Siyul Byeon et al., J Exp Food Chem 2018, Volume: 4
DOI: 10.4172/2472-0542-C1-012

Gastroprotective effects of *Dioscorea batatas* flesh and peel against ethanol-induced gastric injury in mice

Siyul Byeon, Ji Sun Lim, Chan Ho Jang, Janice Nullan Averilla, Jungeun Kim, Seungmin Park, Nayoung Moon, Soojeong Jung, Jisun Oh and **Jong-Sang Kim**
Kyungpook National University, Korea

Gastric ulcer with multifactorial etiologies including excessive drinking is a major digestive disorder, affecting about 10% of world population. In the present study, we investigated the gastroprotective effect of *Dioscorea batatas* Decne (commonly called Chinese yam) flesh or peel against acidified ethanol-induced acute gastric damage in mice. Macroscopic and histological examinations showed that the oral administration of ethanol extracts of yam flesh or peel significantly improved ethanol-induced pathological parameter in the stomach. In addition, oral supplementation of yam extracts decreased biomarkers of oxidative stress, including plasma 8-hydroxy-2-guanosine and gastric malondialdehyde, while increased reduced form of glutathione, and activated antioxidant enzymes such as superoxide dismutase and catalase. Furthermore, yam extract-treated stomach highly expressed heme oxygenase-1, quinone oxidoreductase 1, and prostaglandin E2. Moreover, the expressions of inflammatory factors, such as cyclooxygenase-2 and inducible nitric oxide synthase, were downregulated. In conclusion, these findings suggest that of yam flesh or peel extract can ameliorate ethanol-induced acute gastric damage possibly through activation of antioxidative mechanism and suppression of inflammatory response.

Biography

Siyul Byeon has completed her BS degree from the Yeungnam University, Gyeongsan, Korea. Her interest is focused on gastric organ inflammation and prevention.

sy1_6@naver.com

Notes: