In the current issue of *Cardiovascular Innovations and Applications*, researcher Blase A. Carabello, from East Carolina University, Greenville, NC, USA presents a case study of an asymptomatic patient with severe mitral regurgitation.

In primary mitral regurgitation there are anatomic abnormalities of the mitral valve causing backward flow, placing a hemodynamic burden on the left ventricle. If this burden is severe and prolonged, it leads to left ventricular damage, heart failure, and death. The preferred therapy is restoration of mitral competence through mitral valve repair, which is safer than mitral valve replacement. When repair is performed in a timely fashion, lifespan can be returned to that of a normal individual. Triggers for timely repair include the onset of symptoms and evidence of left ventricular dysfunction as determined by ejection fraction falling toward 60% and/or end-systolic dimension increasing toward 40 mm.

When symptoms or early LV dysfunction occur in patients with primary MR, mitral valve repair or replacement must be performed to avoid irreversible LV dysfunction, heart failure, and death. However, primary nonrheumatic MR is usually treated in experienced hands with mitral valve repair instead of replacement, avoiding the complications of prosthetic heart valves. When there is 95% confidence that a durable repair can be effected, early surgery becomes an important option instead of waiting for symptoms or LV dysfunction to occur, sparing the patient from frequent follow-up examinations and/or the possibility that one of these triggers for surgery will be missed, subjecting the patient to a poor outcome.
