**INHALED RACEMIC EPINEPHRINE AS A TRIGGER FOR TAKOTSUBO CARDIOMYOPATHY**

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**Background:**Takotsubo cardiomyopathy (TC) is a syndrome characterized by systolic dysfunction, precipitated by acute emotional or physical stress, without angiographic evidence of coronary artery disease (CAD). We describe a case of TC predisposed by inhaled racemic epinephrine.

**Case report:** A70-year-old female with history of hypertension, and seizure presented with angioedema secondary to angiotensin-converting-enzyme inhibitor (ACE-i) use. On examination she was vitally stable. She had marked edema of the tongue without evidence of airway compromise, cardiopulmonary exam was within normal limits. She was promptly treated with famotidine, diphenhydramine, dexamethasone and racemic epinephrine. After 24-hours, she complained of chest pain and her electrocardiogram revealed new ST-segment elevation in the anterior leads. Cardiac enzymes peaked at 0.71 (normal value <0.03). Emergent coronary angiography did not reveal any significant CAD. Ventriculography showed apical ballooning consistent with TC which was confirmed on echocardiography (with ejection fraction of 30%). She was discharged after 2 days on her goal directed CHF therapy including metoprolol succinate, spironolactone, hydralazine and nitrates. In 6 months follow up, her echocardiogram showed significant improvement in LV function to 55%.

**Discussion:**TC caused by exogenous administration of epinephrine has been previously reported. It was believed that inhaled racemic epinephrine was better tolerated and less likely to provoke side effects when compared to levo(l)-epinephrine, however in our case we believe that inhaled racemic epinephrine predisposed to Takotsubo cardiomyopathy. The proposed mechanism is through direct toxicity and or microvascular dysfunction due to catecholamine, leading to a hibernating myocardium. Supportive care and standard pharmacological therapy for cardiomyopathy are the cornerstone of management.

**Conclusion:** Inhaled racemic epinephrine should be used with caution and with minimal effective dose especially in patients with predisposing risk factors such as postmenopausal women with psychiatric or neurologic disease.