

Effects of oyster extract on 5-Fluorouracil (5-FU) induced toxicity in rat

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Oyster (*Crassostrea gigas*) contains abundant nutritional elements, including glycogen, vitamins, zinc and taurine. It is reported that oyster extract exhibited several physiological activities. In this study, the symptom relieving effects of oyster extracts on 5-fluorouracil (5-FU) induced toxicity in rats was examined mainly on gastrointestinal toxicity and myelotoxicity.

Male SD rats were used in this study. Test groups were as follows, control, 5-FU, 5-FU and oyster extract (200 and 500 mg/kg/days). Oyster extracts were administered for 21 days in rats. 5-FU was administered for 5 days after 14 days of oyster extracts administered. After termination of administration of oyster extracts, recovery period was established for 3 days, and autopsy was performed.

No deaths were observed throughout the study period. Regarding body weight and food intake, significant reduction suppression and dose-dependent reduction tendency was observed. In the hematological examination, influence was observed on the white blood cell count, red blood cell count, hemoglobin amount and hematocrit value due to administration of 5-FU.

Evaluation of intestinal mucosa by histopathological examination, mucosal thickness, villous height and crypt thickness were dose-dependent or high trend without dose-dependence. In addition, a suppression tendency was also observed for mucosal atrophy of the duodenum due to administration of 5-FU. From the above results, it was suggested that oyster extract is effective in alleviating gastrointestinal toxicity by 5-FU.