

عنوان مقاله:

Squid ink polysaccharide reduces cyclophosphamide-induced testicular damage via Nrf2/ARE activation pathway in mice

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خلاصه مقاله:

Objective(s): Cyclophosphamide (CP) toxicity on testis was hampered by squid ink polysaccharide (SIP) via restoration of antioxidant ability in our previous investigations. This study investigated roles of Nrf2/ARE signal pathway in testis of treated mice. Materials and Methods: Male Kunming mice were employed to undergo treatment with SIP and/or CP. Protein levels of Nrf2, Keap1, histone deacetylase 2 (HDAC2), quinone oxidoreductase 1 (NQO1), and heme oxygenase 1 (HO1) and phosphorylation level of protein kinase C (PKC) in testis were evaluated by Western blotting. Results: Data showed that SIP elevated expressions of NQO1 and HO1 genes, two downstream target molecules of Nrf2, via activating Nrf2 to play preventive roles on CP-treated testis, and further discovered that upstream regulators of Nrf2, Keap1, HDAC2, and PKC, were concerned with the regulation of Nrf2.

Conclusion: These results suggest that SIP could effectively weaken CP-associated testicular damage via Nrf2/ARE signal pathway.

کلمات کلیدی:

Cyclophosphamide, Mice, Nrf2/ARE, Squid Ink Polysaccharides, Testis

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