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UNIQUE ELECTROCARDIOGRAPHIC CHANGES IN A CASE OF PROPOFOL-RELATED INFUSION SYNDROME

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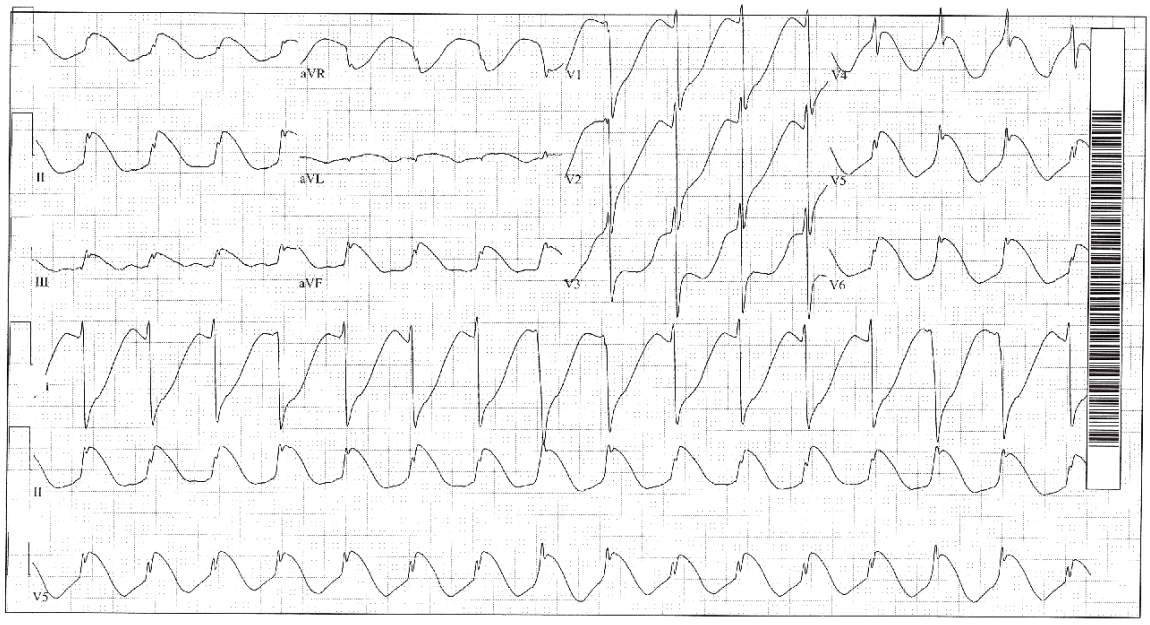
BACKGROUND: Propofol is widely used for sedation of critically ill patients. Propofol-related infusion syndrome (PRIS) is a rare and often fatal syndrome described in critically ill patients in the setting of prolonged high-dose propofol therapy. The usual features of the syndrome include unexplained cardiac failure, metabolic acidosis, rhabdomyolysis, renal failure and electrocardiographic changes, often leading to malignant arrhythmias and sudden death. A Brugada-like electrocardiographic pattern of marked ST-segment elevations in the right precordial leads has been described. We describe a likely case of PRIS with unique electrocardiographic changes involving the inferior and lateral leads.

CASE REPORT: After surgical repair of type B aortic dissection, a 43-year-old Caucasian female was receiving propofol at 2-3 mg/kg/hour for sedation. After 90 hours of the propofol infusion, she developed hypotension and electrocardiographic changes of a junctional rhythm with ST-segment elevations in leads II, III, aVF and V5-V6 with ST-segment depressions in leads V1-V4. Laboratory testing revealed metabolic acidosis, elevated serum creatinine kinase, acute renal failure, hyperkalemia and an elevated cardiac troponin of 2.30 ng/mL (normal = 0-0.60 ng/mL). Emergent coronary angiography revealed normal coronary arteries. PRIS was suspected and the propofol infusion was stopped. The electrocardiographic changes and clinical features of PRIS gradually resolved over the next 48 hours. The patient recovered over the next couple of weeks and was doing well in follow-up a month later.

DISCUSSION/CONCLUSIONS: In addition to the Brugada-like pattern of marked ST-segment elevations in the right precordial leads, patients with PRIS can also have electrocardiographic changes of ST-segment elevations in the inferior and lateral leads. Early recognition of these electrocardiographic changes can lead to the prevention of sudden cardiac death from PRIS.

Keyword: Propofol, Propofol-Related Infusion Syndrome, Electrocardiography



Unique Electrocardiographic Features in a Likely Case of Propofol-Related Infusion Syndrome