Effects of entresto on ejection fraction, and the effects of selected demographic and clinical variables, and the effects of titrated entresto dose on ejection fraction.

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Purpose

To quantify whether predictor variables of age, gender, history of hypertension, history of myocardial infarction, titrated dose of Entresto and EF pre Entresto affected EF post Entresto. We measured the difference between EF pre and EF post Entresto administration. Effect of these predictors on the difference between EF pre and post Entresto readings being positive or non-positive was also analysed.

Results

Post Entresto ejection fractions differed from those pre Entresto. There were 117 positive differences, with 30 non-positive differences. The distribution of EF post Entresto shifted to the right of the x-axis with respect to EF pre Entresto. Myocardial infarction history, maximum dosage, age, and EF pre Entresto had significant individual associations with difference between EF pre and post Entresto. These four predictors showed significant individual associations with EF post Entresto and with difference between EF pre and post Entresto being positive or non-positive..

Methods

Patient data (N = 147) were from one Irish hospital. Wilcoxon signed rank test established whether there was a significant difference in EF pre and post Entresto. We used bivariate analysis to assess individual associations between the predictor and output variables. Where the output variables were continuous, the Kruskal-Wallis and Mann-Whitney U tests were used, depending on whether the predictor had 3 or 2 categories, respectively. For categorical variables, we used simple logistic regression models to assess individual associations. p-value < 0.5 was used to identify significant associations. Significant bivariate predictor variables were fed into the multivariate analysis.

Conclusion

Administration of Entresto made a positive difference to the EF. Age, myocardial infarction history, pre Entresto EF, and maximum dosage of (97/103) were significantly associated with the output variables. Where possible, rapid up-titration should be aimed for. Larger studies would help identify additional predictors.