

Anti- thrombolytic activity of zingerone against high fructose diet induced non-alcoholic steatohepatitis in rat model

Jegathambigai R Naidu¹ and Poshne sasidharan²

¹Faculty of Medicine, Asia Metro Politan University; ²Faculty of Allied Health Science, Asia Metropolitan University

Zingerone, an active compound of ginger and derived from the activation of gingerol has shown many pharmacological and biological properties such as anti-inflammatory, anti-diabetic, anti-lipolytic, anti-diarrhoeic, antimicrobial and anti-spasmodic. The present study was done to evaluate the anti-thrombolytic activity of zingerone against high fructose diet induced rat models. Male Wistar rats were randomly divided into 4 groups: group 1 was fed with standard pellet and water; group 2 was fed with normal pellet, Zingerone of 100 mg/kg body weight of rats and water; group 3 was fed with fructose enriched diet (40%) and fructose drink (20%); and group 4 was fed with fructose enriched diet (40%), fructose drink (20%) and zingerone of 100 mg/kg body weight of rats. Coagulation parameters and thrombus evaluation in liver were done to investigate the effect of zingerone as anti-thrombolytic agent. The high fructose enriched diet group showed thrombus formation and elevated prothrombin time and activated partial thromboplastin time. Treatment with zingerone has reversed the metabolic changes by reducing the thrombus formation in the liver and also by reducing the prothrombin time, activated partial thromboplastin time within the normal range. Hence zingerone may have antithrombolytic activity *in vivo* in rat liver NSAH and hence further investigation is needed to understand the mechanism of action.