

## **ABSTRACT**

### ***(LITERATURE REVIEW)***

#### **THE EFFECT OF HERBAL MEDICINE ON CYCLOPHOSPHAMIDE INDUCED NEPHROTOXICITY IN VIVO**

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Cyclophosphamide, is an alkylating agent that has been widely used in clinical practice since the 1950s as an efficient drug in the treatment of neoplastic diseases such as solid tumors and lymphomas, and non-neoplastic diseases such as multiple sclerosis and rheumatoid arthritis. However, the clinical usefulness of cyclophosphamide is restrained due to several side effects associated with reproductive toxicity, hepatotoxicity, nephrotoxicity and cardiotoxicity in patients and animal models. Nephrotoxicity due to cyclophosphamide includes a variable decrease in glomerular filtration rate along with tubular dysfunction due to acute renal failure. The purpose of this study was to determine the plants and the content of any potential to prevent cyclophosphamide-induced kidney damage and know how the mechanism of the content of these compounds to prevent cyclophosphamide-induced kidney damage.

Animal models used are mice with divided several control groups and treatment groups. Data collection includes Hematology (BUN and creatinine (Cr)), animals were eliminated to be taken kidney organs for histology/histopathology analysis. Some results from the study showed an increase in BUN and creatinine (Cr) levels in the cyclophosphamide treatment group. When given the drug showed a significant reduction in BUN and creatinine (Cr) levels. Histological/histopathological changes include structural changes in the kidney including dilated bladder, interstitial bleeding, leukocyte infiltration, glomerular atrophy, necrosis, tubular swelling, axonal swelling and others. At the time after administration of the drug renal function shows changes in vacuole, histological/histopathological structure of the kidney is normal, shows the restoration of proximal tubules, etc

*Keywords: cyclophosphamide, nephrotoxicity, rats*