LIVER

Ghrelin may be a novel antifibrotic therapy

“Ghrelin exerts antifibrotic effects in the liver and might be a novel antifibrotic therapy” say Monserrat Moreno and colleagues from Spain.

The researchers conducted a study to examine whether ghrelin influences liver fibrogenesis in acute or chronic liver disease. Ghrelin was shown to reduce liver injury, fibrogenic response and myofibroblast accumulation in rat models of acute or chronic liver disease, and to attenuate altered hepatic gene expression in rats with chronic liver injury. Ghrelin also reduced oxidative stress and inflammation and protected against acute liver injury. In mice with chronic liver injury, ghrelin deficiency was associated with exacerbated hepatic fibrosis and liver damage.

In addition to the animal research, the authors performed human investigations and found that the fibrogenic capacity of primary human hepatic stellate cells

in vitro was reduced by the administration of ghrelin. Furthermore, ghrelin gene expression and serum levels of ghrelin were reduced in patients with advanced fibrosis compared with mild disease and ghrelin gene expression was found to correlate with fibrogenic gene expression. Finally, polymorphisms in the ghrelin gene were shown to influence the progression of liver fibrosis in patients with hepatitis C.

Moreno and colleagues conclude that “...ghrelin exerts hepatoprotective and antifibrotic effects in the liver. Further studies should evaluate the safety and efficacy of ghrelin and/or ghrelin agonists in patients with chronic liver diseases.”

Rachel Jones

Original article Moreno, M. *et al.* Ghrelin attenuates hepatocellular injury and liver fibrogenesis in rodents and influences fibrosis progression in humans. *Hepatology* **51**, 974–985 (2010)