

US EPA ARCHIVE DOCUMENT

DATA EVALUATION RECORD

- (1) CHEMICAL: Trichlorfon
- (2) TYPE OF FORMULATION: Unspecified
- (3) CITATION: Lastovetskii, V.V., and Tarashchuk, V.V. 1967.
[Neuropsychic changes in persons suffering from acute poisoning with organophosphorus insecticides.]- Psikhiat. im S.S. Korsakova 67:1222-1227 (Translated from Russian)

(4) REVIEWED BY:

Susan Brett
Staff Scientist
Clement Associates
Washington, D.C.
(202) 333-7990

Signature: _____

Date: _____

Connie Stone
Staff Scientist
Clement Associates
Washington, D.C.
(202) 333-7990

Signature: _____

Date: _____

(32B-0044)

(5) APPROVED BY:

Signature: _____

Date: _____

- (6) TOPIC: This study has information pertinent to discipline toxicology, topic human exposure. It relates to none of the Proposed Guidelines data requirements.

(7) CONCLUSION: No conclusion regarding the long-term neuro-
psychic changes observed after trichlorfon poisoning could
be drawn from the paper, since 52 of the 53 human victims
described had been poisoned with methylmercaptophos and
data on the one trichlorfon poisoning case was not described
separately. In addition, dosages and routes of exposure
were not given.

CORE CLASSIFICATION: Not applicable

(8) MATERIALS AND METHODS: The investigators studied 52 patients
who had suffered from acute poisoning with methylmercap-
tophos and one female patient who had been "acutely poisoned"
with chlorophos. The victims included 50 women and 3
men, ranging in age from 22 to 55 years. The dosages
and routes of exposure were unspecified. The methylmer-
captophos poisonings occurred 1 year before the study
and the chlorophos poisoning occurred 3 years before the
study.

Data on individual patients were not provided. The
investigators compiled group data on neurological and
psychopathological symptoms. The method of determining
these symptoms was unspecified.

(9) REPORTED RESULTS: The following generalized complaints
were most frequently reported. The number of patients
reporting these complaints is also indicated.

<u>Complaint</u>	<u>Number of Patients</u>
Arm and leg pain	46
Headache	44
Rapid fatigue, general weakness	18
Tendency to cry	19
Impaired memory	15
Pain in epigastric and heart region	17
Painful lower liver margin	49

The following are the "neurological symptoms" most frequently reported. The number of patients reporting such symptoms is also given.

<u>Symptom</u>	<u>Number of Patients</u>
Asymmetry of the nasolabial fold	40
Scanning speech	40
Positive Romberg sign	23
Absence of any vibrational sensitivity	19
Heightened peristaltic reflexes	18
Absence of abdominal reflexes	18
Finger tremors upon hand extension	14
Painful, temperature responsive hemiageusia	11
Intentional tremor during nose-finger test	10

The following were frequently reported "psychopathological symptoms." The number of patients reporting such symptoms is also indicated.

<u>Symptom</u>	<u>Number of Patients</u>
Increased fatigue and rapid exhaustion	48
Impaired perception and memory recall	28
Phobias of being alone, heights, darkness	10
Fixed ideation and mental rumination	10
Stereotypic movements	9
Hypnagogic hallucinations	9
Egocentrism and egoistic tendencies	9
Hypochondriacal conditions	9
Lability in emotional affective sphere	8

The blood abnormalities noted were an increase in lymphocytes in 7 patients, an absence of eosinophils in 6 patients, eosinophilia in 2 patients, and lack of eosinophils and stab neutrophils in 4 patients. The blood picture was "unchanged" in 33 of the patients. An increase in the amount of bilirubin in the blood, dysproteinemia, and a positive "Takata-Ara reaction" were found in "some" of the patients.

- (10) DISCUSSION: The main problem with this study in terms of its relevance to the toxicity of trichlorfon was that only one of the patients in the study group had been poisoned

MRID:

Page 5 of 5

with the chemical. Her specific long-term symptoms were not separately described. In addition, the dosage and route of exposure were not specified. Thus, given that 52 of the 53 cases described had been poisoned with methylmercaptophos, it would be unreasonable to generalize the results to trichlorfon intoxication.

(11) TECHNICAL REVIEW TIME: 5.0 hours