

“Primum Non Nocere”
First, Do No Harm “Hippocrates”

Faculty members contributing to this case:

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Case history:

45 years old female patient who had ASD repair since 13 years followed by post operative complete heart block for which a VVI PM with screw in lead in RV septum was implanted.

Lead fracture occurred 8 years ago which was cut and left free in the venous system. Another VVI PM was implanted with a passive lead in RV apex.

1 year ago, patient presented with non remitting fever, leucocytosis & malaise. TTE done by Prof.Dr. Sanaa Ashour revealed vegetation attached to the free lead screwed in the RV septum.

TEE confirmed this vegetation.

Contemporary management:

The therapeutic options for this patient would be:

- Antibiotics only: 2 months trial of antibiotics after blood culture failed to control active infection.
- Surgical lead extraction: This is a high risk, high mortality procedure in the best centers & the required expertise is not available.
- Transvenous lead extraction. “First, do no harm”. A major intervention with significant mortality & morbidity.

Transvenous lead extraction.

● **Preparation:**

- Full antibiotic coverage
- Preparation of 4 units of whole blood & 2 units of fresh frozen plasma.
- Surgical & anesthesiology backup ready & scrubbed together with primed CPB machine.
- Left femoral arterial & venous access for IBP monitoring & temporary PM implantation & for urgent CPB if needed.
- 9 Fr. right femoral venous access for transvenous lead extraction.

● **Procedure:**

- A trial of snaring the loose end of the free lead with a snare failed because the lead was floating in the left pulmonary artery.
- Another trial to bring the loose end of the lead down to the inferior vena cava (IVC) with a deflectable EP catheter was successful. However, the lead keeps prolapsing with the venous return back to the pulmonary artery
- A technique of rapid ventricular pacing was done to minimize the “sucking effect” of the venous return on the lead. This maneuver helped to snare the lead from the IVC.
- Constant traction on the lead was successful in extracting most of the lead & attached vegetation except for a small adherent portion to the RV septum.

● **Post operative:**

- Despite partial lead extraction, clinical & bacteriological cure ensued.
- The patient is afebrile till present time.

Take home messages:

- With more & more intracardiac devices implanted, the need for extraction techniques becomes more & more.
- Prompt recognition of problems is mandatory for a timely procedure.
- Sometimes, partial success is better than complete failure or more exhaustive procedures.
- Lastly, “First, do no harm”.