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Syncope and bifascicular block in the absence of structural heart disease

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Introduction
The management of patients with bifascicular block (BFB) and unexplained syncope, whether a diagnostic strategy based on electrophysiology study (EPS) or empirical pacemaker implantation is preferable, is still controversial.

Purpose
To compare the long-term impact of empirical pacemaker implantation vs. diagnostic strategy based on EPS, on syncope recurrence, complications and mortality.

Methods
An observational study was conducted in patients with cardiogenic syncope and BFB without structural heart disease. Group A was defined if empirical pacemaker was implanted. Group B consisted of patients whose treatment was determined by the EPS results (positive EPS led to pacemaker implantation and negative EPS led to implantable loop recorder). To assess the long-term impact of both strategies, baseline characteristics (Table) and incidence of syncope recurrence, device complications and mortality, were compared. Multiple logistic regression was used for the multivariate analysis.

Results
Among 77 patients included (61% male, mean age 71.7 ± 9.6), an empirical pacemaker was implanted in 36 (46.8%) and EPS was performed in 41 (53.2%) of which 23 finally received a pacemaker (because of positive EPS) and 18 an implantable loop recorder (ILR) (because of negative EPS). Furthermore, during follow-up of 18 ILR patients, pacemaker was implanted in 12 (66.6%) (6 due to findings in the ILR, 5 for AV block and 1 for sick sinus syndrome). With a mean follow-up of 105.4 ± 51.7 months, Group A had lower rates of syncope recurrence (5.6 vs 29.3%, p=0.007) and both groups had similar rates of mortality and complications (33.3 vs 31.7%, p=0.97 and 13.9% vs 17.1% p=0.7). Multivariate analyses revealed treatment approach based on EPS results (OR: 6.24; 95% CI 1.26-30.97; p=0.025), diabetes mellitus (OR 4.13; 95% CI 1.15-15.79; p=0.029) and left bundle branch block (OR: 3.62; 95% CI 1.15-14.79; p=0.033) as independent predicting factors of syncope recurrence.

Conclusions
Empirical pacemaker implantation seems to be associated with lower long-term incidence of syncope recurrence in patients with unexplained syncope and BFB without structural heart disease. It might be advisable to implement a simplified strategy with empirical pacemaker implantation in these patients.
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