

Claims

1. An implantable device (200) for stimulating a heart (H) to lower blood pressure, comprising:

- 5 - a stimulation unit (201) configured to stimulate a ventricle, and
 - a sensing unit (202) for detecting atrial activity of the heart (H),

wherein

- 10 the stimulation (201) unit is configured to stimulate the ventricle (RV, LV) for at least one cardiac cycle with a predefined delay after detection of an atrial activity and to subsequently not stimulate the ventricle (RV, LV) with a predefined delay after the detection of an atrial activity for at least one cardiac cycle, wherein the implantable device is configured to suspend stimulation of the ventricle triggered by said detection
15 of an atrial activity after a predefined number of heart cycles or after a predetermined time period for a number of heart cycles or for a predetermined time period.

2. An implantable device (200) for stimulating a heart (H) to lower blood pressure, comprising:

- 20 - a stimulation unit (201) configured to stimulate a ventricle, and
 - a sensing unit (202) for detecting atrial activity of the heart (H), and
 - a stimulation unit (220) configured to stimulate an atrium,

wherein

- 25 the stimulation (201) unit is configured to stimulate the ventricle (RV, LV) for at least one cardiac cycle with a predefined delay after detection of an atrial activity or with a predefined delay after the stimulation of an atrium and to subsequently not stimulate the ventricle (RV, LV) with a predefined delay after the detection of an atrial activity
30 for at least one cardiac cycle, wherein the implantable device is configured to suspend stimulation of the ventricle triggered by said detection of an atrial activity or triggered by an atrial stimulation after a predefined number of heart cycles or after a

predetermined time period for a number of heart cycles or for a predetermined time period.

3. The implantable device according to claim 1 or 2, wherein said delay is less than 100 ms, preferably less than 90 ms, preferably less than 80 ms, preferably less than 70 ms, preferably less than 60 ms, preferably less than 50 ms, preferably less than 40 ms, preferably less than 30 ms, preferably less than 20 ms, preferably less than 10 ms.
4. The implantable device according to one of the preceding claims, wherein said delay is adjustable, and wherein the implantable device (200) is configured to adjust the delay to be shorter than an intrinsic AV delay of the patient.
5. The implantable device according to one of the preceding claims, wherein the implantable device (200) comprises a ventricular sensing unit, and wherein the implantable device (200) is configured to measure an intrinsic AV delay of the patient and to adjust said adjustable delay depending on the measured intrinsic AV delay, wherein the adjustable delay is adjusted to be shorter than said measured intrinsic AV delay.
6. The implantable device according to one of the preceding claims, wherein the implantable device (200) is configured to suspend the stimulation of the ventricle triggered by the detection of an atrial activity or triggered by an atrial stimulation depending on one or more parameters that can be assigned to the systemic blood pressure.
7. The implantable device according to claim 6, wherein the implantable device (200) is configured to measure the respective parameter or to receive the respective parameter from another device.
8. The implantable device according to one of the preceding claims, wherein the ventricle is the right ventricle (RV), or wherein the ventricle is the left ventricle (LV), or wherein the stimulation unit (201) is configured to stimulate the left and the right ventricle (RV,

- 5 LV) for at least one cardiac cycle with said predefined delay after the detection of an atrial activity or after the stimulation of an atrium, and configured to subsequently not stimulate the left and the right ventricle (RV, LV) with a predefined delay after the detection of an atrial activity or with a predefined delay after the stimulation of an atrium for at least one cardiac cycle.
9. The implantable device according to one of the preceding claims, wherein the stimulation (201) unit is configured to stimulate the ventricle (RV, LV) irrespective of atrial activity for at least one cardiac cycle after the detection of an atrial activity or after the stimulation of an atrium in the absence of intrinsic AV conduction.
10. A method for lowering blood pressure by means of cardiac stimulation, particularly using an implantable device (200) according to one of the preceding claims, wherein the ventricle (RV, LV) is stimulated for at least one cardiac cycle with a predefined delay after detection of an atrial activity or with a predefined delay after the stimulation of an atrium and is subsequently not stimulated synchronously after atrial activity or an atrial stimulation for at least one cardiac cycle.
11. The method according to claim 10, wherein the ventricle (RV, LV) is stimulated for at least one cardiac cycle with a predefined delay after detection of an atrial activity or with a predefined delay after the stimulation of an atrium and is subsequently not stimulated synchronously after atrial activity or an atrial stimulation for at least one cardiac cycle.
12. The method according to claim 10 or 11, wherein the ventricle (RV, LV) is stimulated irrespective of atrial activity for at least one cardiac cycle after the detection of an atrial activity or after the stimulation of an atrium in the absence of intrinsic AV conduction.
13. The method according to one of the claims 10 to 12, wherein the cardiac stimulation is delivered to patients indicated with Heart Failure with preserved Ejection Fraction (HF-PEF).