

Epicardial Pacing Workshop

ACTACC
November 2016



Our patient is
In Intensive Care
Following an elective AVR
.....

One Heart Course 2016 ©



Indications for Pacing

ECG on monitor:

- Bradycardia
- Pauses
- Asystole

Effect of rhythm:

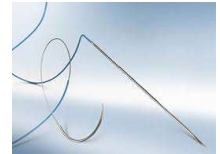
- Low cardiac output
- Reduced renal function
- Symptoms

One Heart Course 2016 ©

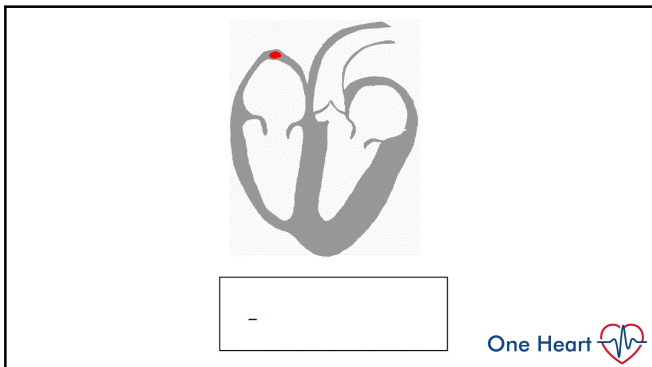


Post-operative Pacing

- external pads
- transvenous endocardial wire
- epicardial wires



One Heart Course 2016 ©



Pacemaker Functions

Stimulate

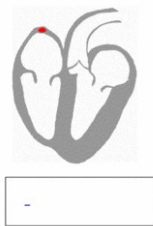
Sense

One Heart Course 2016 ©



Ventricular Pacing

- loss of atrial kick
- cannon a waves
- raised R and L atrial pressure
- raised ANP and BNP
- peripheral resistance unresponsive
- VA retrograde conduction
- depolarisation starts in RV



One Heart Course 2016 ©

One Heart 

Pacemaker Code

- I. Paced chamber
- II. Sensed chamber
- III. Mode of response

- IV. Programmable functions
- V. Antitachydysrhythmia functions

One Heart Course 2016 ©

One Heart 

Modes of Pacing

Fixed rate

AOO atrial pacing

VOO ventricular pacing

One Heart Course 2016 ©

One Heart 

Modes of Pacing

Fixed rate

AOO

YOU ARE THE SENSOR!

VOO

One Heart Course 2016 ©

One Heart 

Modes of Pacing

On Demand

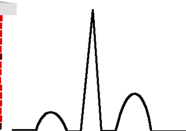
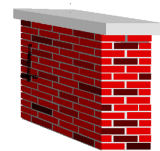
AAI atrial output inhibited by sensed atrial signals

VVI ventricular output inhibited by sensed ventricular signals

One Heart Course 2016 ©

One Heart 

PACEMAKER SENSITIVITY




One Heart Course 2016 ©

One Heart 

Sensitivity programmed too high –
 Unable to 'see' intrinsic signal


UNDERSENSING

One Heart 

One Heart Course 2016 ©


Sensitivity programmed too low –
 Able to 'see' P wave, R wave, T wave intrinsic signal

OVERSENSING

One Heart 

One Heart Course 2016 ©

Sensitivity programmed correctly: -
 Only able to 'see' the R- wave.

One Heart 


One Heart Course 2016 ©

Modes of Pacing

Dual chamber pacing

- D pacing in RA and RV
- D sensing in RA and RV
- D Triggering or Inhibiting

Mode switch DDD to VVI

One Heart 

One Heart Course 2016 ©


The Set-Up

BOX

PACING LEAD

PACING WIRES

R L

One Heart 

One Heart Course 2016 ©