Oral Presentation - 14

Preventive Effects of Amiodarone on the Cardiac Dysrhythmias due to Aluminum Phosphide Poisoning

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Abstract

Objective: Aluminum phosphide (ALP) poisoning is one of the most important causes of poisoning-related deaths worldwide. Many of the ALP-poisoned patients experience some type of cardiac dysrhythmia in the course of their poisoning. The aim of this study was to evaluate the preventive effect of amiodarone on these dysrhythmias.

Methods: A total of 46 ALP-poisoned patients were evaluated in two groups of intervention and control. The control group did not receive amiodarone. In the intervention group, amiodarone was administered with the initial dose of 150 mg intravenous infusion followed by 1mg/h for six hours and 0.5 mg/h for eighteen hours. Holter monitoring was performed in all patients within the first 24 hours of admission.

Results: Atrial and ventricular fibrillation were significantly less frequent in the intervention group (13% versus 48%; P = 0.01). ST-segment elevation was also less detected in the intervention group (4.3% versus 30.4%; P = 0.02). In male patients, dangerous dysrhythmias (a complex of atrial and ventricular fibrillation as well as ventricular tachycardia) were less frequent in intervention group (P = 0.012). Decreased blood pressure and pulse rate were not significantly different between the two groups. Mortality rate was less in the intervention group (43.5% versus 47.8%); however, this difference was not statistically significant. Survival period was significantly longer in the intervention group (22 hours versus 10 hours; P = 0.05).

Conclusions: Although the preventive effect of amiodarone on the mortality of the patients was not proven, it was effective in decreasing the frequency of some dysrhythmias and prolonging survival. These potential desirable effects and the absence of negative effects are pursuable to use this medication in ALP-poisoned patients.