



The Molecular Mechanism Involved in the Protective Effect of Etodolac Against Ovarian Injury Induced with Ischemia/Reperfusion in Rats

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SUMMARY. This study investigated the protective effect at the molecular level of etodolac against ovarian injury induced in rats with ischemia/reperfusion (I/R). Rats were divided into four groups. The 25 mg/kg etodolac + ovarian ischemia/reperfusion (EIR 25) and 50 mg/kg etodolac+ovarian ischemia/reperfusion (EIR 50) groups were given etodolac by the oral route 1 h before administration of anesthesia. Two h of ischemia and 2 h of reperfusion were applied to ovarian tissue in all groups (except for (SG) sham operation group) 1 h after etodolac administration. The experimental results showed that etodolac at a dose of 50 mg/kg suppressed MPO (myeloperoxidase), TNF- α , IL-1 β gene expression in ovarian tissue with I/R better than at a dose of 25 mg/kg. In addition, etodolac at these doses prevented a decrease in SOD gene expression in ovarian tissue subjected to I/R to a significant extent ($p < 0.0001$). In conclusion, etodolac can be used in the treatment of I/R-related ovarian injury.

RESUMEN. En este estudio se investigó el efecto protector a nivel molecular de etodolac contra la injuria de ovario inducida en ratas por isquemia/reperfusión (I/R). Las ratas fueron divididas en cuatro grupos. A los animales de los grupos de 25 mg/kg etodolac + isquemia/reperfusión ovárica (EIR 25) y de 50 mg/kg etodolac + isquemia/reperfusión ovárica (EIR 50) se les administró etodolac por vía oral 1 h antes de la anestesia. Dos horas de isquemia y dos horas de resperfusión fueron aplicadas al tejido ovárico en todos los grupos (excepto para el grupo control SG) 1 h después de la administración del etodolac. Los resultados experimentales mostraron que el etodolac a una dosis de 50 mg/kg suprime la expresión de los genes de la MPO (mieloperoxidasa), TNF- α e IL-1 β en el tejido ovárico mejor que en el mismo tejido ovárico sometido a similar grado de I/R ($p < 0,0001$). En conclusión, etodolac puede ser usado en el tratamiento de injuria de ovarios relacionada con I/R.

KEY WORDS: etodolac; IL-1 β ; ischemia/reperfusion; rat; TNF- α

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