A664 - Ultrasonographic assessment of pleural effusion in patients with heart failure with preserved ejection fraction

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Introduction:
The incidence of pleural effusions (PEs) radiologically in acute decompensated heart failure was estimated by 50 % (1). The prevalence of PEs using chest ultrasound in patients with heart failure with preserved ejection fraction (HFpEF) was not studied before.

Aim
Determine the prevalence and severity of PE using bedside chest ultrasound in patients with HFpEF.

Methods:
We prospectively evaluated 85 patients admitted to the coronary care unit with acute pulmonary edema. 27 patients had LVEF below 50% and they were excluded. We used bedside ultrasonography to document the presence of pleural effusions and estimate the amount using Goecke 2 formula.

Results:
58 patients were recruited with estimated LVEF above 50% and median age of 73 years. Pleural effusion was detected by chest ultrasound in 54 patients (94%) with 91% being bilateral and of moderate amount. The mean value of E/A and E/E’ ratio was 1.92 and 19.9 respectively where mean deceleration time (DT) was 171 ms, however, these parameters were not related to severity of pleural effusion (P= 0.52, 0.98 and 0.7 respectively). The N-terminal pro-brain-type natriuretic peptide (NT-proBNP) was significantly higher in patients with pleural effusion (P = 0.046).

Conclusion:
PEs are present on chest ultrasound in 94% of patients with HFpEF and mainly bilateral. The degree of PEs were moderate and was not related to the LV indices of HFpEF.

References:

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