



Triketone toxicity: A report on two cases of sulcotrione poisoning

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INTRODUCTION:

Sulcotrione is a herbicidal agent belonging to the family of triketones. Sulcotrione herbicides are used for weed control in maize and flax crops. To date, no cases of human poisoning had been reported in the literature linked to different herbicidal agents in the triketone family. We report here on two cases of the voluntary ingestion of this substance in the form of the branded product Mikado(TM), which were recorded by the Angers Poison Centre.

CASE REPORT:

Both cases of voluntary ingestion constituted attempted suicide, and involved two men aged 30 and 37 years. Their symptoms linked to sulcotrione were limited to vomiting, despite elevated plasma concentrations of sulcotrione. In one case, hypertyrosinemia has been demonstrated. The outcome was favourable in both patients and at follow up, no ocular disorders were observed. In the second case, hypotension and transient renal failure could be linked to the concomitant ingestion of chlorophenoxy herbicides.

DISCUSSION:

In animal toxicity studies, sulcotrione inhibit 4-hydro-phenylpyruvate dioxygenase leading to hypertyrosinemia and corneal opacities. In both cases, no ocular disorders were observed despite hypertyrosinemia in one case. These case reports were consistent with the animal toxicology findings concerning triketones, and particularly their relative safety in mammals following acute poisoning. However it seems prudent to monitor plasma tyrosine concentrations and to screen prospectively for corneal deposits if further acute intoxication events occur.

Résumé en anglais

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