

Aluminium Phosphide Ingestion Leading To Esophageal Stricture Formation

Kochhar R (1), Dutta U (1), Bhagat S (1), Poornachandra KS (1), Ragesh (1), Nagi B (1), Singh K (1). 1. Department of Gastroenterology, Postgraduate Institute of Medical Education and Research, Chandigarh 160012, India

Introduction : Aluminium phosphide (ALP) is a solid fumigant pesticide which is often lethal when ingested because of competitive inhibition of respiratory chain enzymes.

Recently it has been reported to lead to esophageal stricture formation. **Aim :** To study the clinical profile and response to treatment of ALP induced esophageal strictures.

Materials and methods : Data on all patients of ALP induced strictures seen between January 2004 and June 2008 was retrieved and analyzed for clinical parameters and response to endoscopic dilatation.

Each patient was subjected to barium swallow to define the site and length of stricture and then subjected to dilatation using Savary Gilliard dilators. **Results :** A total of 12 patients of ALP induced esophageal stricture were seen by us. There were 78 males and 5 females with the mean age of 26.8 years (19 to 46 years). They had consumed 1 to 3 (mean 1.5) ALP tablets (*3 grams) which were partially exposed to moisture already, 8 to 106 weeks before reporting to us. They all had onset of dysphagia within 2 to 8 weeks of ingestion of ALP. 10 patients had a single stricture while 2 had 2 strictures. Of the 14 strictures, 7 were in the upper third, 4 in the mid third and 3 in the lower third of the esophagus. The mean length of the stricture was 1.75 ± 0.622 cm. 2 patients failed to respond to dilatation while 10 responded, requiring 2 to 9 dilatations (mean 5.4 ± 2.5) to achieve a diameter of 15 mm. Three patients were given intralesional steroids to augment the effect of dilatation. Two patients, who failed, were subjected to transhiatal esophagectomy. All patients were followed up for 19.9 ± 7.8 months (11 to 30 months) and have remained symptom free. **Conclusion :** ALP can cause esophageal strictures which can be dilated endoscopically in a majority of patients. 16% of them however require surgical intervention. ALP strictures, thus, behave like corrosive-induced strictures.