PROPOLIS REDUCES CHRONIC ETHANOL-INDUCED HEPATOTOXICITY IN RATS  
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Introduction: Propolis is a complex mixture of substances obtained and processed by bees from plant sources. They possess a high polyphenol content that relates to its good antioxidant capacity. It is known that chronic ethanol consumption generates oxidative stress in the liver. It has been reported the hepatoprotective effect of various purified polyphenols present in propolis (ferulic acid, quercetin, and chrysin), on the ethanolic injury.

Objective: To determine the hepatoprotective effect of Peruvian ethanol extract of propolis (EEP) in rats with chronic ethanol consumption.

Methods: The propolis was obtained from the Tacna region - Peru, containing 283 mg and 24 mg of GAE and QE, total phenols and flavonoids per g of propolis. With an IC50 in their ability and anti radicals ABTS and DPPH: 3,95 and 17 µg EEP/mL, equivalent to 18 µM of ascorbic acid and 13,6 µM of Trolox, respectively. In this study 21 Holtzman rats were randomized into three groups: control, ethanol, and ethanol + propolis. They received 45-day a balanced diet and 8 g ethanol/kg (ethanol group), and 8 g ethanol/kg + 100 mg of EEP/kg (ethanol + propolis group). Hepatotoxicity was evaluated by measuring the activity of liver enzymes and antioxidant system related to oxidative stress like GSH and TBARS metabolites.

Results: In the liver post-mitochondrial fraction it was determined that ethanol consumption alter the activity of glutathione S-transferase, glutathione reductase and glutathione peroxidase in 43%, 13% and 24% respectively. EEP consumption decreased ethanolic injury in 27%, 9% and 23% respectively; reduced levels of TBARS and SOD by 21% and 20%, and increased GSH reduced concentration by 73%.

Conclusion: The results indicate that the consumption of EEP reduces chronic ethanol-induced hepatotoxicity in rats.

Keywords: hepatotoxicity, ethanol, propolis