USE OF AN IMPLANTABLE LOOP RECORDER TO INCREASE THE DIAGNOSTIC YIELD IN UNEXPLAINED SYNCOPE: TEN-YEAR CENTRE EXPERIENCE

Ana Rita Pereira, Alexandra Briosa, João Santos, Daniel Sebaiti, Rita Miranda, Sofia Almeida, Luís Brandão, Hélder Pereira

HOSPITAL Garcia de Orta E.P.E.

INTRODUCTION

The indications for the use of implantable loop recorder (ILR) on the diagnoses of unexplained syncope were clarified and updated at the 2018 ESC Guidelines for the diagnosis and management of syncope.

PURPOSE

To evaluate the ILR indications, diagnostic yield, ILR-guided interventions and adverse events occurrence predictors.

METHODS

- Retrospective, single-centre study
- Selected all patients that underwent ILR implantation due to syncope from 2010 to 2020 and that that had at least 3 months of follow-up.
- Follow up completed until the first arrhythmic event leading to a diagnosis, until the end of the battery life/device extraction, all-cause death or current date, what occurred first.

RESULTS

40 patients with unexplained syncope

Demographics
- Mean age 62.9±15.2 years
- 52.5% female

Indication
- 72.5% Recurrent syncope of uncertain origin with absence of high-risk criteria
- 17.5% Suspected reflex syncope presenting with frequent or severe episodes
- 10% High-risk criteria in whom a comprehensive evaluation did not demonstrate a cause of syncope

Initial workup
- 100% 12-lead ECG + 24-hours Holter + transthoracic echocardiogram
- 10% Tilt test
- 10% Treadmill test
- 5% Electrophysiological test
- 5% Carotid sinus massage

Median follow-up of 9.5 month

65% Recurrent symptoms — **52.5%** syncope; **12.5%** presyncope

32.5% Arrhythmia-correlated syncope
- 69.3% asystole
- 15.3% complete atrioventricular block
- 7.7% 2:1 atrioventricular block
- 7.7% tachy-brady syndrome
- **Median time until diagnosis**: 2 months (1-7 months)
- **Treatment:** all pacemaker implantation, exception of 1 cardiac resynchronization therapy
- **Relation with arrhythmias:** Presyncope (22.2%, p=0.06) versus syncope (61.9%, p<0.01)

32.5% Symptoms without significant arrhythmias

10% Asymptomatic but clinically significant arrhythmias
- All atrial fibrillation leading to oral anticoagulation

No patient died due to an arrhythmic cause

CONCLUSIONS

ILR implantation presented a high diagnostic yield as enabled the identification of serious rhythm disturbances in 32.5%, excluded significant arrhythmias as cause of symptoms in 32.5% and provided targeted therapeutic in 42.5%. Cox regression did not identify any predictor of adverse event. The findings support the recommendation in current guidelines that an ILR should be implanted early rather than late in the evaluation of unexplained syncope.