AVNRT ablation is not always an easy mission, Case presentation

**History**
- Female patient 55 years old Housewife from Zagazig
- Married and has 5 off springs
- No special habits
- Not DM not HPN not smoker
- No previous medical history
Patient presented with frequent paroxysmal rapid regular palpitations of acute onset and offset that are not controlled by different anti-arrhythmic drugs prescribed
So Patient referred for EP study

Physical examination

• BP 130/80
• Pulse 75/minute
• Normal general and cardiac examination
ECG

- During tachycardia:
  shows Regular Narrow complex tachycardia for DD
  1- AVNRT
  2- AVRT
  3- Atrial tachycardia

- In between attacks
  shows normal sinus rhythm
Lab profile & ECHO

Accepted apart from mild LV diastolic dysfuntion
EP study

Decrimental ventricular pacing showed central conduction till reaching WCL
EP study
(Extra-stimulus test) from ablation catheter at HRA failed to produce AH jump, Echo beat, or tachycardia even after administration of atropine
EP study

Tachycardia is easily induced by burst atrial pacing from CS 9/10 at CL 270 m.sec
EP study

Tachycardia cycle length was 335 m.sec
With very short VA interval
EP study

The first impression was AVNRT

But

Entrainment could not be done
EP study

There was failure of entrainment of tachycardia by V pacing with production of VA dissociation at different stimulation cycle lengths.

SO

Automatic tachycardia is suspected
EP study

Tachycardia occurred during study with 2:1 ventricular conduction
Together with very short VA interval

We concluded that the tachycardia is not
EP study

conduction recovered 1:1 AV conduction by a PVC facilitating hiss bundle conduction without terminating tachycardia

Tachycardia occurred with aberrancy
EP study

So with previous data:

1- It is not AVRT....... Due to occurrence of AV block during tachycardia

EP study

2- What are with AVNRT?

a- Easily inducible by burst Atrial pacing
b- Very short VA interval < 70 msec
c- Termination of tachycardia by A wave
EP study

3- What are With Junctional ectopic tachycardia?

1- No AH jumb, echo beat, or induction of tachycardia by extra-stimulus test.
2- 2:1 AV conduction during tachycardia is more likely to occur with automatic tachycardia.

EP study

We decided to Continue our EPS

Is it really AVNRT or Focal Junctional tachycardia ?????????????
EP study

Delta HA =

(HA during V pacing at TCL – HA during tachycardia)
EP study: Delta HA

We reviewed the induction pattern of tachycardia
So It is AVNRT

Why ??

• Induction of tachycardia by jumb
• HA interval during V pacing – HA interval during tachycardia (delta HA is negative (-19))
EP study

We started Slow pathway mapping and ablation
But !!!!!
We failed to abort the tachycardia

EP study

In the situation of previous failed ablation we decided to make fast pathway modification for 15 seconds with low energy
But
EP study

We were lucky
AV conduction returned 1:1
And we cannot induce the tachycardia
again even after giving atropine
EP study

Future plan

Patient was discharged for follow up

Till now

No recurrence of the tachycardia.
No AV conduction disturbance.
Home message

• Study well your type of tachycardia using different EP maneuvers before going to ablation

• Keep your eyes on V waves when you ablate near hiss bundle and be ready for emergency ventricular pacing

Home message

Define your enemy then open the fire
Thank You