

Radiation Induced Symptomatic Critical Left Main Lesion and Symptomatic Aortic Stenosis In An Inoperable Candidate: Role of Percutaneous Intervention

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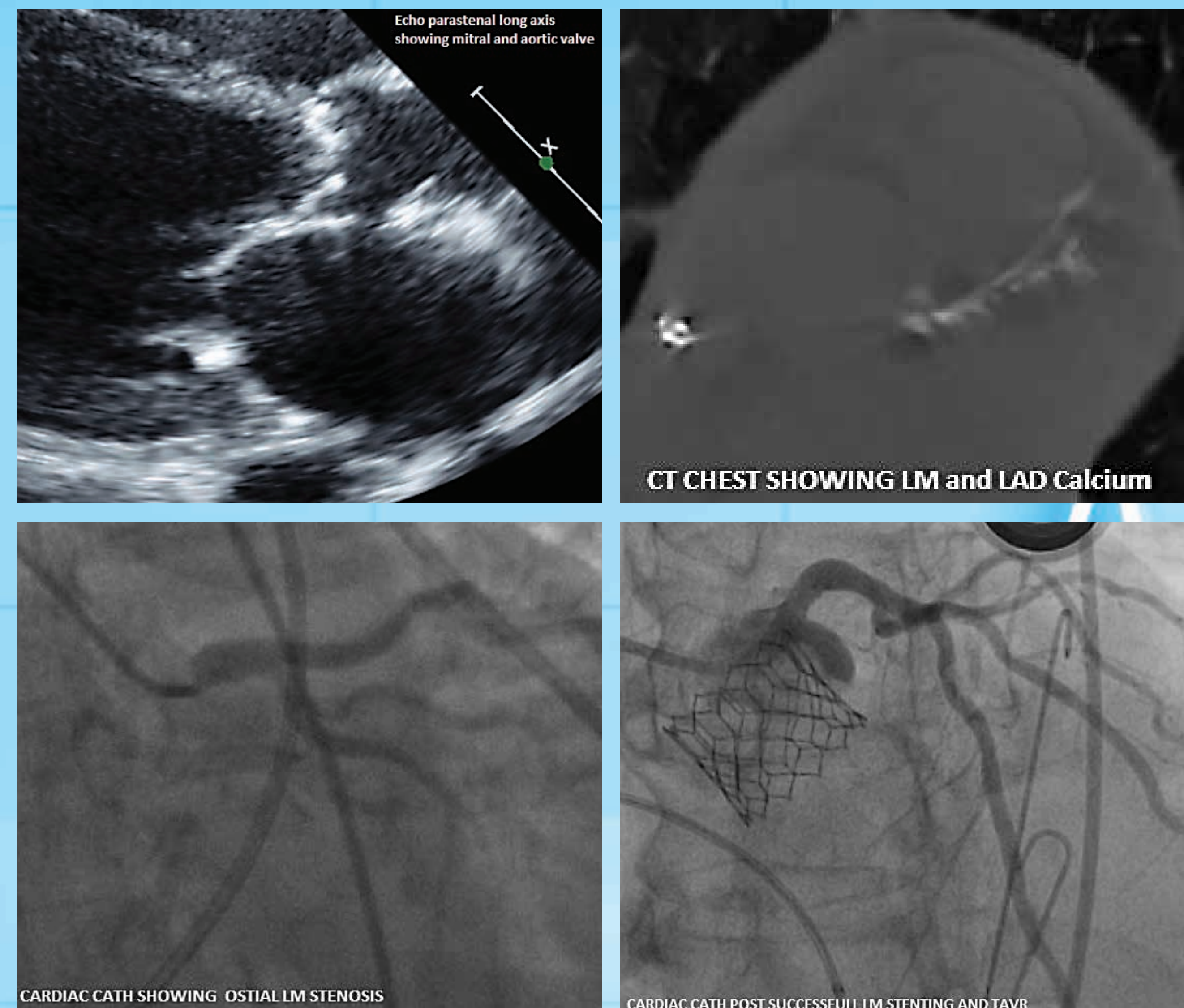
BACKGROUND

We are presenting a challenging case of radiation induced critical left main stenosis and severe aortic stenosis in an inoperable candidate. TAVR plus left main stenting resulted in successful outcome.

METHODS

67 year old female who received chest radiation therapy 16 years ago for Hodgkin lymphoma, newly discovered ESRD and stage IV rectal carcinoma presented with severe dyspnea at rest and found to have severe aortic stenosis with aortic valve area of 0.44 cm² and mean gradient of 48 mmHg, ejection fraction 45% and LAD wall motion abnormality. Cardiac catheterization showed isolated 95% ostial left main coronary artery (LMCA) stenosis. She has resting dyspnea and could not ambulate more than 5 steps. Given prior radiation therapy related mediastinal changes, adhesions, lung fibrosis, comorbidities and short lifespan due to stage IV malignancy, she was deemed prohibitive surgical candidate. Decision was made to intervene percutaneously.

IMAGES



RESULTS

She underwent combined procedure for TAVR and drug eluting stenting of LMCA with excellent angiographic result. Left ventricular systolic function and wall motion normalized. She notes great improvement in her dyspnea from NYHA class IV to class I on subsequent follow up. Ejection fraction normalized.

CONCLUSION

The pathogenesis of radiation induced valvular and coronary disease is not completely understood. Ostial coronary artery lesions with valvular stenosis are classic long term sequelae of prior mediastinal radiation therapy. Post radiation changes in mediastinal anatomy increases the surgical risk and percutaneous interventions seem promising. Current literature is limited to case reports and large scale studies are needed. Our case demonstrate the long term consequences of radiation therapy and use of modern percutaneous intervention technique that has improved the symptoms and cardiac mortality of this patient.