Fluoxetine is a selective serotonin re-uptake inhibitors (SSRI) drug, which is the most widely used in the treatment of depression. The aims of this study were to evaluate the analgesic effects of fluoxetine, and the analgesic effect of combination of fluoxetine and diclofenac in model of thermal pain in male mice. Mice were divided into four groups, six in each. Group 1 received normal saline. Group 2received diclofenac. Group 3 received fluoxetine. Group 4 received fluoxetine before the administration of diclofenac. Evaluation of the analgesic action of the drug was achieved by the tail flick test.
Tail-flick latency significantly increased ($P < 0.05$) in the group 2 in the 2 time intervals as compared to control group. In the group 3, there were no significant changes ($P > 0.05$) in the tail-flick latency after 30 min as compared to corresponding time of control group, while it significantly increased ($P < 0.05$) after 60 min as compared to corresponding time of control group**.** In the group 4caused significant increase ($P < 0.05$) in the time of tail-flick latency after 60 min as compared to corresponding time of diclofenac group and fluoxetine group. In this study, combination of low dose diclofenac with fluoxetine caused a significant prolongation of tail-flick latency proposing additive antinociceptive effect. Thus, combination of diclofenac with fluoxetine hypothetically reduce the dose requirement and adverse effects for each drug.. Further clinical studies are needed to prove these effects.