



TRANSFORMING TOXICOLOGY LANDSCAPE FOR SAFER AND SUSTAINABLE TOMORROW

## POSTER PRESENTATIONS

### [ID-P#003] The Thallium Revenge

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**Background:** Thallium was historically used as a rodenticide, but it has been banned in many countries because of several cases of accidental as well as criminal poisonings of humans. Globally known as 'poisoner's poison'. Thallium is notorious and complex for the multi system involvement because of its cellular mimicry for potassium and also avidly bind to sulfhydryl groups.

**Case reports:** Here, we report two cases of thallotoxicosis, where in the first case, patient was a victim of attempted homicidal poisoning and in second case, patient ingested thallium with suicidal intention after poisoning other family members. Both patients had significant high levels of thallium detected in blood and urine.

#### Case 1

##### DAY BLOOD VALUE URINE VALUE

23/10/2023 432 mcg/L 2717 mcg/L

25/10/2023 130 mcg/L 959 mcg/L

28/10/2023 58 mcg/L 613 mcg/L

03/11/2023 36 mcg/L 374 mcg/L

09/11/2023 26 mcg/L ---

#### Case 2

**Day of consumption of thallium** 5 10 13 10 20 28 Date 26/3/21 31/3/21 3/4/21 10/4/21 20/4/21 28/4/21

Blood 514 µg/L 386 µg/L 382 µg/L 253 µg/L 223

µg/L 92 µg/L

Urine 4658 µg/L 5240 µg/L 1722 µg/L 5420 µg/L

575 µg/L 827 µg/L

They were symptomatic, managed with Prussian blue, hemodialysis and other symptomatic measures by a multidisciplinary team approach. Both patients were discharged in hemodynamically stable condition.

**Conclusion:** Early recognition of the characteristic signs and symptoms of thallium poisoning, such as a painful ascending sensory neuropathy and alopecia, followed by prompt initiation of safe and appropriate therapy will substantially improve the prognosis. The treatment modalities include orogastric or nasogastric lavage, oral activated charcoal followed by either multiple-dose activated charcoal (MDAC) or Prussian blue, hemodialysis or combined hemodialysis and hemoperfusion.(1-6) We can see that thallium poisoning is treatable if the patient comes in contact of healthcare early.