. Administration of *Achyranthes aspera* L. root extract and silymarin significantly decreased the elevated enzyme levels. 100mg Kg$^{-1}$ is found to be a minimal effective dose against hepatotoxicity. Histology of liver and kidneys of these animals clearly showed the hepatic, glomerular damage and their repairment with root extract.

Levels of serum and liver LDH, AST, ALKP and ALT were investigated in AFB$_1$ intoxicated animals. Serum parameters (LDH, AST, ALKP and ALT) were raised and liver parameters (LDH, AST, ALKP and ALT) were decreased than the normal level. Lipid peroxidase level was extremely increased and other antioxidant enzyme levels and non-enzymatic anti oxidants fell down than the normal level. Oral administration of methanol extract of *Achyranthes aspera* L (100mg) caused a decrease in the activity of marker enzymes in serum, which may be a consequence of the stabilization of plasma membrane as well as repair of hepatic tissue damage caused by aflatoxin.

The enzymes of drug metabolism (GR, GP$_x$, GST, SOD and CAT) decreased significantly in aflatoxin treated rats. Similarly slight variations were seen in haematological parameters (RBC, Haematocrit, MCV, Hb, MCH, and MCHC). RBC, Haematocrit and Hb content were raised in plant root extract treated rats.
From this investigation, it is inferred that methanolic root extract of *Achyranthes aspera* L. excerts antihepatotoxic activity. The results of the present study expose the application of the bioactive molecules of *Achyranthes aspera* to manage aflatoxicosis in poultry, piggery, fishery etc. The study on the extracts of *A.aspera* further exposes its anti oxidant potential, a thrust area in the modern search for anti oxidant plant drugs. It opens a good avenue for the development of plant drugs.