

Quantitative detection of left ventricular wall motion abnormality by two-dimensional echocardiography

ABSTRACT

Echocardiography is a widely used imaging technique to examine various cardiac functions, especially to detect the left ventricular wall motion abnormality. Unfortunately the quality of echocardiograph images and complexities of underlying motion captured, makes it difficult for an in-experienced physicians/ radiologist to describe the motion abnormalities in a crisp way, leading to possible errors in diagnosis. In this study, we present a method to analyze left ventricular wall motion, by using optical flow to estimate velocities of the left ventricular wall segments and find relation between these segments motion. The proposed method will be able to present real clinical help to verify the left ventricular wall motion diagnosis.

Keyword: Left ventricular; Echocardiograph; Short axis; Optical flow