ANTINOCICEPTIVE ACTION OF SOME CYCLOPEPTIDE ALKALOIDS IN MICE

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Cyclopeptide alkaloids are a group of cyclic closely related polyamide bases of plant origin, especially widespread in the Rhamnaceae family. Few biological actions have been reported for this group of substances, including antibacterial, antifungal and sedative effects. The goal of the present study was to investigate the possible antinociceptive action of cyclopeptide alkaloids. Intrathecal administration (5 µl) of adoutine X, franganine, scutianine B and discarine B produces antinociception while of scutianine C (10 nmol/site) produces hyperalgesia and of scutianine D or vehicle did not change tail-flick response in mice. We next tested some possible side effects produced by cyclopeptide alkaloids. Among the cyclopeptide alkaloids tested, only discarine B produces hypothermia. Moreover, discarine B, scutianine B and scutianine C produces hypomotility assessed in the open-field test. As glutamate is the major nociceptive transmitter in central nervous system, we investigated the role of glutamate receptors in the antinociceptive action of cyclopeptide alkaloids. However, the tested cyclopeptide alkaloids did not alter the specific binding of [^{3}H]-glutamate to cerebral membranes of mice. Taken together, our results have shown that adoutine X and franganine possessed an interesting analgesic profile, presenting analgesia without side effects. The exact mechanism involved in the antinociceptive response is still unknown, but seems to be unrelated with glutamate receptors binding. **Acknowledgements:** CAPES, CNPq, FAPERGS. **Key words**: peptides, analgesic, glutamate