

ABSTRACT

Background: The use of monosodium glutamate (MSG) in excess doses risks increasing free radicals in the body. The effects of increasing free radicals include hepatocyte damage, so prevention efforts are needed through the consumption of antioxidant-rich foods such as Ajwa dates. The purpose of this study is the effect of Ajwa puree (*Phoenix dactylifera*) on liver cell damage.

Method: Experimental research with post test only control group design. Research subjects 20 wistar male white rats were divided into four groups. The first group of normal mice, group II, III and IV were induced with MSG 1.2 g / 200 gBB and given pure Ajwa dates at 0.6 and 1.2 g / 200 gBB for groups III and IV. Liver cell damage was observed in the presence of hydropic degeneration, albumin, and fat and necrosis assessed according to the Manja Roenigk score. The difference in liver cell damage was analyzed by one way ANOVA and post hoc test.

Result: Liver cell damage in group I: 2.52 ± 1.59 ; II: 65.08 ± 57.63 ; III: 2.56 ± 0.61 ; and IV: 3.52 ± 2.67 ($p = 0.007$). The difference in liver cell damage between the two groups was shown between groups I and II, and between groups II and III and IV.

Conclusion: the administration of Ajwa puree dates (*Phoenix dactylifera*) had an effect on liver cell damage in male white rats wistar strain induced by MSG. A dose of 0.6 g / 200 gBB is an effective dose in preventing liver cell damage due to MSG induction.

Keywords: MSG, Liver Cell Damage.