Takotsubo cardiomyopathy temporarily associated with thoracic epidural steroid injection for post-herpetic neuralgia

Nicholas P. McKernan, MD, Bryant J. Rondeau, MSIII and Russell K. McAllister, MD
Texas A&M Health Science Center College of Medicine and Scott & White Memorial Hospital, Temple, Texas

INTRODUCTION

Takotsubo cardiomyopathy, or stress-induced cardiomyopathy, is a transient systolic dysfunction of the left ventricle typically triggered by an acute illness or intense emotional or physical stress. Post-herpetic neuralgia (PHN) is pain persisting in the dermatomal distribution of a herpes zoster infection six months after healing of the zoster eruptions. We present a case of a patient who underwent an uneventful thoracic epidural steroid injection (ESI) for treatment of PHN and then developed Takotsubo cardiomyopathy.

CASE REPORT

A 77-year-old woman with PHN returned to our pain clinic for repeat thoracic ESI. Previous treatments with ESI, propoxyphene and gabapentin had adequately managed her pain. Her medical history included herpes zoster, multiple myeloma, stage III kidney disease, anemia, hypertension, hyperlipidemia and a deep venous thrombosis. Social stressors included her brother’s recent death and her husband’s admission to a nursing home.

After re-examination, a fluoroscopically-guided T4-5 ESI was planned. The patient positioned herself prone on the fluoroscopy table and local anesthesia was used prior to insertion of a 17g touhy needle via a left paramedian approach. The epidural space was identified on the first pass using loss of resistance. After negative aspiration, a solution of 80mg triamcinolone and 4mL of 0.125% bupivicaine was injected.

She tolerated the procedure well and also appeared comfortable post-procedure. At discharge, her vital signs were stable and she had no new deficits or complaints. Approximately two hours post-procedure, she developed a headache and chest pain while resting at home. She was taken to the emergency department (ED) with substernal chest pain radiating into her left neck, shortness of breath, nausea and vomiting.

In the ED, she received nitroglycerin, fentanyl, heparin and aspirin. An electrocardiogram (ECG) showed mild ST-segment elevation with Q waves in the precordial leads and widening of the QRS complex. Her troponin was 0.09ng/mL on arrival and 3.45ng/mL 4 hours later. A transthoracic echocardiogram (TTE) demonstrated depression of the apex of the left ventricle with apical ballooning and preserved wall motion of the basal segments. A repeat TTE 20 days later showed improvement of her ventricular function and repeat troponin was 1.84ng/mL 4 hours later. A transthoracic echocardiogram of the QRS complex. Her troponin was 0.09ng/mL on arrival and 3.45ng/mL 4 hours later. A repeat TTE 20 days later showed improvement of her ventricular function and repeat troponin was 1.84ng/mL 4 hours later.

The diagnosis of Takotsubo cardiomyopathy was made, and the patient admitted to the cardiovascular intensive care unit (ICU) for treatment. Her troponin peaked at 2.7ng/mL, but her ICU course was otherwise uneventful. Her ESI site was also unremarkable. On hospital day #4, repeat TTE 5 days later showed no regional wall motion abnormalities and an EF of 56%.

DISCUSSION

Contrast ventriculography of the left ventricle in a right anterior oblique view in diastole (A) and systole (B). There is apical ballooning during systole with a narrower neck, resembling a taka-tsubo or octopus trap.


REFERENCES


We present this case report as what we believe to be the first documented case of Takotsubo cardiomyopathy temporally associated with a thoracic ESI.