

Protective effects of *Picrorhiza kurroa* on cyclophosphamide-induced immunosuppression in mice

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ABSTRACT

Objective To study the immunomodulatory effect of ethanolic and aqueous extract of the rhizomes of *Picrorrhiza kurroa* (Scrophulariaceae) in normal and immunosuppressed mice models. **Materials and Methods** The rhizomes extract of *Picrorrhiza kurroa* was administered orally according to their body weight in mice. The study was carried out by various hematological and serological tests. The assessment of immunomodulatory activity on specific and non-specific immunity was studied by administration of test extract. The method of cyclophosphamide-induced immunosuppression was employed with slight modification to study the immunomodulatory potential of the extract. Plant extracts were administered by oral feeding canula to the test groups (groups III-VI), group I (control animals) and group II (model control animals) received same volume of normal saline (0.2 ml). Humoral antibody response to SRBC measurement of antibody titer by hemagglutination reaction was done. The mice belonging to the all groups were antigenically challenged with SRBC (0.5×10^9 cells/ml/100 g) on 10th day intraperitoneally. Cellular immune response (Foot pad reaction test) the edema was induced by injecting SRBC (0.025×10^9 cells) in left paw, and 0.025 ml of saline was injected in right paw. **Results** The plant extract showed protective effects on humoral immunity. The change in percentage deduction in footpad volume was also found significant ($P < 0.001$). Administration of extract remarkably ameliorated both cellular and humoral antibody response. **Conclusion** It is concluded that the test extracts possessed promising immunostimulant properties. But, the alcoholic extract is more potent than aqueous extract in producing delayed type hypersensitivity response.

KEYWORDS

Hematological and serological tests . immunomodulatory activity . *Picrorrhiza kurroa* . rhizomes

REFERENCES