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THE POISON PEN

Further Study is Needed to Assess Ototoxicity from Organophosphates and Paraquat

Farzad Gheshlaghi

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I read with interest the study conducted by Jayasinghe et al. entitled, "Effects of Deliberate Ingestion of Organophosphate or Paraquat on Brain Stem Auditory-Evoked Potentials" published in your journal [1]. The authors concluded there were no significant lesions in the auditory pathway in organophosphate (OP)- or paraquat (PQ)-poisoned patients compared to the matched controls; they also speculated the generation of reactive oxygen species within the perilymphatic space following ingestion of OP or PQ may not be enough to cause lesions in the auditory pathway.

However, inclusion into their study and subsequent analysis did not account for severity of poisoning by OP or PQ, and it was not clear how symptomatic patients were at first brainstem auditory evoked potential (BAEP) testing (1 week after exposure) or at repeat testing. If poisoning was not severe enough, that could account for no significant lesions in the auditory pathway. Further study is needed to follow-up this interesting pilot study: BAEP test should be performed on admission in patients with OP or PQ poisoning and BAEP testing should be repeated every other day in the first week to understand better how OP and PQ poisoning may or may not be associated with ototoxicity.

Reference

1. Jayasinghe SS, Pathirana KD (2011) Effects of deliberate ingestion of organophosphate or paraquat on brain stem auditory-evoked potentials. Journal of Medical Toxicology 7:277–280

F. Gheshlaghi (✉)
Forensic Medicine and Clinical Toxicology, School of Medicine,
Isfahan University of Medical Sciences,
Isfahan, Iran
e-mail: gheshlaghi@med.mui.ac.ir