

عنوان مقاله:

Persian Gulf Cone Snail Venom (*Conus coronatus*): First Report as A Potential Source of Antagonist Conotoxins

محل انتشار:

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خلاصه مقاله:

**Introduction:** *Conus* is the genus of toxic gastropods with pharmacologically active compounds in its venom that mostly lives in marine environments. *Conus* venom consists of a rich source of analgesic peptides. In the current study, the analgesic effects of *Conus coronatus* venom from the Persian Gulf were investigated in mice models. **Materials and Methods:** The venom ducts were extracted and homogenized. Deoxygenated cold aqueous acetonitrile solution (۴۰%) was used in this study for conotoxin extraction. Purification was carried out using Sephadex G-۲۵. Purified fractions were injected intraperitoneal (IP) in both formalin and hotplate tests with different doses. Following the pain response assessment, nicotine was used as the agonist of the acetylcholine receptor, and pain response to the co-injection of nicotine and conotoxin was calculated. Tricine-SDS-PAGE was used for molecular weight determination. **Results:** Findings revealed that the action of purified fraction of *C. coronatus* venom (C۲) at a dose of ۰.۸ mg/kg was comparable with morphine as a positive control (۲.۵ mg/kg). The analgesic potential of this fraction was observed in the hot plate test. However, the co-injection of nicotine and C۲ decreased the analgesic effect. **Conclusions:** According to findings, it can be stated that conotoxins isolated from *C. coronatus* had analgesic effects and could be used for discovering and producing novel medicines. Moreover, the peptides observed in this study with less than ۶.۵ kDa probably are members of the antagonist conotoxins which have been reported for the first time in this study.

کلمات کلیدی:

Analgesic, Antagonist, Conotoxin, *Conus coronatus*

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