

EVALUATION OF ACUTE ORAL TOXICITY OF HORSE CHESTNUT (AESCULUS HIPPOCASTANUM) IN BALB-C MICE

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INTRODUCTION: Horse chestnut (*Aesculus hippocastanum*) is a phytotherapeutic widely used in folk medicine. Its active ingredient is escin, which has anti-edematous and anti-inflammatory properties. Although its efficacy is widely documented, studies involving its broad safety remain scarce. Therefore, the present study aimed to evaluate the toxicity of horse chestnut through clinical and behavioral analyses, in addition to biochemical and hematological parameters. **OBJECTIVE:** To evaluate the acute oral toxicity of horse chestnut in Balb-c mice. **MATERIAL AND METHODS:** Male Balb-c mice (20 grams) were used and separated into 5 experimental groups (saline vehicle - PBS and reference horse chestnut (HC) 5, 50, 300 and 1000 mg/kg). The animals received a single oral dose and were monitored daily for 14 consecutive days to assess clinical and behavioral changes. During the 14 days of monitoring, weight gain, clinical and behavioral signs were recorded. Twenty-four hours after the last day of observation (15th day), the animals were euthanized and their blood collected for biochemical and hematological analysis. **RESULTS:** No significant changes were observed in the hematological parameters. However, in the biochemical parameters, a significant increase in creatine kinase levels was observed in the groups treated with doses of 50 and 300 mg/kg, when compared to the control group (PBS). In addition, the animals in the HC group at the dose of 1000 mg/kg presented the following behavioral changes: piloerection, dacryorrhea and ptosis. **CONCLUSION:** Based on the results presented, the elevation of creatine kinase levels is indicative of damaging processes in the skeletal and/or cardiac muscles. However, to confirm this hypothesis, a more in-depth histological analysis is necessary to investigate damage to these target organs. Regarding the changes observed in clinical signs, the presence of ptosis, dacryorrhea and piloerection are indicative that the substance, at the highest dose tested, presented toxic effects; however, these data cannot be evaluated in isolation. Therefore, further studies are necessary to corroborate this hypothesis.

Keywords: Horse chestnut; Acute toxicity;herbal medicine.