Wednesday, October 25, 2006

Cardiology: Heart Failure, Valvular Disease, Myxoma and Arrhythmia, continued

CONCLUSION: Sporadic cardiac myxomas contain both extrinsic Fas/FasL dependent and survivin anti-apoptosis pathways that control cell cycles, with changes in Ki-67, p16, p53 and p63.

CLINICAL IMPLICATIONS: The pathogenesis of cardiac myxoma and may provide clues for treatment.

DISCLOSURE: Fao-Hsien Chu, None.

RESULTS: There were 54 patients; 33 had a diagnosis of CHF, 16 had a mixed diagnosis of CHF and other diseases, and 5 had a diagnosis other than CHF. The mixed diagnosis group presented with 10 patients with pneumonia, 6 patients with chronic obstructive pulmonary disease, 2 patients with asthma, 1 patient with bronchitis, 1 patient with sepsis and one patient with gastrointestinal bleeding. Of the 5 patients without CHF, 4 had a diagnosis of pneumonia and one with pleuritis. Of the CHF group only 19/33 (57%) patients had an initial chest radiograph showing pulmonary vascular congestion. Of the mixed diagnosis group, only 5/10 (50%) patients diagnosed with pneumonia had infiltrates. Of the 6 patients with a diagnosis of chronic obstructive pulmonary disease only one had a chest radiograph showing hyperinflation. Of the 16 patients with a mixed diagnosis only 5 (31%) revealed initial chest radiographs with pulmonary vascular congestion. Of the 4 patients diagnosed with pneumonia alone only 2 patients had chest radiographs supporting the diagnosis.

CONCLUSION: In patients with a chief complaint of shortness of breath and BNP levels more than 400 pg/ml, admitting chest radiograph findings correlate poorly with a clinical diagnosis of CHF and other diseases.

CLINICAL IMPLICATIONS: The diagnosis of CHF alone or concurrently with other disease processes requires an integrative approach and not solely relying on admitting CXR findings or BNP levels.

DISCLOSURE: Fabrizio Monge, None.

UTILITY OF PORTABLE CHEST RADIOGRAPH MEASUREMENTS IN DIFFERENTIATING CONGESTIVE HEART FAILURE FROM OTHER CAUSES OF DYSPNEA IN PATIENTS PRESENTING TO EMERGENCY DEPARTMENTS

METHODS: Retrospective chart review of patients presenting to the emergency department with dyspnea. Two radiologists independently reviewed the CXRs and obtained measurements of VPR, VPW, VPR, and CTR. VPR was calculated by dividing VPW by the diameter of the thorax. Areas under the receiver operating characteristic curve (AUC) were computed from logistic regression models.

RESULTS: Seventy-eight patients were analyzed. The mean age was 68.5 (SD 13.2), 65.5% were women and 84.6% were African-American. 57.7% had the diagnosis of CHF. VPR and VPR could not distinguish patients with CHF from patients with other causes of dyspnea (p=0.37 and 0.128 respectively). CTR alone was a good method of distinguishing patients with CHF from patients with other causes of dyspnea (AUC=0.79, 95% CI, 0.67 to 0.90, p<0.001). LogBNP predicted CHF with AUC=0.90 (p<0.001). When logBNP and CTR were analyzed together, CTR did not add any statistically significant predictive accuracy to the model using BNP (p=0.07).

CONCLUSION: VPR and VPR do not appear to differentiate CHF from other causes of dyspnea in this study group. CTR is a good independent predictor of CHF. CTR does not add any statistically significant predictive value to BNP measurement.

CLINICAL IMPLICATIONS: CXR measurements are readily available, inexpensive, and non-invasive. While VPW and VPR cannot be relied upon to differentiate the causes of dyspnea in patients presenting to the emergency room, CTR may provide useful diagnostic information.

DISCLOSURE: Jair Mendoza Mendoza, None.

CORRELATION BETWEEN CHEST RADIOGRAPH AND SERUM BRAIN NATRIURETIC PEPTIDE LEVELS IN PATIENTS PRESENTING WITH DYSPEA

METHODS: Retrospective chart review of 54 patients that had BNP levels greater than 400 pg/ml, and to correlate the clinical diagnosis with the admitting chest radiograph findings.

RESULTS: Of the 54 patients, 33 had a diagnosis of CHF, 16 had a mixed diagnosis of CHF and other diseases, and 5 had a diagnosis other than CHF. The mixed diagnosis group presented with 10 patients with pneumonia, 6 patients with chronic obstructive pulmonary disease, 2 patients with asthma, 1 patient with bronchitis, 1 patient with sepsis and one patient with gastrointestinal bleeding. Of the 5 patients without CHF, 4 had a diagnosis of pneumonia and one with pleuritis. Of the CHF group only 19/33 (57%) patients had an initial chest radiograph showing pulmonary vascular congestion. Of the mixed diagnosis group, only 5/10 (50%) patients diagnosed with pneumonia had infiltrates. Of the 6 patients with a diagnosis of chronic obstructive pulmonary disease only one had a chest radiograph showing hyperinflation. Of the 16 patients with a mixed diagnosis only 5 (31%) revealed initial chest radiographs with pulmonary vascular congestion. Of the 4 patients diagnosed with pneumonia alone only 2 patients had chest radiographs supporting the diagnosis.

CONCLUSION: In patients with a chief complaint of shortness of breath and BNP levels more than 400 pg/ml, admitting chest radiograph findings correlate poorly with a clinical diagnosis of CHF and other diseases.

CLINICAL IMPLICATIONS: The diagnosis of CHF alone or concurrently with other disease processes requires an integrative approach and not solely relying on admitting CXR findings or BNP levels.

DISCLOSURE: Fabrizio Monge, None.

Correlation Between Chest Radiograph and Serum Brain Natriuretic Peptide Levels in Patients Presenting with Dyspnea

METHODS: Retrospective chart review of 54 patients that had BNP levels greater than 400 pg/ml, and to correlate the clinical diagnosis with the admitting chest radiograph findings.

RESULTS: Of the 54 patients, 33 had a diagnosis of CHF, 16 had a mixed diagnosis of CHF and other diseases, and 5 had a diagnosis other than CHF. The mixed diagnosis group presented with 10 patients with pneumonia, 6 patients with chronic obstructive pulmonary disease, 2 patients with asthma, 1 patient with bronchitis, 1 patient with sepsis and one patient with gastrointestinal bleeding. Of the 5 patients without CHF, 4 had a diagnosis of pneumonia and one with pleuritis. Of the CHF group only 19/33 (57%) patients had an initial chest radiograph showing pulmonary vascular congestion. Of the mixed diagnosis group, only 5/10 (50%) patients diagnosed with pneumonia had infiltrates. Of the 6 patients with a diagnosis of chronic obstructive pulmonary disease only one had a chest radiograph showing hyperinflation. Of the 16 patients with a mixed diagnosis only 5 (31%) revealed initial chest radiographs with pulmonary vascular congestion. Of the 4 patients diagnosed with pneumonia alone only 2 patients had chest radiographs supporting the diagnosis.

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DISCLOSURE: Fabrizio Monge, None.