



Paraquat exposure through breastfeeding: A case series

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Objective: Paraquat poisoning by oral route causes high fatality. However, the data of paraquat exposure through breastfeeding is rarely available and the laboratory result of the paraquat concentration in the breast milk is very limited. Here we report the cases of paraquat exposure through breastfeeding consulted the Ramathibodi Poison Center (RPC).

Cases Report: Two paraquat exposure cases were consulted with RPC. The 1st case was a 7-month-old male who was breastfed for many times from his paraquat-intoxicated 25-year-old mother. His mother's urine dithionite test was positive (blue) but the child's was negative on the second day after breastfeeding, respectively. Both mother and son developed systemic toxicities from paraquat. His mother received intravenous cyclophosphamide, dexamethasone, vitamin C, oral vitamin E and hemodialysis while the infant was only treated by the supportive measures. They both survived and were discharged from the hospital. The paraquat concentration in the breast milk on the second day after ingestion by High performance liquid chromatography method was not detectable. Our laboratory's limit of detection of the paraquat concentration in the breast milk sample was 1 mg/mL. The 2nd case was a 3-month-old female who was fed breast milk six times by her 18-year-old mother, who had ingested paraquat about 11 hours prior to hospital visit. The mother's urine dithionite test was positive and that of the infant was weakly positive (pale blue-green) at presentation. The infant's creatinine increased on the third day which was suspected to be due to systemic toxicity. She and her mother were treated by immunosuppressive drugs and eventually discharged.

Conclusion: Although, paraquat was not detected in the breast milk sample, both children who ingested breast milk on many occasions developed systemic toxicity and one had positive dithionite test. Therefore, paraquat should be present in the breast milk in very small amount and ingestion of a large amount might cause paraquat poisoning.