A new insight on ethanol-induced gastric mucosa injury

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Many people all over the world indulge themselves in drinking, which is correlated to a wide spectrum of medical, psychological, behavioral, and social problems. It is well known that chronic alcohol abuse may induce gastrointestinal dysfunction, chronic atrophic gastritis and is closely related with gastric carcinoma. However, the detailed mechanism by which ethanol affects the gastrointestinal mucosa remains to be elucidated.

A research article to be published on October 14, 2008 in the *World Journal of Gastroenterology* addresses this question. The research team led by Professor Ren from Gastroenterology Division, Zhongshan Hospital of Xiamen University, systematically evaluated gastric mucosa alteration related to ethanol.

They found that the gastric mucosal lesion index was correlated with the malondiadehyde (MDA) content in gastric mucosa. As the concentration of ethanol was elevated and the exposure time to ethanol was extended, the contentof MDA in gastric mucosa increased and the extent of damage aggravated. The ultrastructure of mitochondria was positively related to the ethanol concentration
and exposure time. The expression of mtDNA ATPase subunits 6 and 8 mRNA declined with the increasing MDA content in gastric mucosa after gavage with ethanol.

They concluded that Ethanol-induced gastric mucosa injury is related to oxidative stress, which disturbs energy metabolism of mitochondria and

plays a critical role in the pathogenesis of ethanol-induced gastric mucosa injury.

Source: World Journal of Gastroenterology