Hypomagnesaemia post-percutaneous coronary interventions

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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. 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). 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. Despite PCI, the risk of arrhythmia in these patients remains high, especially in the immediate post-procedure period. If untreated, hypomagnesaemia 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 hypomagnesaemia post-PCI would need further elucidation.

Biography
Anjali Om is a sophomore at Virginia Commonwealth University in the Guaranteed Admissions BS/MD program. Prabal Guha is an electrophysiologist at McLeod Regional Medical Center in Florence, SC. He completed his medical school and internal medicine training in India and a fellowship in cardiology at SUNY Syracuse. His interest is in basic electrophysiology, in the study of the role of potassium channels in cardiac arrhythmia, and he is currently an Assistant Professor of medicine at USC Columbia.

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