Background

Jatropha herb contains various active compounds such as flavonoids, diterpene, tannins, alkaloids, cucin, terpenoids and steroids. The active compounds are known as anti-inflammatory, antibacterial, antifungal, anticancer and antioxidant. However, it is not well known about the effect of the herb to organ function. Liver as its function in digestion, metabolism and detoxification may susceptible damage by toxic compound. Then, it must be well maintained in a good condition.

Objective

To investigate the effects of Jatropha seed extract in LDH activity and histological liver.

Methods

Mice was orally given by various level of doses of jatropha seed extract with 0, 5, 25, 50 and 250 mg/KgBW for 28 days. The LDH activity was measured by a spectrophotometer and Hematoxylin-Eosin staining was performed to see histological image of the liver. Data were analyzed statistically using one way-ANOVA.

Results

Finding result was revealed that jatropha doses of 5, 25 and 250 mg/KgBW decreased the activity of LDH (2.35; 2.28 and 2.41 U/L). The Jatropha dose 50 mg/KgBW increased the activity of LDH (2.64 U/L). Analysis by linear regression showed decreased pattern LDH activity after it was given with jatropha (ANOVA, p< 0.05). Histological image of liver has demonstrated damage dose of Jatropha seeds’ extract 25, 50 and 250 mg/KgBW showed that it can damage in nucleus, cytoplasm, and cell by dose of 25, 50 and 250 mg/KgBW. This study showed the extract of Jatropha cause increased LDH levels. It can caused damage in liver cell that can decreased the activity of LDH.

Conclusion

The Jatropha extract has decreased of LDH activity of the liver and cause damage to the hepatocyte.