



EKG of a Young, Vomiting Female

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Clinical image description

A 37-year-old female with a history of a Roux-en-Y gastric bypass and intussusception presented to the emergency department with two weeks of constipation and one week of non-bloody, nonbilious vomiting. She had not passed flatus or a bowel movement for one week. Labs were pertinent for a severe contraction alkalosis with an arterial pH of 7.51, a potassium level of 2.1 mmol/L, a chloride level of 71 mmol/L, and a bicarbonate level of 56 mmol/L. Computed tomographic imaging of her abdomen revealed dense stool throughout the colon, but no acute abnormalities or obstruction otherwise. An electrocardiogram revealed anterolateral ST-segment depressions, T-wave inversions in V1-2, and the presence of U-waves

diffusely throughout (Figure 1, arrows), all new compared to prior. She was admitted to the intensive care unit for aggressive electrolyte repletion, after which her repolarization abnormalities improved (Figure 2). U-waves may be seen in the setting of severe hypokalemia, hypocalcemia, or hypomagnesemia, left ventricular hypertrophy, digoxin use, or the use of class IA or III antiarrhythmics. Other EKG changes associated with severe hypokalemia include a sagging or depressed ST-segment or a low amplitude T-wave. U-waves with negative polarity provoked by stress testing have been associated with a significant stenosis of the left main or left anterior descending artery.



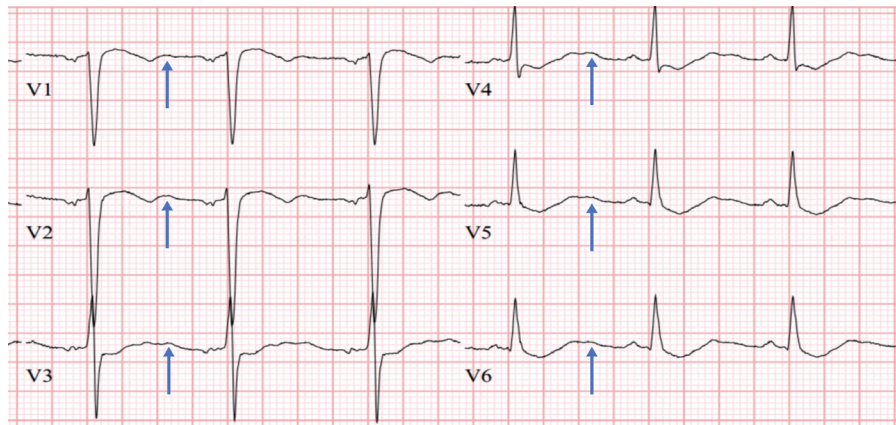


Figure 1:

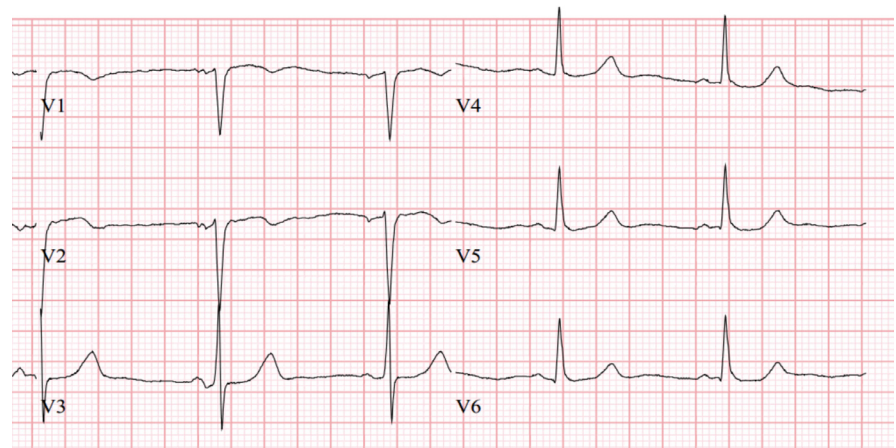


Figure 2: