

ABSTRACT

Exposure of carbon monoxide (CO) released by insect repellent has a negative impact on health by forming carboxyhemoglobin (CO-Hb) as a trigger for oxidative stress in the human body. Therefore, the objective of the study was to investigate the effect of commercial anti-mosquitos on CO-Hb and malondialdehyde (MDA) levels in the blood. Effect of electric spray, coils, and electric mats on CO-Hb and MDA levels in blood was evaluated using male Wistar rats (8 h per day) and monitored for 20 days. The study found that the highest increase in CO-Hb and CO-Hb levels in the blood was observed when exposed to electric spray formula compared to other anti-mosquitos. In addition, the highest increase in MDA levels also occurred when exposed to the electric spray. Statistical analysis revealed that there was a significant relationship between CO-Hb and MDA levels in the blood (p -value = 0.000). High CO-Hb levels in the blood could stimulate oxidative stress and lead to cell damage in the body.