CR33 Drug - drug interaction in a patient with epilepsy and newly diagnosed paroxysmal atrial fibroundulation

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KEYWORDS: anticoagulants; carbamazepine; cytochromes; phenobarbital

INTRODUCTION/OBJECTIVES: Cytochrome P450 isoenzymes have a major role in the metabolism of xenobiotics. They are mostly found in hepatocytes and oxidize majority of drugs, thus shifting them into their inactive form. Some of them can influence cytochromes' activity while getting oxidized, simultaneously inducing or inhibiting them. This way, drug activity can be altered and their benefit in the management of the disease limited.
CASE PRESENTATION: Female patient, age 73, had the diagnosis of epilepsy which had been well controlled with phenobarbital and carbamazepine for the last 40 years. In May 2022, she complained of palpitations and occasional perimalleolar edema of the left leg. A 24-hour-ECG showed paroxysmal atrial fibroundulation and she was prescribed flecainide for rhythm control. Because of high CHAD-VASc score (4), edoxaban was initiated, but shortly after she was referred to a clinical pharmacologist for optimization of anticoagulation therapy which wouldn't interact with her antiepileptics. She was advised to change the antiepileptic therapy, what she refused, scared that her seizures wouldn't be under control anymore. Hence, the decision was to discontinue edoxaban therapy and initiate warfarin, but in doses 30 to 60 % higher than usual.
CONCLUSION: Phenobarbital and carbamazepine are strong inducers of CYP3A4 enzymes, which leads to more rapid metabolism and therefore reduced efficacy of NOACs and warfarin, both the substrates of that cytochrome. Even though warfarin is the better treatment option because of the possibility of monitoring its effectiveness through prothrombin time and calculation of INR, it still does not completely ensure the patient from systemic embolism and stroke.

CR34 DYNAMIC LEFT INTRAVENTRICULAR OBSTRUCTION IN TAKOTSUBO CARDIOMYOPATHY IN A 62-YEAR-OLD WOMAN: A CASE REPORT

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KEYWORDS: Broken Heart Syndrome; Left Ventricular Outflow Tract Obstruction; Stress Cardiomyopathy, Takotsubo Cardiomyopathy; Ventricular Dysfunction

INTRODUCTION/OBJECTIVES: Takotsubo cardiomyopathy (TTC), also known as the broken heart syndrome and stress cardiomyopathy, is a condition which results in left ventricular systolic dysfunction. It is mainly triggered by extreme emotional stress. Onset of LV outflow tract obstruction (LVOTO) during the acute phase of TTC is a rare but challenging complication that can lead to syncope.
CASE PRESENTATION: We report a case of a 62-year-old woman who was admitted to emergency department due to syncope after exposure to intense stress associated with work. ECG on presentation showed ST-segment elevation in precordial leads and elevated troponin values. She was admitted to coronary care unit. Transthoracic echocardiography (TTE) showed reduced left ventricular ejection fraction (LVEF) of 36% and apical ballooning of the left ventricle along with an intraventricular peak gradient of 68 mmHg detected by Doppler echocardiography. Coronary angiography excluded significant coronary heart disease, while ventriculography showed apical ballooning. The patient remained hemodynamically stable and asymptomatic. A week later, TTE was performed again and showed improved LVEF of 60% with a resolution of LVOTO and she was discharged from the hospital. Six months later patient remains well and asymptomatic.
CONCLUSION: Since symptoms of TTC mimic those of acute coronary syndrome, it is very challenging for physicians to diagnose this condition. Transitory LVOTO during the acute phase of TTC can complicate the clinical course of TTC patients, resulting in a syncope or even hemodynamic instability.