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Chordae Rupture and Acute Mitral Regurgitation associated with Infective Endocarditis in a Hemodialysis Patient

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Case Study : Acute pulmonary edema in hemodialysis patients is a common cause of hospital admission and often associated with fluid overload or congestive heart failure. Here we report a rare case of chordae rupture and consequent severe mitral valve regurgitation due to infective endocarditis presenting sudden onset of pulmonary edema even though being properly done hemodialysis.

A 36-year-old man presented with dyspnea for 1 day associated with fever. He had been diagnosed with chronic kidney disease and hypertension 8 years prior, and under proper hemodialysis for recent two years. Vital parameters showed systemic inflammatory response with tachycardia and fever. Crackles were heard bilaterally and Chest X-ray showed hazy opacities in both upper and lower lobe with enlarged cardiac silhouette. Computed tomography revealed bilateral pulmonary edema and cardiomegaly with pericardiac effusion. C3, C4, Rheumatoid factor, anti ds-DNA antibody and anti-GBM antibody were all negative. Osler's node and Roth spot were not found on the physical examination.

After emergent hemodialysis, pulmonary edema was rapidly resolved but cardiomegaly was still remained. A laboratory test revealed elevated troponin I and T, and B-type natriuretic peptide. Additional transthoracic and transesophageal echocardiogram showed a frail mass dangling from the antero-lateral leaflet of mitral valve, and severe mitral regurgitation associated with multiple ruptured chordae. Enterococcus faecalis was identified in the bacterial cultures from the peripheral blood. Diagnosed with chordae rupture and acute mitral regurgitation associated with definite infective endocarditis by Duke criteria, the patients successfully treated with mitral valve replacement and proper systemic antibiotic therapy for 6 weeks.

Keywords : Pulmonary edema; Hemodialysis; Mitral regurgitation; Chordae rupture; Infective endocarditis