

Histological effect of cola nitida aqueous extract on rat's liver during hepatocarcinogenesis.

ABSTRACT

Hepatocarcinogenesis can be defined as precancerous lesion which will develop into Hepatocellular Carcinoma. It has been carried out previously that Cola nut (*Cola nitida*) has beneficial medicinal properties. In this study, we have assumed efforts to ascertain the histological anticancer potency of Cola Nitida aqueous extract on DEN/AAF induced hepatocarcinogenesis rat's liver. The structural components of the liver include plates of liver, called hepatocytes. The normal hepatocytes were well organized and arranged. Cells membranes were markedly clear. The nuclei were round and uniform with little variation in size causing no pleomorphis. Male Sprague Dawley rats were divided to eleven groups. Hepatocarcinogenesis was induced in seven groups of rats by employing two carcinogen systems: an intraperitoneal injection of 200 mg/kg DEN as initiator, followed by 0.02% of AAF in rat chow to promote carcinogenesis. The effect of 1, 2.5 and 5% cola nitida aqueous extract on hepatocarcinogenesis induced male rats and normal ones was investigated. Histological evaluation of rat liver revealed DEN/AAF induced and untreated rats group showed higher inflammation or necrosis, and in general abnormality; compared to all other groups. The results indicate that, Cola nitida might act as an antioxidant agent, which could inhibit or slow down histopathological changes induced by DEN/AAF.

Keyword: DEN/AAF; Hepatocarcinogenesis; Anticancer; Hepatocellular carcinoma; Cola nitida; Rat; Liver.