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Resveratrol in combination of Ibuprofen against acute carrageenan-induced inflammation and hepatic insult: rectificationof adenylate energy charge (AEC), anti-apoptotic, cell proliferation and DNA preservation potentials.

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Abstract : Inflammation is considered the quickest response to body organs damage and usually non-steroidal anti-inflammatory drugs (NSAIDs) are used in management of such condition, yet due to their undesirable side effects; other substitutes became of high demand. The present study aimed to investigate beneficial effects of combining resveratrol with ibuprofen in preventing carrageenan-induced inflammation and hepatic injury in rats. Results revealed that; combining resveratrol (40 mg/kg) with ibuprofen (40 mg/kg) lead to augmented anti-inflammatory and hepato-protective effects signified by partial prevention of carrageenan induced paw edema, reduced serum arachidonic acid, PGE2, ALT and AST levels after both single and repeated administrations, decreased hepatic TNF-α level and 8-OHDG content, enhancement in hepatic tissue cell energy performance, declined oxidative and nitrosative stresses. Finally both histochemical H & E studies as well as caspase-3 and PCNA immunuhistochemical examinations exposed the beneficial out comes from combining both treatments. As a conclusion; combining resveratrol with ibuprofen could be recommended over the use of ibuprofen alone in the treatment of inflammation.
Key wards : Carrageenan, Ibuprofen, Inflammation, Resveratrol.

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