

Nonoccupational Determinants of Plasma DDT and p,p'-DDE in Men from Chiapas, Mexico

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Abstract:

A cross-sectional study was conducted to evaluate nonoccupational biological exposure to 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane (DDT) compounds and to identify the main factors associated with such exposure in a malaria endemic region in Mexico. Capillary gas column chromatography was used to determine levels of p,p'-DDT and its metabolites in plasma. The mean age of the 144 male participants was 28 yr. Mean p,p'-DDE (1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene) and p,p'-DDT levels were 203.5 µg/l and 67.4 µg/l, respectively. Those whose houses had been sprayed for malaria control had much higher p,p'-DDE levels ($p < 0.001$). High levels of chlorinated pesticides were found despite being banned in Mexico for agricultural and public health use. Findings demonstrate the role of antimalarial campaigns as a major contributing factor for high DDT plasma levels.

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contamination, DDT, malaria, Mexico, reproductive health

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