EVALUATION OF IMMUNOMODULATORY ACTIVITY OF KETOROLAC IN MICE

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Abstract: Ketorolac is non-selective cyclooxygenase inhibitor reported to exhibit anti-inflammatory and potent analgesic effects but little is known about its effects on immune system. Therefore, the present study was designed to explore the immunomodulatory activityof ketorolac in mice. In this study, cell mediated immunity (CMI) was assessed by delayed type hypersensitivity (DTH) and cyclophosphamide induced neutropenia while humoral immunity was determined by heamagglutination assay (HA) and mice lethality test. In DTH assay, decrease in skin thickness was observed in ketorolac treated groups(2mg/kg, 4mg/kg and 8mg/kg) when compared to control group within 72 hours after challenged with dinitrochlorobenzene (DNCB). In cyclophosphamide induced neutropenia, average count of white blood cells and neutrophils decreased significantly in all groups. HA titer values were reduced statistically in ketorolac treated groups (2mg/kg, 4mg/kg and 8mg/kg) in dose dependent manner because of antibody reduction. Ketorolac enhanced the mortality percentage by bovine*Pasteurellamultocida*in mice. From these results, it was concluded that ketorolac has immunosuppressive effect which may be considered while using it for analgesic and anti-inflammatory purposes.

Keywords: Ketorolac, Immunomodulatory, Delayed Type Hypersensitivity, Heamagglutination