

The present study was designed to investigate the protective effect of *Withania somnifera* and *Aloe barbadensis* in pesticide induced toxicity. Since toxicity of pesticide is thought to be due to reactive oxidant species so plants with antioxidant activities may afford to the protective action from pesticide toxicity. Quinalphos (QP), which is an organophosphorus pesticide with tremendous utility in mixed pest control due to its insecticidal and acaricidal properties, was used in this study. Both acute and chronic studies were done. QP dose was 40-mg/kg body weights for acute studies and it was 14-mg/kg body weights for 15 days for chronic studies. QP produced the reversible type of liver and kidney necrosis, which was evident from the elevated levels of various biochemical enzymes and altered histological observations. Following treatment with *W. somnifera* and *A. barbadensis* extracts (200 mg/kg body weight and 500 mg/kg body weight respectively) for 15 days, a significant protective effect was observed in QP intoxicated hepatic and renal damage as evident from the decreased levels of serum enzymes, total and direct bilirubin and increased levels of total protein and albumin which were altered due to QP intoxication. In the liver and kidney tissues, treatment with the *Withania* and *Aloe* extracts significantly reduced the levels of MDA and hence the lipid peroxidation. Also, the GSH levels and SOD activity came back to normal after the treatment with *Withania* and *Aloe* extracts. In the histopathological studies, QP intoxicated animals showed extensive necrosis, inflammation and infiltration. Whereas the *Withania* and *Aloe* extract treated animals exhibited not only restoration of the liver and kidney architecture towards normal but also reduced inflammation and raised the proportion of regenerating cells. Probable mechanism of this protective action of *W. somnifera* and *A. barbadensis* observed in this study is attributed to their free radical scavenging activity, inhibition of lipid peroxidation, superoxide scavenging activity and their property to increase the level of antioxidant enzymes. These results indicate a potent antioxidative, antilipid peroxidative, hepatoprotective and renal protective activity of both *W. somnifera* and *A. barbadensis* extracts. These herbs merits further investigation, on other models, to identify the active principles responsible for the protective action against pesticide toxicity and detailed mechanism of action.