

Postpartum Congestive Heart Failure Due to Diastolic Dysfunction: Importance of Advanced Echo-Doppler Analysis

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Abstract

We present a case of a 25 year-old female who developed acute hypoxic respiratory failure secondary to postpartum heart failure with preserved ejection fraction. Despite essentially normal tissue Doppler velocities and E/e' ratio by existing guidelines for the adult population, available literature suggests that our patient's markers of diastolic function were significantly abnormal relative to what is expected in the third trimester of pregnancy. Advanced echo-Doppler analysis and her clinical presentation support the presence of underlying diastolic dysfunction. This case illustrates the challenges associated with the diagnosis of diastolic dysfunction during pregnancy and the need for pregnancy specific guidelines.

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Abbreviations List:

BNP: Brain natriuretic peptide

DD: Diastolic dysfunction

E: Early diastolic mitral inflow velocity

e': early diastolic mitral annular tissue velocity

EDPVR: End diastolic pressure volume relationship

EF: Ejection fraction

GLS: Global longitudinal strain

HFpEF: Heart failure with preserved ejection fraction

pHFpEF: Postpartum heart failure with preserved ejection fraction

LA: Left atrial

LAVi: Left atrium end-systolic volume index

LV: Left ventricle

PASP: Pulmonary artery systolic pressure

SpO2: Oxygen saturation

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