

The change of plasma cholinesterase in acute organophosphate poisoning patients

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Objective: This study was carried out to assess the change of plasma cholinesterase during the treatment of organophosphate poisoning. **Method:** Organophosphate poisoning patients were treated with atropine and high dose of pralidoxime. Plasma cholinesterase activity was measured every 12 hours. Assays were done on an automatic biochemical analyzer (Hitachi analyzer 912) using the method published by Knedel and Bottger in 1967; the Normal Level: 5300 - 12900 UI/L-37°C. **Results:** The number of patient in our study was 94. At the time of admission, the mean of plasma cholinesterase activity was 12.8% (of Normal Level Lower) (SD: 14.3; range: 1.3 - 83.6), increased to 60.8% (SD = 32.3; Range: 3.4 - 156.4) at the time of discharge. The patients were received pralidoxime therapy with mean dose of 21.8 gram (SD12.4; Range: 0.5 - 54.5). Plasma cholinesterase was reactivated with speed of 1.7% for the first 12 hours therapy then 9.35 % per day for every day (SD = 13.58; maximum: 70.3%). **Discussion:** Although plasma cholinesterase activity has not always reflected clinical severity of organophosphate poisoning, it has been useful to monitoring the progressio of organophosphate poisoning undergoing treatment because of its very fast reactivation. **Conclusion:** Under the effect of pralidoxime therapy, plasma cholinesterase reactivated fast and can be good parameter to estimate the progression of organophosphate poisoning.