

## **Evaluation of Histopathological Changes in Aluminum Phosphide Fatal Poisoning**

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**Objective :** Aluminum phosphide (AlP) is a solid fumigant widely used in Iran as a grain preservative(1). AlP poisoning may lead to multi-organ dysfunction(2). This study examines histopathological changes of human organs in cases with aluminum phosphide fatal poisoning. **Methods :** The cases with aluminum phosphide fatal poisoning in Tehran Legal Medicine Center over 12 month period starting in March 2006, were studied. Necropsy was performed for all cases and liver, lung, brain, kidney and spleen were collected from all cases and fixed in formaldehyde solution (37% formalin). Tissue specimens were taken from organs and processed by routine histological method. Then any histopathological changes were recorded by pathologist. **Results :** In gross examination, almost all the vital organs were found to be congested. In microscopic study, the most frequent histopathological findings in liver were central venous congestion, degeneration of hepatocytes and mononuclear infiltration. In lung, alveolar thickening, and dilated capillaries were detected. Findings in the brain tissue revealed degenerated Nissel granule in the cytoplasm and deeply stained degenerated eccentric nucleus in brain cortex. Changes in the kidney included glomerulus's and intraparenchymal congestion. **Conclusion :** These findings indicated that histopathological changes are common in aluminum phosphide fatal poisoning. **Reference :** 1. Shadnia, S, Mehrpour, O, Abdollahi, M. Unintentional poisoning by phosphine released from aluminum phosphide. *Hum Exp Toxicol* 2008; 27: 87–89. 2. Brautbar, N, Howard, J. Phosphine toxicity: report of two cases and review of literature. *Toxicol Ind Health* 2002; 18: 71–75.