**UTILIZATION OF ECHOCARDIOGRAPHY IN PULMONARY EMBOLISM: A GROUND REALITY**

**H. Lodhi**1, M. Waqas1, M. Khan2, H. Shafiq3, I. Achebe4, A. Shafiq5

1Baptist Memorial Medical Group, Southaven, MS, USA

2Albert Einstein college, New York, NY, USA

3Aureus University School of Medicine, Oranjestad, Aruba

4UTSW Medical Center, Dallas, TX, USA

5Aurora Health Care, Milwaukee, WI, USA

We wanted to see how echocardiogram is utilized in a community setting, in pulmonary embolism (PE) patients and how it affects the clinician’s decision to use tPA.  
**Background:** PE is a common diagnosis in the emergency department (ED). Standard treatment for PE includes anticoagulation. Traditionally unstable patients, with persistent hypotension or hypoxia, are candidates for tissue plasminogen activator (tPA). Echocardiographic findings didn’t affect the tPA decision based upon those recommendations. However recently, there has been an increased trend of echocardiography use in PE, based upon on expert recommendations, yet there is no clear consensus.

**Methods:** For this retrospective study, we included 306 patients of age > 18, admitted through ED with diagnosis of PE, ICD 10 codes I269.9 & I269.99, between June of 2016 to January 2017. Echocardiography results and treatment plans were reviewed to see how it changed management.

**Results:** Among 306 with PE, 219 (71.6%) had echocardiograms. 65 (21.2%) had abnormalities on echocardiograms which included pulmonary hypertension (PH) or right ventricular (RV) strain. Total 10 patients (3.3%) received tPA, 7 (2.3%) of them had RV strain on echocardiogram and 3 (1%) had PH. Our analysis revealed that echocardiogram use itself didn’t have significant impact on use of tPA (P=0.73); however, evidence of RV strain did (P=0.001). It appears, that use of echocardiograms in patients with PE did not impact management in our study unless there was evidence of RV strain, which was a small percentage of total patients who received echocardiograms. This suggests excessive echocardiography utilization in PE.

**Conclusions:** Although echocardiogram has its role in management of PE, but we think more clear guidance is needed for physicians on how to use clinical parameters when ordering echocardiography in PE to ensure efficient use.