The Effect of Leaves Extract of Sambiloto (Andrographis paniculata) on Renal Histopathology Features Induced by Gentamicin in White Rats (Rattus norvegicus)

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Abstract

This research was aimed to know the effect of leaves extract of sambiloto as a nephroprotector on renal histopathology features induced by gentamicin in white rats (Rattus norvegicus). The effect of leaves extract of sambiloto was tested in 25 rats. Twenty five male white rat were randomly divided into five groups; K- as negative control was given carboxy methyl cellulosa in 15 days, P0 was given carboxyl methyl cellulosa in 15 days, P1, P2 and P3 were respectively given leaves extract of sambiloto with a dose of 177 mg / kg bw / day / po, 189 mg / kg bw / day / po, and 239.5 mg / kg bw / day / po for 15 days. On the 15 day of experimental, P0, P1, P2, P3 was given 200 mg/kg bw of gentamicin. Gentamicin solutions on P0, P1, P2 and P3 treated through intramuscular injection. After 24 hours of gentamicin induced, take the rats renal by laparotomy and then making preparations histopathology with staining Haematoxylin-Eosin (HE). Based on the result of Kruskall-Wallis statistical analysis on renal histopathology showed this research that the treatment have significant difference (p < 0,05). The leaves extract of sambiloto treated group (P3) gave the best value on the renal morphology, it gave a good effects in preventing nephrotoxicity in white rats.

Keyword: Sambiloto extract, gentamicin-induced, nephrotoxicity, acute renal failure (ARF), renal histopathology