

ABSTRACT

(LITERATURE REVIEW)

NEPHROPROTECTIVE ACTIVITY OF HERBAL PLANTS TEST AGAINST CHEMICAL POISON INDUCED KIDNEY DAMAGE

Izzatul Ma'rifah

Chemical toxins are certain substances that have a detrimental effect on human tissues, organs, or biological processes. Organic chemicals such as chloroform, toluene, benzene, bromobenzene, potassium thiocyanate (KSCN), formalin, carbon tetrachloride (CCl₄), dichlorobenzene, trichlorobenzene, pyrene, naphthalene, and phenol can cause health problems. Kidneys are very susceptible to the toxic effects of drugs and chemicals so that they can trigger the formation of free radicals that lead to nephrotoxicity. The purpose of this study was to determine which plants have the potential to prevent nephrotoxicity. The design of this research is a literature review. Researchers conducted a search for manuscripts through the ScienceDirect database. In the scanning process, the researcher got 37 articles that matched the keywords. In the skimming process, the researchers assessed the quality of the articles and got 8 articles. In the mapping process, the researcher chose 5 articles to be reviewed. The data discussed in the five articles reviewed were serum creatinine, blood urea nitrogen, SOD, GSH, and CAT. The animals used in this study were rats with several types of groups, including the control group and the group that was given several kinds of treatment. There are several tests to determine kidney function, namely examination of BUN and Cr and examination of antioxidant activity, namely levels of enzymes SOD, CAT, and GSH. Some research results found that herbal plants decreased BUN and Cr levels significantly, while antioxidant activity increased significantly in the herbal plant treatment group. The conclusion in this study is that herbal plants can treat chemical toxin-induced nephrotoxicity. The suggestion in this study is that further research can be carried out on other herbal plants in Indonesia that have nephroprotector effects.

Keywords: *Chemical Poison, Rat, Nephrotoxicity*