



Barostim Therapy Surgical Considerations

Tony Shao MD

Matthew Sussman MD

Christopher Chow MD

Jackson Memorial Hospital / University of Miami Hospital



Clinical Presentation

- 47F w/ PPCM 1998, EF 20-25%, BMI 40, IDDM, paroxysmal AF, gout
- PSHx
 - Medtronic CRT-D
 - Mitraclip
 - Previous chemo port in the right chest
- Symptoms
 - Fatigue
 - Exercise intolerance
 - Lower extremity swelling



Barostim System Elements



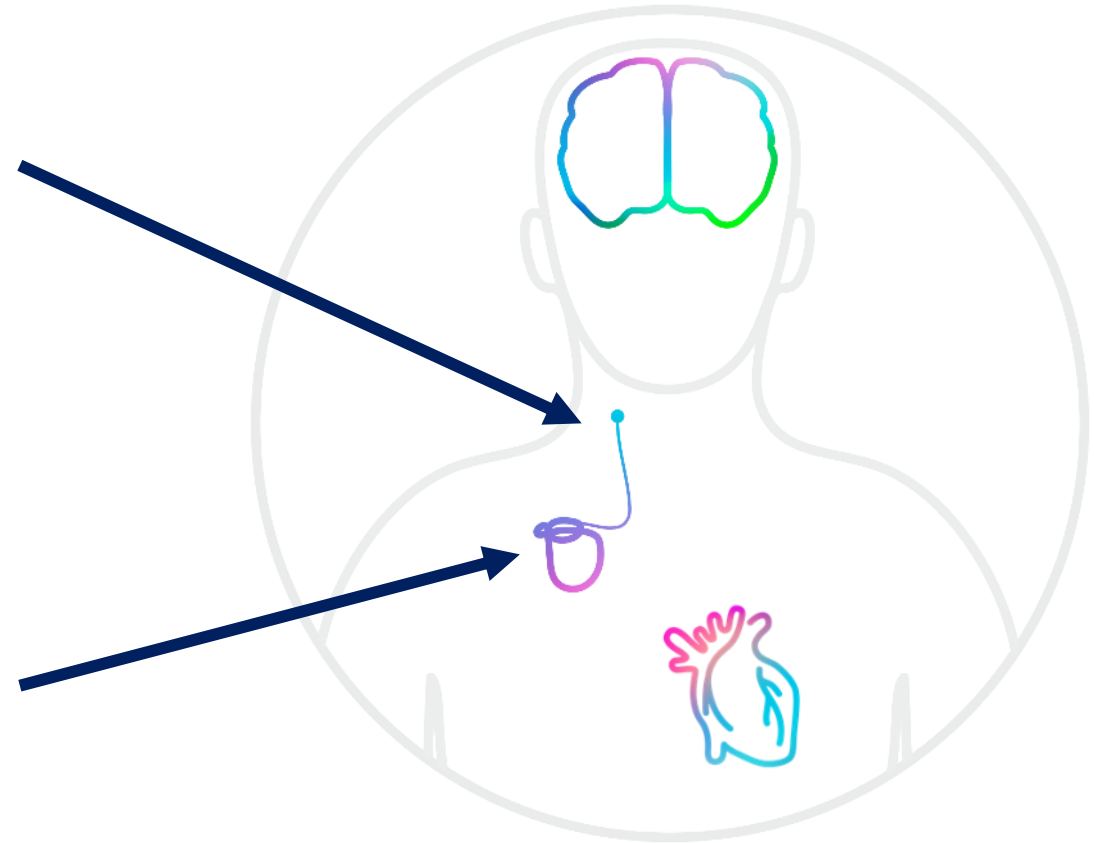
Carotid Sinus Lead

Create a small incision to access the carotid bifurcation and secure the 2mm electrode and lead



Implantable Pulse Generator (IPG)

Tunnel the lead over the collarbone and connect to IPG in a standard device pocket



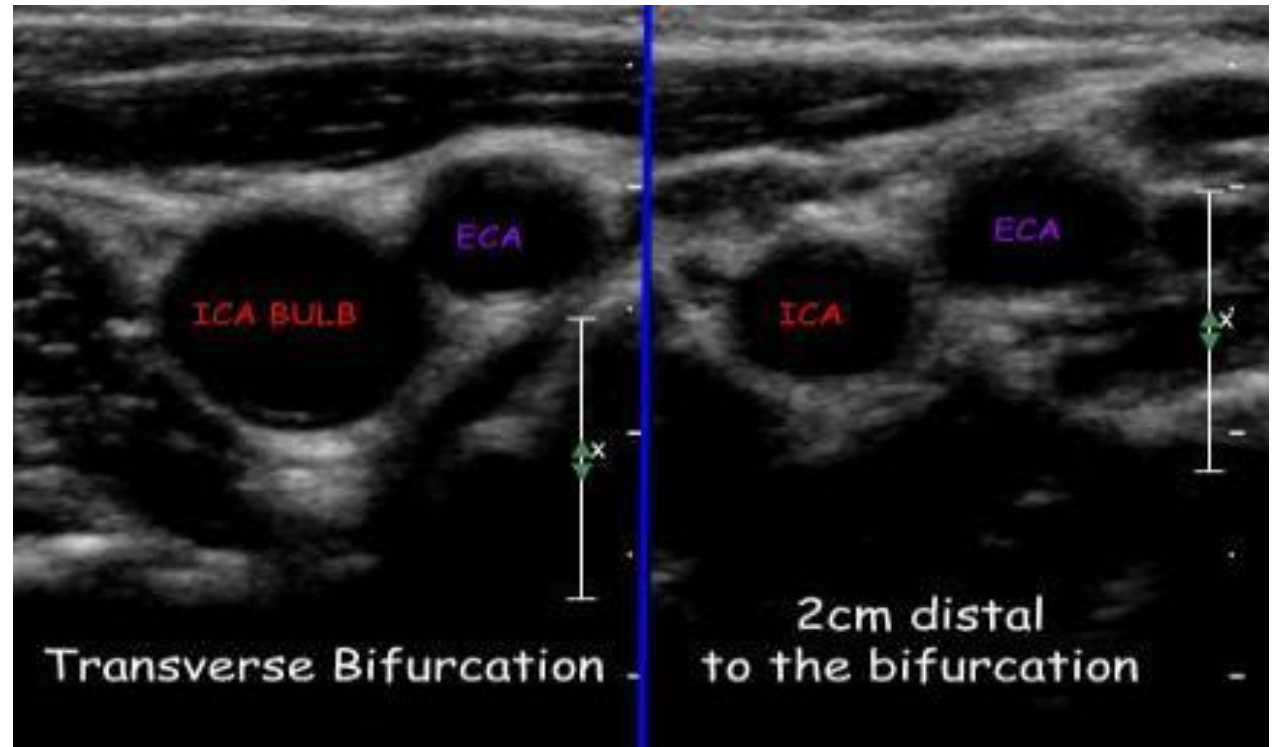
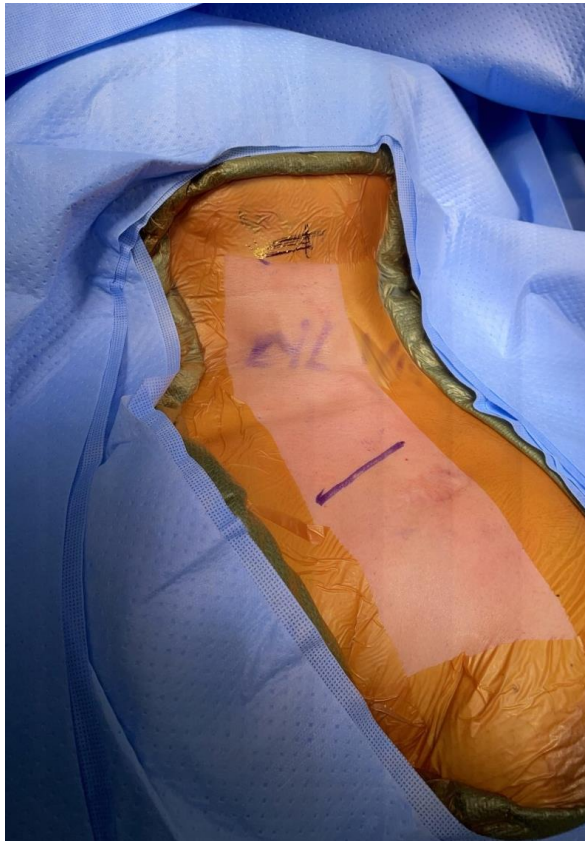
Requires no leads in the heart or vasculature

Case Preparation

- Supine
- GETA
 - Anesthesia considerations:
- A-line for close BP monitoring
- Shoulder roll, neck turned to the contralateral side
- Peri-op antibiotics
- Neck and chest prep



Case Preparation



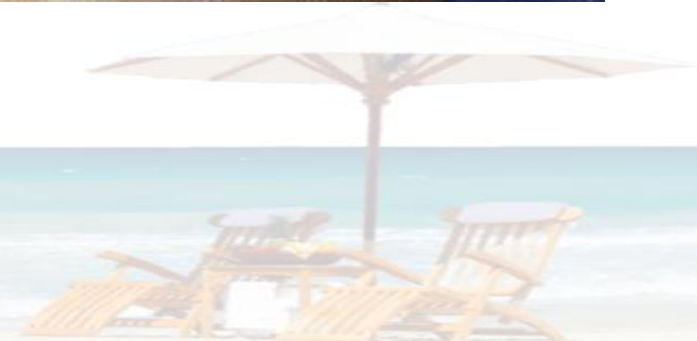
Exposures

- Ultrasound to mark the carotid bifurcation
- Neck incision just superficial
- Divide the platysma
- Retract SCM
- Expose and open the carotid sheath
- Dissect out the carotid bulb
- Remove the chemo port



Placing the Generator

- Create the upper chest pocket, 5 cm transverse incision, just below clavicle
- Pocket in the pectoralis fascia
- Subcutaneous tunnel from the chest to the neck
- Leads through the tunnel
- Connect the leads to the generator
- Place generator in the pocket

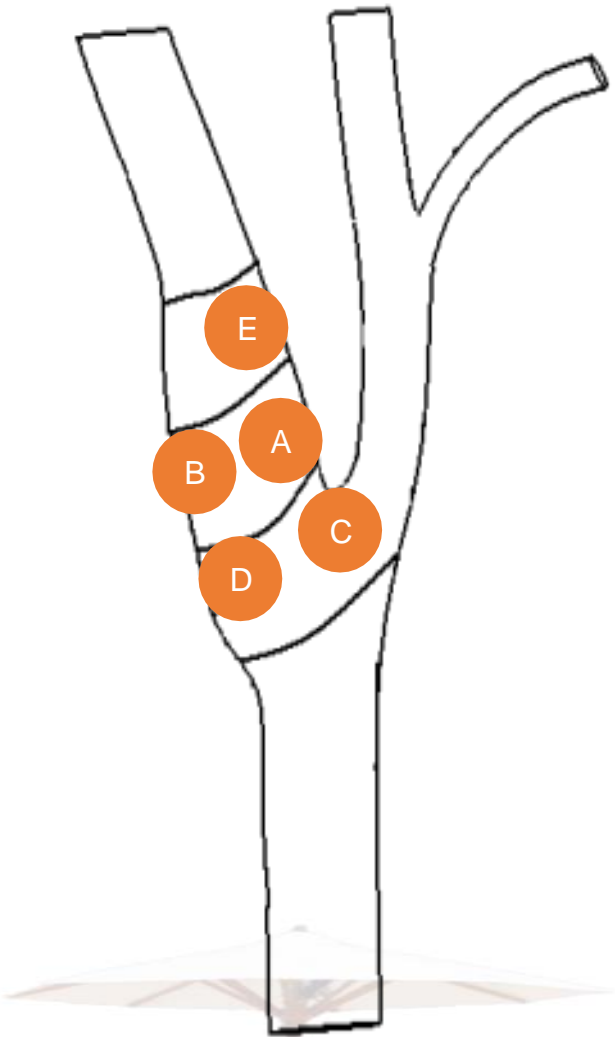
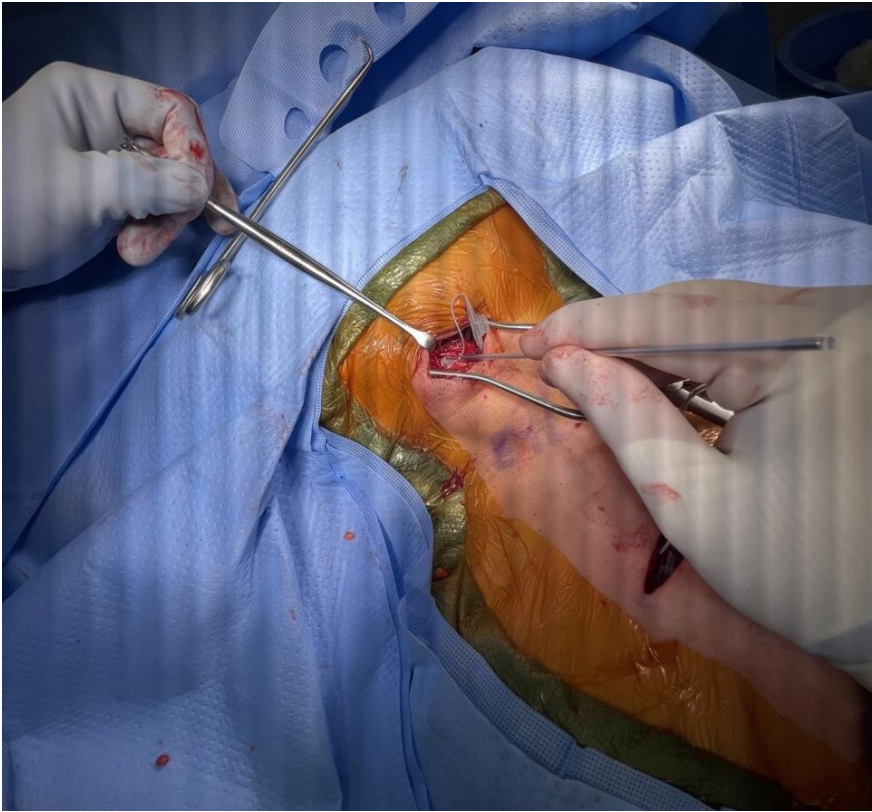


Testing the generator

- Place the electrodes over the carotid body
- Calibrate the device with the help of the reps
- Look for a 10% drop in blood pressure



Testing the generator

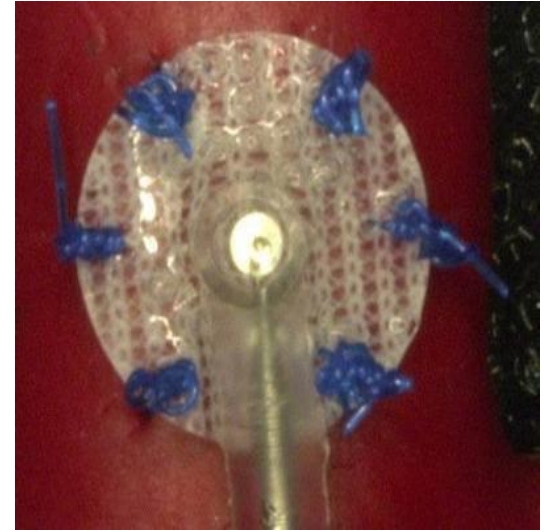
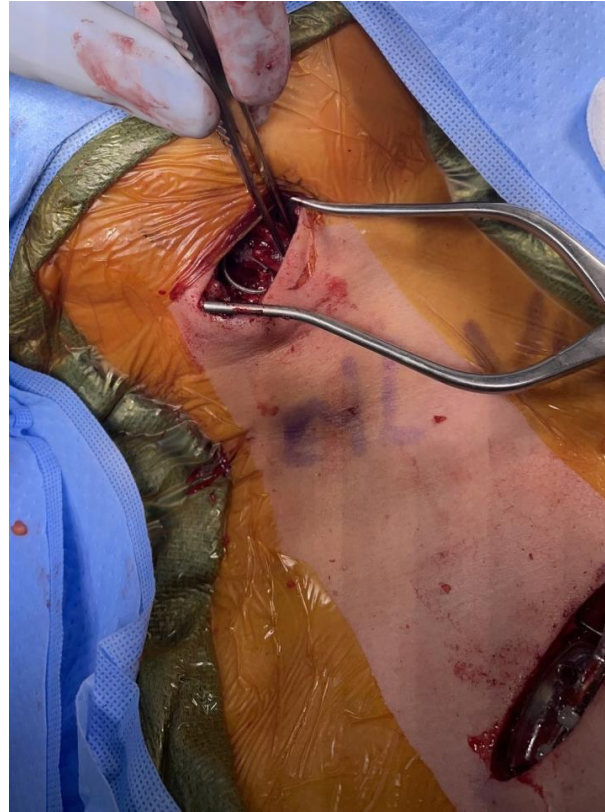


Securing the device

- Secure electrodes with 6-0 prolene, interrupted, 6 in a circle
- Secure the generator in the pocket with 2-0 prolene
- Hide the excess lead
- Close the neck with 3-0 vicryl and 4-0 monocryl and dermabond
- Close the chest with 3-0 vicryl and 4-0 monocryl and dermabond



Securing the device



Post-procedure

- The patient is weaned from general anesthesia, her arterial line is removed, and she was discharged from the hospital the same day after a brief recovery in the PACU

