



Dhaval Naik, DO; Dhaval.naik@medicine.ufl.edu
 Juan Vilaro, MD
 Assistant Professor of Medicine
 Division of Cardiovascular Medicine

Background

Acute mitral regurgitation (MR) due to ischemic dysfunction of the subvalvular apparatus in the setting of acute MI is well-known phenomenon.

Case

A 73 y o female admitted for respiratory failure from pulmonary edema & a. fib with rapid ventricular response. Dyspnea improved after diuresis but she remained in a. fib. TTE showed normal left ventricular systolic function with mild MR (Figure 1). Later on, despite her being converted to sinus rhythm, she appeared more dyspneic. During a similar presentation two weeks prior, patient had undergone TEE guided cardioversion, which moderate to severe MR with normal LVEF (Figure 2).

Figures

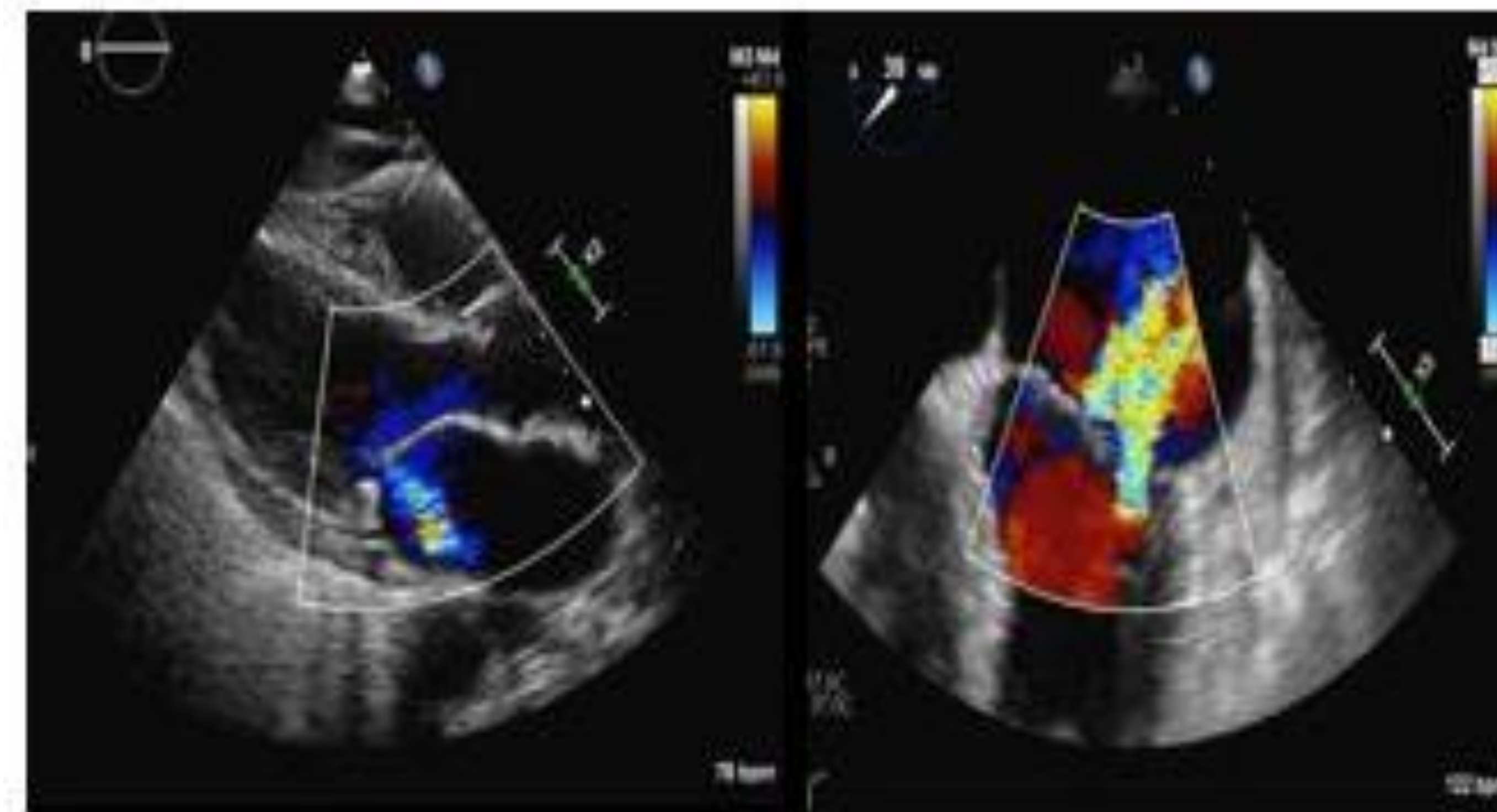


Figure 1

Figure 2



Figure 3

Figure 4

Clinical Decision-making

Patient had recurrent flash pulmonary edema in the absence of hypertension or volume overload, with dynamic ST-changes suggestive of ischemia on ECG. The large discrepancy in MR severity in echoes obtained two weeks apart raised suspicion for ischemic mitral regurgitation as the underlying etiology. She was referred for coronary angiography which showed 90% stenosis in mid RCA (Figure 3). She underwent successful drug-eluting stent placement (Figure 4). She was seen in clinic about a month after discharge and appeared to be doing well.

Conclusion

The case demonstrates that transient ischemia causing papillary muscle dysfunction can cause acute severe MR which is reversible with the relief of ischemia. The 90% stenosis in mid right coronary artery was likely compromising the blood supply to posterior papillary muscle causing its dysfunction and subsequent moderate to severe MR.