Acute Toxicity Assessment of Ophiocordyceps Sinensis Fermentation Preparation Using the Wistar Rat

Shih-Liang Chang, Bing-Rong Chi, Yi-Jheng Hong
E-mail: slchang@mail.dyu.edu.tw

ABSTRACT

Background: Ophiocordyceps sinensis (Os) are known to have anti-inflammatory, anti-oxidation, anti-tumor, anti-fatigue effect. That has many health products in market, but the evaluation of safety is very import before the marketing. In this study, the Os fermentation preparation was subjected to the acute toxicity assessment of the safety in Wistar rats. Materials and methods: Feeding Os fermentation preparation for Wistar rats were divided into three groups (0, 1, 5 g/kg-BW) of difference doses randomly. After administered once fed, continuous observation acute toxicity and record physiological responses values during 14 days and the following items were recorded: (1) clinical observation: observation twice a day to determine the mortality rate, general toxic symptoms recorded daily; (2) growth efficiency, food & water intake; (3) clinical and pathological tests: blood tests, serum biochemical tests, urine tests. (4) histopathological examination: dissection test, visceral weight, histopathology. Results: After treated Os two week the weight, food and water intake were no significant difference among three groups. Also, blood biochemistry level (glutamic-oxaloacetic transaminase (GOT), glutamic-pyruvic transaminase (GPT), blood urine nitrogen (BUN), and creatinine (Cr) and complete blood count (CBC) (white blood cell, red blood cell, hemoglobin, hematocrit, platelet ..etc) were no significant difference among three groups. Furthermore, organ by H&E stain we investigate that heart, liver, kidneys with pathological section 400X that no organ impaired was found. Conclusion: As the data showed, after once fed of three different doses in two weeks. There was no significant acute toxicity shown in physiological value (food & water intake), biochemical parameters, complete blood count, tissue and histopathology examination in this study. Keyword: Ophiocordyceps sinensis、Acute Toxicity Study、Security Assessment

REFERENCES