

ABSTRACT

The development of new medicine requires preclinical trials. Laboratory animal with hyperuricaemia conditions needed for testing uric acid-lowering medicine substance. Melinjo (Gnetum gnemon) is known to have high levels of purines that can raise uric acid levels. This study was conducted to determine the effect of various parts of melinjo (Gnetum gnemon) against uric acid levels in rats (Rattus norvegicus).

This is experimental study, pretest and posttest control group design. A total of 20 male rats (Rattus norvegicus) were randomized into 4 groups: control group, leaves group, rind group and seed group. Juice of melinjo leaves (9.3 gram/kg BW), rind (10 gram/kg BW) and seed (13 gram/kg BW) were given for 18 days in each group. Uric acid levels examination was done periodically before treatment (day 0), day 6, day 11 and day 18. Uric acid levels data were analyzed using Paired Sample T-Test and One Way ANOVA.

The results of Paired Sample T-Test analysis on each group by comparing uric acid levels before treatment (day 0) with uric acid levels on day 6, day 11 and day 18 showed no significant difference in the control group, leaves group and rind group. The increase of uric acid levels were significantly found in seeds group at day 11 ($p = 0.029$). However, this increment cannot be categorized as a hyperuricemia condition. One Way ANOVA analysis results by comparing the uric acid levels between groups at the periodically examination showed no significant difference between uric acid levels of groups at day 0, day 6, day 11, and day 18. Juice of melinjo (Gnetum gnemon) leaves (9.3 gram/kg BW), rind (10 gram/kg BW) and seed (13 gram/kg BW) given orally for 18 days cannot make hyperuricemia condition in rats (Rattus norvegicus) so it cannot be used as inducers of uric acid.

Keywords: Gnetum gnemon, leaves, rind, seed, uric acid