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ESCAPE ECHO BIGEMINY SECONDARY TO MILD HYPERKALEMIA

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INTRODUCTION
Escape echo bigeminy is a bigeminal rhythm in which each atrioventricular junctional escape beat is followed by a conducted beat from a sinus P wave. In other words, a normal sinus (anterograde) P wave is sandwiched between 2 QRS complexes, an arrangement causing group beating with recurring couplets.

CASE
This is the case of a 63-year-old female, with hypertension, Type 2 diabetes mellitus, dyslipidemia, and ischemic heart disease, who consulted with a one-day history of chest discomfort. The chest pain was burning in nature and associated with nausea and vomiting. Upon presentation, the patient was bradycardic with a heart rate of 40 beats per minute and normal blood pressure. An electrocardiogram showed atrioventricular junctional escape beats followed by a conducted beat from a sinus P wave. The chest radiography was normal. She has mild hyperkalemia (5 mmol/L), but other electrolytes were normal. Troponin I was negative. The patient was treated for bradycardia secondary to unstable angina. She was given intravenous atropine for two doses, which did not resolve the bradycardia. The patient was given an insulin chase and serum potassium was reduced to 4 mmol/L. Heart rate normalized to 60 beats per minute and repeated ECG showed resolved escape echo bigeminy.

CONCLUSION
Escape-capture bigeminy occurs if the effective inter-sinus interval exceeds the sum of the escape interval and the refractory period after the escape beat. This requires an intermittent block of the impulse either at the sinus or AV nodal level. Digitalis, digitalis plus beta-blocker, or calcium blocker may be partially implicated. The patient had mild hyperkalemia and the correction of which led to the resolution of the arrhythmia. As presented by the case, mild hyperkalemia may cause an escape echo bigeminy arrhythmia that can be reversed medically, precluding the need for pacing.

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A RARE CASE OF PSEUDOPHEOCHROMOCYTOMA WITH PANIC ATTACK WITHOUT AGORAPHOBIA – A CASE REPORT

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INTRODUCTION
Pseudopheochromocytoma is a rare but often disabling syndrome comprised of paroxysmal severe hypertension and symptoms of catecholamine excess including anxiety, tremors, sweating and palpitations. It is a diagnosis of exclusion. There is considerable overlap between pseudo-pheochromocytoma and panic disorder. How psycho-logical factors influence the severe and acute rise in blood pressure seen in patients with pseudopheochromocytoma is unknown.

CASE
A case of a young hypertensive patient diagnosed at the age of 26 years old without proper follow up is presented. He arrived at a tertiary hospital with symptoms of paroxysm and chest pain and was diagnosed as a case of ischemic stroke with uncontrolled hypertension.

24-hour urine catecholamine screening showed a mild rise of norepinephrine with normal epinephrine and dopamine levels. We proceeded with a 24-hour urine normetanephrine screening which revealed mildly elevated normetanephrine and a normal metanephrine level. Repeat testing showed normal evels of both normetanephrine and methanephrine. Multiphasic adrenal CT was unremarkable except for an incidental finding of a tiny simple renal cyst. Due to recurrent chest pain, multi-slice cardiac CT was done which showed normal findings. Despite the maximal dosages of an alpha- and beta-blocker, blood pressure remained uncontrolled. Addition of spironolactone showed no benefit. Patient was referred to the psychiatric department for evaluation. He was diagnosed with panic attack without agoraphobia and was started with alprazolam for symptom control.

CONCLUSION
While the current study represents an important addition to the limited literature on pseudopheochromocytoma, its mechanism has yet to be fully explained and a specific diagnostic test has not been identified. The findings support the use of alpha- and beta-blockade without any other possible treatment options for now. With such scarce data, optimal treatment for pseudopheochromocytoma remains challenging.