

Acute Human Self-Poisoning with the Substituted Aromatic (Organochlorine) Fungicide Chlorothalonil - Tetrachloroisophthalonitril

S.Shahmy¹, T.Suhitharan¹, L.Sriskandarajah¹, A.H Dawson.^{1,2}

¹South Asian Clinical Toxicology Research Collaboration, University of Peradeniya,

Peradeniya. ²School of Population and Health, University of Newcastle, Australia

Objective: Chlorothalonil is a broad spectrum *tetrachloroisophthalonitril* (Organochlorine) fungicide that disturbs the glycolysis & energy production by conjugation with thiols from germinating fungus cells. Chlorothalonil has been produced since the 1960s. Regulatory tests showed it to have the potential to be a weak skin sensitiser. It is well absorbed orally and via inhalation but poorly absorbed dermally. There have been no published case reports of poisoning due to ingestion of chlorothalonil. We report the case series of chlorothalonil poisoning due to self ingestion and a single case of occupational inhalation exposure. Previous publications of human exposure are limited to 5 confirmed (patch testing) case reports of dermatitis and a single case report of anaphylaxis and two confirmed case reports (inhalational testing) of asthma due to occupational exposure. **Methodology:** Clinical and biochemical data were collected prospectively from all patients with chlorothalonil poisoning as part of a multicentre observational cohort of human poisoning in Sri Lanka. **Case series:** There were six patients with self ingestion and one patient with occupational inhalation of chlorothalonil. All cases were reported to a single study centre situated in the tea districts of the central hills of Sri Lanka. Most common clinical symptoms following self ingestion were burning sensation on mouth and throat, difficulty in swallowing, burning sensation in epigastric region and vomiting. One patient developed mild oral ulceration. One patient developed a self limited (<2 minutes) single episode of generalized tonic clonic seizure. The single patient with occupational inhalation complained of difficulty in breathing with no additional sequelae. GCS was normal in all patients except for one patient who had a seizure (GCS13/15) and another with mild oral ulcer GCS (11/15). All patients remained haemodynamically normal. All patients received to supportive care and the median hospital stay was 2 days. There were no deaths. **Conclusions:** Deliberate self harm with chlorothalonil ingestion is rare. Human toxicity appears to be mild but larger case series are required.