Abstract

An implantable medical device, comprising a processor, a memory unit, a first detection unit configured to detect an atrial electric signal of a human or animal heart, and a second detection unit configured to detect a ventricular electric signal of the same heart. During operation of the device, atrial events are evaluated in the atrial electric signal detected by the first detection unit and/or ventricular events are evaluated in the ventricular electric signal detected by the second detection unit for recognizing a condition of the implantable medical device in which atrial electric signals are detected only insufficiently.

This evaluation is done by applying at least one of the following criteria:

- morphology of the detected atrial electric signals;
- lacking stability of atrial events;
- absence of atrial events over a first period of time;
- detection of an amplitude of the detected atrial electric signal being lower than a predefined threshold value;
- absence of atrial events during detection of ventricular electric signals at the same time;
- comparison of atrial events sensed with a first sensing profile of the first detection unit and atrial events sensed with a second sensing profile of the first detection unit, the second sensing profile being more sensitive than the first sensing profile.