



The Impaired Balances of Oxidant/Antioxidant and COX-1/COX-2 in Ovarian Ischemia-Reperfusion Injury and Prevention by Nimesulide

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SUMMARY. The aims of this study were to investigate the association of ovarian I/R injury with oxidant/antioxidant and cyclooxygenase activity and to examine the effect of nimesulide in I/R injury. Rats were divided into four groups: sham group, ischemia-reperfusion group (IR), nimesulide 25 mg/kg group (NIM 25), and nimesulide 50 mg/kg group (NIM 50). The severe oxidative stress and inflammation that occurred in the ovarian tissue treated I/R were recovered by treatment of nimesulide. The histopathological findings, severe haemorrhage, oedema, vascular congestion accompanied with migration and adhesion of polymorphonuclear leukocytes in the endothelium were observed in the IR group that MDA, MPO and COX-2 levels were found high whereas GSH and COX-1 levels were found low. The severe histopathological findings in IR group were moderate in NIM-25 group whereas those were slight in NIM-50 group. This finding suggests that nimesulide prevents injury due to reperfusion following ischemia better when used with dosage 50 mg/kg.

KEY WORDS: Antioxidant, Ischaemia-reperfusion, Nimesulide, Rat.

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