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LETTER TO THE EDITOR

Lipid emulsion-induced inhibition of apoptosis

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Dear Editor

I have read the article titled "Protective effects of intravenous lipid emulsion on malathion-induced hepatotoxicity" recently published in Bratislava Medical Journal (1). Bax and bcl-2, pro-apoptotic and anti-apoptotic proteins of the intrinsic apoptotic pathway, respectively, contribute to regulating apoptosis (2). In the Immunohistochemical results of the Results section, Esen and Uysal described that "The bax, bcl-2 and caspase-3 immunoreactivity in malathion group was significantly increased ($p < 0.001$), and the immunoreactivity of all three proteins was lower in the malathion+ILE group compared to the malathion group ($p < 0.01$) (Fig. 5)." (1). Malathion increased bax immunoreactivity, whereas the combined treatment with malathion and lipid emulsion decreased bax immunoreactivity. However, malathion increased bcl-2 immunoreactivity, whereas the combined treatment with malathion and lipid emulsion decreased bcl-2 immunoreactivity. Thus, because the combined treatment with malathion and lipid emulsion decreased the immunoreactivity of both the pro-apoptotic protein bax and the anti-apoptotic protein bcl-2 more than malathion alone, it may be confusing for readers to interpret the lipid emulsion-mediated decrease of apoptosis induced by malathion in this report (1). It would be more reasonable to compare the magnitude of difference of bax immunoreactivity in both groups (malathion alone versus the combined treatment with malathion and lipid emulsion) with that of difference of bcl-2 immunoreactivity in both groups (Fig. 5) (1). Otherwise, as it was reported that lipid emulsion inhibits bupivacaine-induced increase in bax/bcl-2 expression ratio, it would be more reasonable to describe bax/bcl-2 ratio in the malathion alone and the combined treatment groups with malathion and lipid emulsion (3). I believe that this study suggests the protective effect of lipid emulsion on malathion-induced hepatotoxicity.

References

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