

# Accidental methyl salicylate poisoning in two adults

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## Introduction

Methyl salicylate (MS) is widely available as a component in many over-the-counter brands of ointments, lotions, liniments and medicated oils intended for topical application [1]. Among the most potent forms of methyl salicylate is oil of wintergreen (98% MS). Salicylate ointment has a very high concentration of MS. One teaspoon contains 7000 mg MS, equivalent to 90 baby aspirin tablets. We report two adults presenting with accidental MS poisoning. They were admitted with a bottle containing 98% MS, which they drank assuming it was ethanol.

## Case report

Patient 1 was a 32-year-old man, who was admitted with a history of a sudden syncopal attack after consuming a small amount of MS. His breath smelled of MS. He was restless and hyperventilating. Pulse rate was 140 per minute and blood pressure (BP) was 90/60 mm Hg. Soon after admission he developed a generalised tonic clonic seizure. Oxygen saturation was 100%, Glasgow Coma Scale (GCS) was 6 and arterial blood gas pH was 7.15. Within two hours, while waiting for haemodialysis (HD), he developed a cardiac arrest and died. The autopsy showed congestion of organs. The smell of MS was present in the gastro-intestinal tract. Blood analysis detected the presence of MS, which was not quantified.

Patient 2 was, a 42-year-old man who had ingested one mouthful (about 10 ml) of MS. He was admitted with burning epigastric pain. The vomitus had the characteristic smell of MS. He was anxious, restless and tachypnoeic. He had a generalised tonic clonic seizure, after which, he became delirious and had to be restrained physically. The GCS was 13. Pulse rate was 120 per minute, BP was 130/80 mm Hg, respiratory rate was 36 per minute and oxygen saturation was 93% while on oxygen 6 l per minute. He had bilateral basal fine end-inspiratory crepitations and epigastric tenderness. Gastric lavage aspirate smelt of MS. He was given activated charcoal. Convulsions were controlled with intravenous diazepam and midazolam infusions. Investigations showed

metabolic acidosis and respiratory alkalosis characteristic of salicylate poisoning. Hypoglycaemia, hypokalaemia, and hyponatraemia were corrected. White cell count was 20,100/mm<sup>3</sup> with 89% neutrophils. Urine pH was 6.0. Urinalysis showed ketones, 100 mg/dl protein, pus cells 10-12/high power field (hpf) and red cells 100/hpf. There were few granular casts. Liver profile was aspartate transaminase = 665 u/l, alanine transaminase = 233 u/l, alkaline phosphatase = 243 u/l, and total bilirubin = 11.7 umol/l. Sodium bicarbonate in 5% dextrose infusion was commenced at 100 ml/hour to achieve an alkaline diuresis. Patient underwent haemodialysis about two hours after admission. After haemodialysis, the patient's conscious level improved. He went home after four days.

## Discussion

Haemodialysis is widely advocated in managing severe MS intoxication. Patients with severe poisoning may require extended durations of HD [2]. Experimental and clinical studies confirm that urinary alkalinisation increases MS elimination [3]. Deaths of two 4-year-old boys who ingested an unknown quantity of MS liniment have been reported in Sri Lanka before. Despite gastric lavage, anticonvulsant therapy and forced alkaline diuresis, they died within 24 hours [4].

## Conflicts of interest

We declare that there are no conflicts of interest.

## References

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