

ABSTRACT

This study aimed to examine the anti-cholestatic effect of *Berberis lycium* on α -naphthylisothiocyanate (ANIT) induced cholestatic liver injury in mice. Cholestasis is a disease of liver injuries that is characterized by the interruption of bile flow from hepatocytes to intestine, which also leads to accumulation of bile acid in the liver, resulting in oxidative stress, inflammation, apoptosis and fibrosis. Cholestasis is extremely associated with a variety of diseases, such as obstructive jaundice, cystic fibrosis, gallstones and acute hepatitis. In this study, ANIT exposure to mice resulted in severe cholestasis with liver injury, which was confirmed by significantly elevated serum levels of ALT and AST. The purpose of this study was to investigate the effects of berberine and extract of *Berberis lycium* on liver. Berberis extract and berberine confirmed similar effects on all parameters measured. *Berberis lycium* was analyzed by HPLC. The chromatogram showed the presence of berberine by comparing different peaks at retention time. The study was conducted to investigate the anti-cholestatic potential of the root extract of *berberis lycium*. The shade-dried roots were powdered, soaked in ethanol and filtered. Then the filtrate was subjected to rotary evaporator to prepare the extract. The mice were randomly divided in different groups. Each group received different dose. In one group mice were given extract (150mg/Kg) and other group was given berberine (100mg/kg) for 19 days and later treats both groups with ANIT (75mg/Kg) for 48 hours. The results showed that the plant possess significant anti-cholestatic activity as there was relatively less damage to the liver of mice whose treatment was with the extract and berberine.