

Inferioposterior hypoperfusion artifact on short axis myocardial perfusion SPECT images: a study on potential causes. M. Gary Sayed and Charles Intenzo, Department of Diagnostic Imaging, Thomas Jefferson University, Philadelphia, PA

BACKGROUND: In myocardial perfusion SPECT imaging, the presence of an area of hypoperfusion in the inferioposterior wall, known as the IP artifact, is clearly observable in the short axis. Little is known on IP etiology and on the impact of this artifact on test specificity. This project focuses on studying the causes of the artifact and its impact on test specificity. METHODS: Series of 26 cardiac phantom SPECT images were acquired under various conditions, which had been identified as potential causes. To test for confidence of interpretation the acquired images will be combined with 25 actual clinical images selected retrospectively in order to create an image set, which will be presented to two nuclear physicians for interpretation and analysis. RESULTS: Short axis images acquired utilizing the various on going imaging protocols and the corresponding clinical images will be presented. Quantitative measurements of perfusion in the four walls and the extent of IP hypoperfusion will also be assessed and presented.