Objective of present study

Acute pancreatitis is an inflammatory disorder of the exocrine part of pancreas. Involvement of oxidative stress and inflammatory mediators are the major causative factors for the development of acute pancreatitis.

Incidence of acute pancreatitis ranging from 5 to 80 cases per 100,000 population with increasing evidence in western countries. The severity of clinical presentation varies from a mild, self-limiting form to severe disease. About 1-7% of patients are with interstitial pancreatitis, 8-39% with necrotising pancreatitis and 14-62% with infected necrosis. Almost all patients with necrotising pancreatitis without multi organ failure survive, whereas those with multi organ failure has a median mortality of 47%.

Previous studies reported that α, β amyrin (Melo MC, 2010), pentoxifylline, alpha lipoic acid (Abdin AA, 2010), N-acetyl cysteine (Bull. Alex. Fac. Med, 2008), Allopurinol (Czako L, 1998), Methyl prednisolone (Melo MC, 2010), Melatonin (Shabir S, 2010) & Selenium (Hardman J, 2005) shown protective effect on L-Arginine induced pancreatitis by virtue of their anti oxidant & anti-inflammatory properties.

The use of the synthetic and semi-synthetic treatment has various kinds of drawbacks like photosensitivity skin reactions, intolerance and addiction. Apart from this these compounds are very expensive and not reliable.

Hence, there is need of potential antioxidant & anti-inflammatory agent’s available from natural sources, which are cost effective and have several advantages than the synthetic and semisynthetic compounds.

Based on this, it is presumed that B-Pinene, Lawsone, Myrcene and Limonene, potential antioxidant & anti-inflammatory agents might exert a beneficial effect on L-Arginine induced pancreatitis in rats.