Impact of catheter ablation versus antiarrhythmic drugs on quality of life in patients with atrial fibrillation

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OBJECTIVES: The study focused on 12 chronic ACS specific health states which describe various conditions related to myocardial infarction, stroke severity, treatment side-effects of gastrointestinal bleeding, and their appropriate treatments. Health states were developed based on expert clinical opinion and were presented alone and in combination. A total of 86 participants took part in the research. They ranged in age from 20–82 years (mean age 50.1 years). Participants were presented with information about stroke, myocardial infarction, gastrointestinal bleeding, and their treatments. They were then shown 12 health states describing differing severity and combinations of ACS events and associated treatment and were asked to value these using a standard gamble technique. To minimise cognitive overload, the health states were presented to participants in a random order.

RESULTS: The results showed that participants successfully valued the health states applying values derived for the main three stroke health states in a logical sequence. Utility values ranged from 0.80 (SD = 0.24) for mild stroke, 0.63 (SD = 0.24) for moderate stroke, and 0.47 (SD = 0.31) for a patient who had experienced a severe stroke. When myocardial infarction was added to these three scenarios the returned utility values for mild, moderate and severe stroke decreased to 0.72 (SD = 0.25), 0.59 (SD = 0.26) and 0.43 (SD = 0.31) respectively. When gastrointestinal bleeding was also added, the mild and severe stroke health states decreased to 0.68 (SD = 0.27) and 0.42 (SD = 0.32) respectively, while the moderate stroke health state remained unchanged.

CONCLUSIONS: Results were internally consistent, with the more severe health states valued with a poorer utility value. Of note, treatment side effects are relatively insignificant when cardiovascular events are considered. Utility results affect the burden of ACS outcomes.

Factors determining utility measured with the EQ-5D in patients with atrial fibrillation

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OBJECTIVES: Although atrial fibrillation (AF) is associated with increased morbidity and mortality related to heart failure, stroke and other thromboembolic complications, there is limited data on its effects on patients’ health-related quality of life (HRQoL). The objective was to analyse the factors determining utility in patients with all types of AF, both at baseline and after one year from inclusion, based on data from the Euro Heart Survey on AF.

METHODS: HRQoL was measured with the EQ-5D questionnaire, providing a utility score. At baseline, 5050 AF patients in 35 European countries had completed all dimensions of the EQ-5D, and 3045 had done so after one year. We used Powell’s censored least absolute deviations estimator (CLAD) for inference and ordinary least squares (OLS) regressions for prediction. Variables with strong correlation (≥0.6) were omitted and insignificant variables removed stepwise from the CLAD regressions (95% CI). OLS regressions were performed on the difference in utility between baseline and follow-up.

RESULTS: The mean utility per patient at baseline was 0.753 (SD 0.269), compared to 0.783 (SD 0.249) at follow-up. Regardless of time point, utility and change in utility were significantly correlated with age, gender, AF type and symptoms. At baseline, utility was also determined by domestic status, regular exercise habits, diabetes and comorbidities. At follow-up, additional determinants included geographic region, underlying heart disease, baseline utility, and adverse events. Change in utility over time was affected by the baseline variables age, gender, geographic region, regular exercise habits, comorbidities, heart failure symptoms, utility, and adverse events during follow-up. Utility in AF patients at baseline and over time is influenced by demographic and disease-specific variables, mainly gender and the modifiable factors symptom burden, AF type, comorbidities and adverse events. These findings provide useful information on the effect of AF on HRQoL and input for economic evaluations.