

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

- (1) CHEMICAL: Trichlorfon
- (2) TYPE OF FORMULATION: Unspecified
- (3) CITATION: Marchenko, L.I. 1973 [Household poisoning by trichlorfon, complicated by polyneuritis.] Vrach. Delo 4:116-117 (Translated from Russian)

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(32A-0134)

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- (6) TOPIC: Case History

(7) MATERIALS AND METHODS:

- (a) Poisoning victim: The patient was a 36-year-old woman.
- (b) Poisoning incident: She drank trichlorfon with the intention of committing suicide.
- (c) Amount of exposure: About 50 ml of trichlorfon
- (d) Route of exposure: Oral
- (e) Symptoms: At the time of admission to a hospital, the patient was extremely pale and unconscious. The extremities reacted to pin pricks with movement. The skin was pale and moist. The lips were cyanotic and hypersalivation was present. The pulse was 88 beats per minute and rhythmic with slight accumulation. Arterial pressure was 145/90 mm Hg. The heart sounds were muted. Respiration was 32 per minute and gurgling was present. The lungs had large bubble-like rales. The stomach was soft. The liver and spleen were not enlarged. The mouth contained white foam. The pupils were contracted and had no reaction to light.

The tendon and periosteal reflexes from the extremities were decreased, while the patellar and Achilles reflexes were not evident. Neither were the abdominal reflexes evident. The muscles on the back of the head were "moderately" rigid. The Kernig sign was negative. Fibrillar twitching was noted in the muscles of the face and extremities. Defecation was spontaneous. The stool was fluid and profuse.

The following day, after admission, the patient's condition had improved significantly; she had returned

to consciousness and somnolence had disappeared, as had the nausea and diarrhea. The reduction in vision began to be evident, and the pupils remained contracted. There were no meningeal signs. The patient's overall condition improved day by day.

Sixteen days later, pains began to be noticed in the muscular gastrcnemius, a high degree of fatigue appeared in the arms and legs, and there was a burning sensation in the hands. The patient gradually lost the capacity for movement in the ankle and wrist joints. No tendon reflexes were evident. Disorders of the distal type were present, along with sensitivity of the high "glove" and "legging" type. A high level of atrophy was present in the muscles of the wrists, forearms, and skins, especially of the peroneal type, together with dangling of the feet. The hand took on "claw-like" shape.

The patient was discharged 3 months later. When examined 2 and 3 years later, she said that she felt well. She returned to her previous job. Mild atrophy remained in the muscles of the feet and the mobility of the toes was restricted.

(f) Treatment: The patient was treated for acute poisoning with 0.1% atropine sulfate solution by subdermal injection of 1 ml, every 2 hours for 1 day and by drop-wise intravenous administration of 4 ml. For the purpose of detoxication, 2,000 ml of physiological solution was introduced

by drops with 2 ml of a 5% solution of ascorbic acid, 1 ml of a 5% vitamin B solution, 1000 ml of a 5% glucose solution, 10.0 ml of a 10% calcium chloride solution, and 100 mg of hydrocortisone. The patient was given oxygen, humidified by alcohol vapors, intranasally. In addition, cardiac measures (unspecified) were used, as well as prednisolone, intramuscular penicillin, pumping the stomach, and diphenylhydramine.

Treatment for the toxic polyneuritis was vitamins B₁, B₆, B₁₂, and B₁₅, prednisolone, ATP, neostigmine methyl sulphate, strychnine, ereuite, anilac, nicotinic acid, dibasol, cocarboxylase, glutamic acid, aloe, massage, physical therapy, paraffin applications, and electrophoresis with neostigmine methyl sulphate.

(g) Clinical tests: The blood indices on the day of admission were: erythrocytes 4,700,000, hemoglobin 14 gm%, chromatic index 0.9, leukocytes 6,100, eosinophils 1%, band neutrophils 2%, segmented neutrophils 56%, lymphocytes 35%, monocytes 6%, erythrocyte sedimentation rate 3 mm per hour.

Urinalysis on the day of admission showed a specific gravity of 1,020 with no protein or sugar present.

A diagnostic spinal puncture was also made on the day of admission. The fluid pressure was 220 ml of water column. The fluid was clear, had a protein content of

^{by drops}
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Microscopically, there were 0 to 1 leukocytes in the field of vision.

cont: Not applicable

- (8) REPORTED RESULTS: The acute poisoning was followed 16 days later by toxic polyneuritis. After 3 months of treatment, the patient was discharged. She returned to her previous job. *Three* At ~~3~~ years later, mild atrophy remained in the muscles of the feet, and the mobility of the toes was restricted.

- (9) TECHNICAL REVIEW TIME: 2.5 hours