

Ameliorating Effects of Rosemary and Costus on Blood-Associated Toxicity in Ehrlich-Bearing Mice Treated with Cisplatin

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Abstract : Background: Rosemary (ROLE) and costus (SLRE) have been established to show antioxidant effects. Aim: This study aimed to evaluate the ameliorating effects of ROLE and SLRE on the side effects induced by cisplatin (CIS) in tumor-bearing mice. Materials and Methods: Extracts of ROLE and SLRE were examined for their phytochemical activities. To evaluate their anti-tumor effects, mice were inoculated intraperitoneally (i.p.) with 2.5×10^5 Ehrlich ascites carcinoma (EAC) and then treated i.p. with CIS at days 3-7 and with ROLE (dose) or SLRE (dose) at days 3-14. Mice were sacrificed on day 14 for CBC and T-cell analyses. Results: Phytochemical analysis revealed that both ROLE and SLRE showed similar antioxidant activities. Treatment of EAC-bearing mice with CIS-induced antitumor efficacy of about 90%. Treatment with CIS in combination with ROLE or SLRE did not further enhance the antitumor activity of CIS. However, co-administration of ROLE or SLRE with CIS significantly increased the antitumor efficacy of CIS. Flow cytometric analysis showed that the numbers of CD4+ and CD8+ T cells were decreased in EAC-bearing mice after treatment with CIS. Treatment with both ROLE and SLRE improved the number of these cells. Conclusion: Combinatorial treatment with rosemary and costus can enhance the antitumor activity of CIS

Keywords : CBC, cisplatin, costus, rosemary

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