عنوان مقاله:

Effects of N-acetylcysteine on spexin immunoreactivity in kidney tissues of rats treated with adriamycin

محل انتشار:

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خلاصه مقاله:

Objective(s): Due to its negative side effects, mainly nephrotoxicity, adriamycin (ADR) is used fairly infrequently. The purpose of this study is to investigate the effects of N-acetyl cysteine (NAC) on the immunoreactivity of spexin (SPX) in the kidney tissues of rats given ADR.Materials and Methods: A total of ۲۸ male Sprague-Dawley rats were randomly assigned to four groups (n=۷): control (no intervention), NAC (۱۵۰ mg/kg/day, administered intraperitoneally), ADR (single dose of ۱۵ mg/kg, administered intraperitoneally), and ADR+NAC (single dose of ۱۵ mg/kg ADR + ۱۵۰ mg/kg/day NAC, both administered intraperitoneally). The experiment was concluded on the ۱۵th day. Results: The administration of ADR resulted in biochemical and histopathological alterations in the kidney. It was found that ADR treatment led to elevated levels of TOS (total oxidative stress), apoptosis, and SPX. Conversely, when NAC was administered as a treatment, it effectively reduced TOS, apoptosis, and SPX levels. These findings suggest that SPX may contribute to the development of ADR-induced kidney damage.Conclusion: Further investigations are warranted to gain a comprehensive understanding of kidney damage, and specifically to elucidate the role of SPX in this context. Additionally, these studies can pave the way for exploring novel therapeutic strategies targeting SPX to prevent and/or treat the development of kidney damage.

کلمات کلیدی:

Adriamycin, N-acetylcysteine, Nephrotoxicity, Neuropeptide Q, Spexin