

COCONUT OIL AND ALUMINIUM PHOSPHIDE POISONING:

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BACKGROUND: Poisoning by suicidal or accidental ingestion of aluminium phosphide (AIP) is a frequent medical emergency seen all over the world. AIP is a highly toxic, easily available and low cost rodenticide. Upon exposure to moisture, it liberates phosphine gas, which is absorbed rapidly by inhalation, dermal and gastrointestinal route. Phosphine rapidly inhibits mitochondrial respiration and has cytotoxic action. Unfortunately no specific antidote is available against it till date. Coconut

oil has been reported to inhibit the release of phosphine gas from aluminium phosphide due to

physicochemical properties of aluminium phosphide and nonmiscibility with fat.

OBJECTIVE: To study the role of coconut oil in the management of aluminium phosphide poisoning.

STUDY DESIGN: Ten cases admitted to the emergency department with the diagnosis of Alphas poisoning were included in the study. Inclusion criteria were ingestion of more than 5 tablets of aluminium phosphide. Clinical examination and investigations were performed to assess patient's status. Diagnosis was confirmed by silver nitrate test. All patients were managed by early gastric lavage along with administration of coconut oil, charcoal powder, baking powder, kmno₄ through ryle's tube. Intravenous fluids, magnesium sulphate, proton pump inhibitor were given to all patients. IV inotropes and antiarrhythmic were given as required.

RESULTS: Out of ten cases enrolled 6 cases survived, five male and one female. Average period of stay in hospital was 6 days. All cases that died were in shock at presentation, required mechanical ventilation and finally developed multiple organ failure. Two patients among the survival group required mechanical ventilation. Mortality in our study was 40%.

DISCUSSION: Coconut oil was the new addition to routine protocol for the management of alphas poisoning. Mortality shown by our study was much less than the studies using routine protocol. Use of coconut oil might be responsible for this significant reduction in mortality.

CONCLUSION: Coconut oil may be helpful in the successful management of AIP poisoning. Further large studies are required to establish the place of coconut oil in the routine management protocol for AIP poisoning.