

## Potential Association of Favipiravir with Enhanced Ischemia/Reperfusion Injury in Rat Liver Tissue

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**SUMMARY.** The researchers used biochemical and histopathological tests to determine the effect of favipiravir on ischemia/reperfusion (I/R)-induced liver injury in rats. Eighteen male albino Wistar rats in three groups (sham, liver I/R, Favipiravir+liver I/R) underwent liver ischemia/reperfusion. Biochemical and histopathological analyses were performed. tGSH levels were greater in the SG group than in the LIR group and higher in the LIR group than in the FIR group, according to the findings. Furthermore, NF- $\kappa$ B, TNF- $\alpha$ , IL-1 $\beta$ , MDA, ALT, and AST levels were considerably higher in the LIR and FIR groups compared to the SG group. The FIR group had a higher proportion of necrotic/pycnotic nuclei, indicating cell death, according to histopathological analyses. The study shows that favipiravir, which is routinely used to treat COVID-19, can aggravate liver damage in diseases involving I/R injury, such as liver transplantation or major liver surgery. As a result, in such instances, the administration of favipiravir should be carefully evaluated.

**RESUMEN.** Los investigadores utilizaron pruebas bioquímicas e histopatológicas para determinar el efecto de favipiravir sobre la lesión hepática inducida por isquemia/reperfusión (I/R) en ratas. Dieciocho ratas Wistar albinas macho en tres grupos (simulado, hígado I/R, favipiravir + hígado I/R) se sometieron a isquemia/reperfusión hepática. Se realizaron análisis bioquímicos e histopatológicos. Según los hallazgos, los niveles de tGSH fueron mayores en el grupo SG que en el grupo LIR y más altos en el grupo LIR que en el grupo FIR. Además, los niveles de NF- $\kappa$ B, TNF- $\alpha$ , IL-1 $\beta$ , MDA, ALT y AST fueron considerablemente más altos en los grupos LIR y FIR en comparación con el grupo SG. El grupo FIR tuvo una mayor proporción de núcleos necróticos/picnóticos, lo que indica muerte celular, según los análisis histopatológicos. El estudio muestra que favipiravir, que se utiliza habitualmente para tratar la COVID-19, puede agravar el daño hepático en enfermedades que implican lesión I/R, como el trasplante de hígado o la cirugía hepática mayor. Como resultado, en tales casos, la administración de favipiravir debe ser evaluada cuidadosamente.

**KEY WORDS:** favipiravir, ischemia/reperfusion, liver, oxidation

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