

Effects of bezafibrate to high trans-fat diet (HTD) -induced nonalcoholic steatohepatitis (NASH) model in mice

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We previously presented that bezafibrate (BF), a PPAR-pan agonist, has preventing and therapeutic effects on high fat and high cholesterol (HFHC) diet-induced nonalcoholic steatohepatitis (NASH) model in mice. In this study, we examined the effects of BF to high trans-fat diet (HTD) -induced NASH model in mice. HTD was fed to 7-week-old ob (spontaneously obese, hyperglycemia model) mice for 12 weeks to induce NASH. Half of ob mice were orally administered BF (100 mg/kg/day) for 12 weeks. Remaining ob mice were served as controls and administered the vehicle. Normal C57BL/6J mice were fed normal diet and administered the vehicle. After 12 weeks, plasma levels of AST, ALT, TC, glucose, and concentrations of hepatic TG, TC in ob mice fed HTD were markedly higher than those of normal mice. Fatty droplets, inflammation and fibrosis were observed in histopathologic examination of liver. BF significantly lowered plasma TC level, histopathologic fibrosis area and fibrosis scoring without effecting to plasma ALT levels. These results suggested that bezafibrate may suppress the progression of fibrosis in mice NASH model induced by HTD through a decrease in plasma cholesterol level or directly.