Additional Diagnostic Value of Very Prolonged Observation by Implantable Loop Recorder in Patients with Unexplained Syncope

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Introduction: The average diagnostic yield of the implantable loop recorder (ILR) is reported to be 35% over an observation period generally less than 18 months. The aim of this study was to evaluate the diagnostic value of ILR during prolonged observation. Methods and Results: Consecutive patients who had received one or more ILR (Reveal/plus/DX, Medtronic inc.) were included. The diagnostic ECG was classified according to the ISSUE classification. We analyzed 159 patients (88 males, 70±14 years): 70 of these were followed up for >18 months. The cumulative diagnostic rates were 30%, 43%, 52% and 80% at 1, 2, 3 and 4 years, respectively. The diagnostic yield was independent of structural heart disease, bundle branch block, number of syncopes, age and gender; the median time to diagnosis of ISSUE type 1 patients was shorter than that of the others (4 [2;10] vs. 16 [6;23] months; p=0.003). During the observation period, 3 patients (1.9%) died and none suffered arrhythmic death. Conclusions: Prolonging observation increased the diagnostic value of ILR in syncopal patients and was safe. As consequence, when a strategy of prolonging monitoring is chosen, monitoring should be maintained even for several years until diagnosis is established.

Keywords: syncope, implantable loop recorder, diagnostic value