Validation of the HFA-PEFF-score for the diagnosis of heart failure with preserved ejection fraction

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Topic(s):
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Background: The diagnosis of heart failure with preserved ejection fraction (HFpEF) is challenging. The European Heart Failure Association has proposed a novel diagnostic algorithm, the HFA-PEFF score. The aim of this study is to validate the diagnostic value and establish the potential clinical impact of the HFA-PEFF score.

Purpose: The aim of this study is to validate the diagnostic value and establish the potential clinical impact of the HFA-PEFF score.

Methods and results: The HFA-PEFF score was evaluated in two independent, prospective cohorts from Europe and the U.S.A., respectively, i.e. the Maastricht cohort (228 HFpEF patients and 42 controls, diagnostic validation), and the Chicago cohort (459 HFpEF patients, application). In Maastricht, the HFA-PEFF score categorizes 4% of the total cohort with suspected HFpEF in the low-, 40% in the intermediate-, and 56% in the high-risk category. A high HFA-PEFF score (5-6 points) has proven to be a good ‘rule in’ for HFpEF with high specificity (93%) and a PPV of 98%. A low HFA-PEFF score (0-1) points can rule out HFpEF with a sensitivity of 99% and NPV of 73%. The diagnostic accuracy of the HFA-PEFF score is 0.89 as determined by the AUC of the ROC-curve. The distribution of the score was similar in HFpEF patients from Chicago. Risk categories were also predictive of HF hospitalization or death in both cohorts.

Conclusion: This study validates and characterizes the HFA-PEFF score in two independent, well phenotyped cohorts in Europe and the U.S.A. We demonstrate that the HFA-PEFF score has a good diagnostic value and can be helpful in clinical practice for screening and risk stratification.
Abstract:

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A Maastricht cohort

B Maastricht vs. Chicago – HFpEF only

P<0.001