

Hepatoprotective Effect of Mycophenolate Mofetil against Tacrolimus Exposure in Rat

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Abstract : Tacrolimus (TAC), a calcineurin inhibitor, is clinically used as an immunosuppressive agent in the transplant recipient, but its use associated-hepatotoxicity. Mycophenolate mofetil (MMF), an anti-metabolite, is a potent immunosuppressive drug. MMF is not hepatotoxic and is the most common adjunctive immunosuppressant for TAC. The effects of TAC and MMF combination in the liver is still not well understood. This work aimed to investigate their combined effect against in liver in rats Wistar after 24 h. The oral median lethal doses (LD50) of TAC and MMF alone were evaluated in rats are 240 mg/kg and 500 mg/kg respectively. Oral administration of the MMF at 50 mg/kg to male Wistar intoxicated with TAC at 60 mg/kg, demonstrated a significant protective effect by lowering the levels of hepatic markers enzymes (AST, ALT) in the serum rat. MMF attenuated oxidative stress by restoring the activities of SOD, CAT and by reducing the malondialdehyde (MDA) and protein carbonyl levels liver. This study provided evidence that MMF protects rat liver from TAC-induced injury and suggests a most combination use for organ transplantation.

Keywords : tacrolimus, mycophenolate mofetil, combination, liver, rat

Conference Title : ICSR2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020