A 37-year-old woman was referred to our hospital with the first episodes of syncope. The 12-lead ECG during sinus rhythm showed a normal QT interval. Transthoracic echocardiography and cardiac catheterization demonstrated no structural heart disease. Serum concentration of potassium was 2.8 mEq/L. ECG showed repetitive polymorphic tachy-
cardias followed by the shorted-coupled premature ventricular contractions exhibiting the identical QRS morphology consistent with the short-coupled variant of torsades de pointes (SCVTdP) (Picture 1) (1), which disappeared after the implementation of potassium. Abdominal computed tomographic image demonstrated a right-sided adrenal tumor (Picture 2A). The elevated serum concentration of cortisol was normalized after the resection of the tumor (Picture 2B), consistent with Cushing syndrome. No recurrence of the tachycardia was observed over a subsequent 11-year follow-up after an implantation of ICD.

SCVTdP is a distinct subgroup of idiopathic ventricular fibrillation with an unknown etiology. This case strongly suggests a causal relationship between arrhythmia and hypokalemia (2).

The authors state that they have no Conflict of Interest (COI).

References