Introduction
Nearly a million patients undergo percutaneous coronary interventions (PCI) in the United States every year. These patients are at high risk for arrhythmia, which can be precipitated by electrolyte imbalances, such as hypokalemia or hypomagnesemia. The effect of PCI or contrast used on these electrolytes post-procedure has not been well studied.

Methods
We retrospectively analyzed the charts of 426 consecutive patients who had serum magnesium levels checked within two days pre-PCI and within two days post-PCI from January 2010-July 2015. Normal serum magnesium level in our lab was 1.4-2.0 (mEq/L).

Results
Of the 426 patients, 139 (33%) had a decrease of 0.4 mEq/L or more. Ninety (21%) patients had post-PCI serum magnesium levels ≤ 1.4 mEq/L.

Figure 1. Percent of Patients with Post-PCI Hypomagnesemia

Conclusions
Despite PCI, the risk of arrhythmia in these patients remains high, especially in the immediate post-procedure period. If untreated, hypomagnesemia post-PCI could precipitate arrhythmia in such high-risk patients. If confirmed in a larger series of patients, this new observation could necessitate a post-PCI check of electrolytes in all patients to minimize the risk of arrhythmia. The pathophysiology of hypomagnesemia post-PCI would need further elucidation.

References