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DELAYED NEUROTOXICTY OF AN ORGANOPHOSPHATE INSECTICIDE MARKETED IN SRI LANKA

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This paper draws attention to a new organophosphate insecticide marketed in Sri Lanka which appears to have delayed neurotoxic effects in man. Ten isolated cases of paralysis due to acute polyneuropathy developing after exposure to this compound are presented. Three of the patients are agricultural workers who were exposed to the poison when using it as an insecticidal spray. The other seven had ingested the insecticide deliberately with suicidal intent.

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The insecticide responsible for the poisoning was found in bottles labelled " Tamaron ". " Tamaron " sold in Sri Lanka is a local formulation containing a solution (60% w/v in ethylene glycol monomethyl ether) of methamidophos with added dispersing agent (5%). The trace of material remaining in the bottle from a patient which has been identified as a typical formulation of " Tamaron " contained methamidophos and small amounts of several related compounds as impurities.

Although methamidophos has been registered as in insecticide in a number of countries since 1969 no reports of delayed neurotoxicity due to this compound have been made hitherto. Preliminary experimental studies to evaluate and compare the delayed neurotoxicity of technical grade methamidophos and of the formulated material contained in " Tamaron " marketed in Sri Lanka suggest that the latter is more neuropathic than the equivalent concentration of the purer material. Whether these differences can account for the apparent high incidence of neuropathies in Sri Lanka compared with other countries or whether some nutritional, genetic or other factor is involved is not yet clear. However, this report emphasises the necessity for a more effective monitoring system in Sri Lanka to detect and minimize the adverse effect produced by agro-chemicals.