

## 116 UNRECOGNIZED SEVERE THALLIUM POISONING

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**Objective:** In former times thallium poisoning was frequent in many countries as a result of ingestion of rodenticides. Therefore WHO spoke against further use in 1973. Contemporary thallium poisoning has been rare in Germany. We describe a case which was diagnosed late. **Case Report:** A 14-year-old female was admitted with headache, abdominal and dorsal pain. Her general condition deteriorated and a loss of body-weight about 4 kg was noted. The patient complained of dizziness and muscular weakness of the lower limbs. In addition she reported numbness in the anogenital region. Proteinuria and ketonuria were discovered. All other laboratory and analytical findings were in the normal range. The first tentative diagnosis was anorexia nervosa. Increased blood pressure was treated first with atenolol, later in combination with nifedipine. Numbness, weakness, and piercing pain in the lower limbs as well as genital dysaesthesia intensified during the first period of hospital stay. Nuclear magnetic resonance imaging of head and lumbar spine was unrevealing. Cerebrospinal fluid composition was normal. Finally alopecia areata appeared within one week. The patient's disorder was now diagnosed as a psychosyndrome. The patient rejected further diagnostic and therapeutic measures and left the hospital. Five days later she was readmitted because of dramatic weight loss and almost complete paresis of lower limbs, which further progressed to tetraparesis. Acute axonal polyneuropathy with complete degeneration was diagnosed electrophysiologically. The EEG indicated degenerative and chronic inflammatory processes. At this time analysis of thallium in serum and urine was performed and high levels were found (serum: 300 µg/L, normal range <0.6 µg/L; urine: 2236 µg/L, normal range <0.7 µg/L). Immediately treatment with Prussian blue (potassium ferric ferrocyanide; Anidotum Thallii Heyl) was started (dosage initial 3000 mg, followed by 250 mg/kg/d divided in 2 to 4 doses orally). The thallium excretion was increased effectively. One month later the thallium level was still slightly elevated (serum: <5 µg/L; urine: 22 µg/mL). The clinical state was substantially improved in the same time. The hypertension disappeared with decreasing thallium level. The patient's hair began to grow again. The tetraparesis receded gradually. The origin of this thallium poisoning is still unclear. **Conclusion:** The patient developed signs of subacute thallium poisoning. Initial symptoms were misinterpreted because the complete toxic differential diagnosis was not taken into account. The initial toxicological analysis was incomplete. When Prussian blue is administered by mouth it forms a non-absorbable complex with thallium during the enterohepatic circulation of the metal which is excreted in the faeces. This measure enhances elimination.