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## Clinical Experience with Implantable Loop Recorder - From Diagnosis to Treatment

<u>Kadmon, E</u>; Kusniec, J; Haim, M; Zabarsky, R; Strasberg, B Rabin Medical Center, Petah Tikva, Israel

# Background:

An arrhythmic mechanism underlying infrequent syncope is often difficult to detect using a Holter electrocardiogram or an external loop recorder. An implantable loop recorder (ILR) is an effective tool in these cases.

## Objective:

To review our clinical experience with ILR and its efficacy.

## Methods:

We reviewed patients' files implanted with ILRs between Dec 2006 and July 2009, including diagnostic work-up done, ILR findings and influence on treatment.

# Results:

There were 39 patients (22M/17F), aged 27-96y (mean 70y). 19 had recurrent syncope, 17 had single syncopal episode, and 3 had pre-syncope. Follow up period was 2 weeks to 32 months (mean 10.4m). Tachyarryhthmias detected - supraventricular tachycardia (1), atrial tachycardia (2). Bradyarrhyhtmias detected - paroxysmal AV block (7), sinus arrest (4) and severe sinus bradycardia (1). 12 patients were paced, 2 weeks to 14 months (mean 1.3m) after ILR implantation. Patients with recurrent syncope were most likely to require a pacemaker, and those with pre-syncope were least likely to. Conduction disturbances were a moderate predictor for requiring a pacemaker, while neurological illnesses were a negative predictor. 12 patients complained of symptoms in the absence of documented arrhythmia, in 11 of them no arrhythmia was found throughout the follow-up and in 1 an arrhythmia requiring a pacemaker was eventually detected. By October 2009 15 arrhythmias were detected, 11 were excluded, 8 are under follow-up, and 5 ILRs were explanted without achieving a diagnosis.

#### Conclusion:

In our experience ILR is effective for detecting and excluding arrhythmias in patients with unexplained syncope.