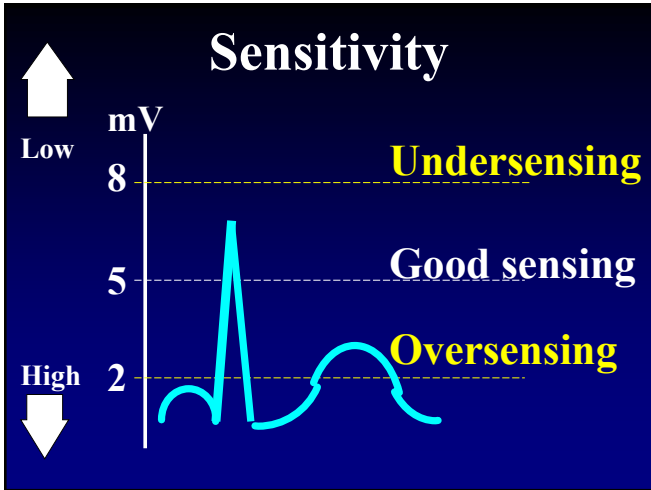


Pacing code.

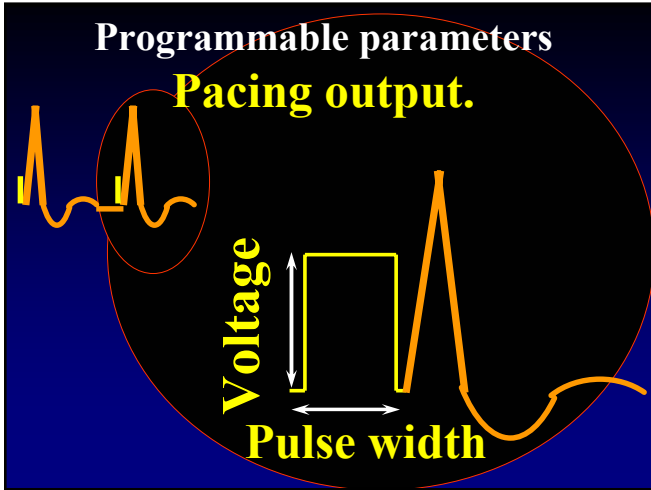
Chamber Paced	Chamber Sensed	Response	Program Rate modulation
O	O	O	P
V	V	I	R
A	A	T	
D	D	D	

Cardiac Pacing

Sami Viskin
Tel Aviv, 1998.



- Programmable parameters in single chamber pacing.
- Lower rate limit
 - Sensitivity
 - Output
 - Voltage
 - Pulse width



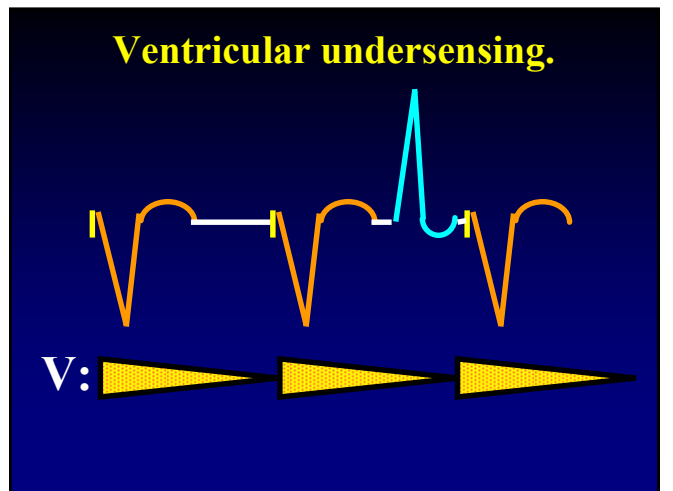
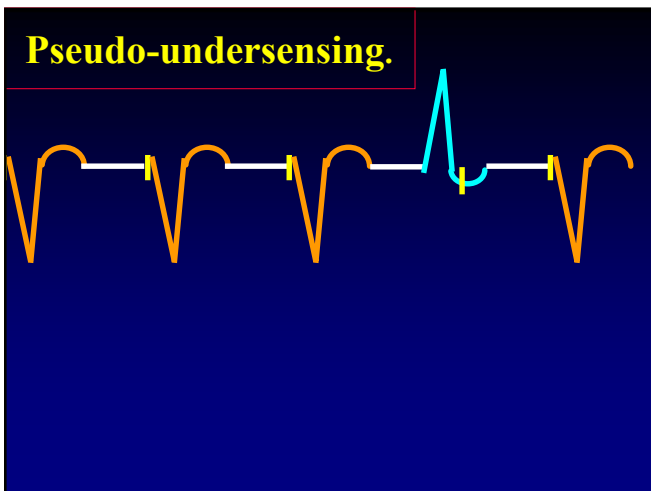
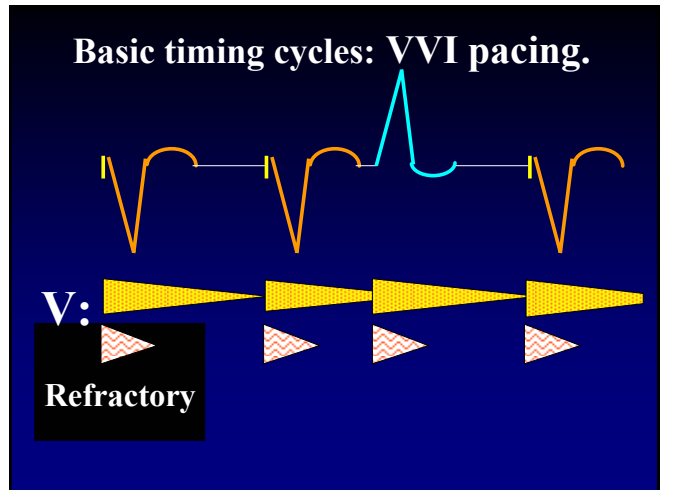
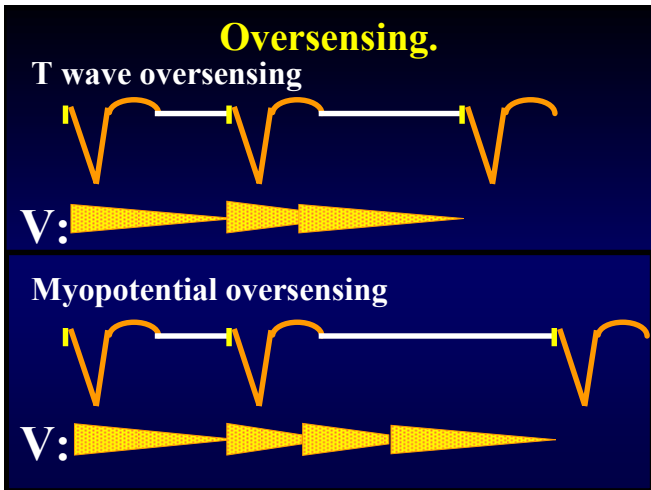
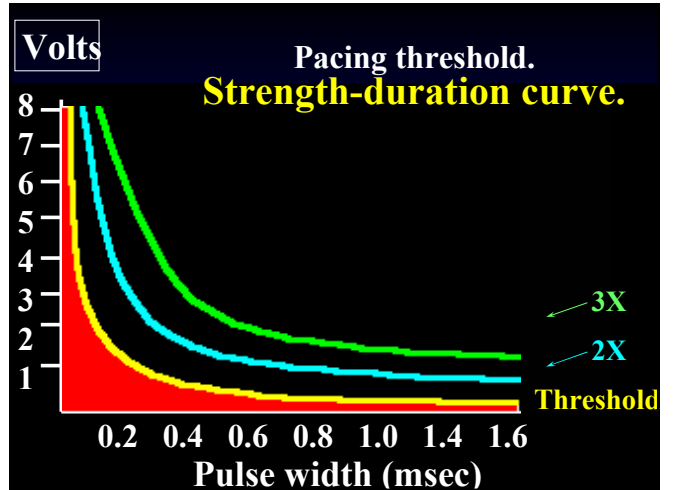
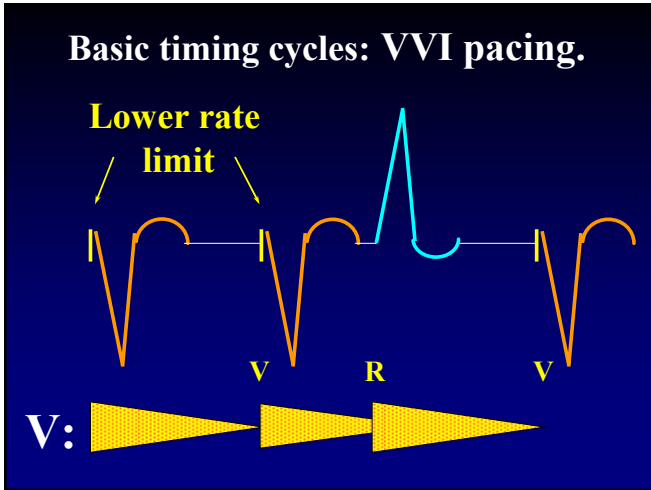
Sensitivity.

Temporary pacemaker

Demand

Demand
(less sensitive)

Asynch.



Failure to pace

No output:

- Pacemaker failure
- Total battery depletion
- Lead fracture
- Lead disconnection
- Oversensing

No capture

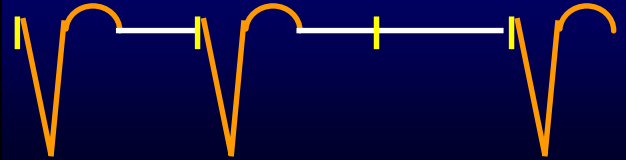
- Partial battery depletion.
- Lead dislodgment
- Lead insulation brake
- Threshold rise

Failure to pace.

No output

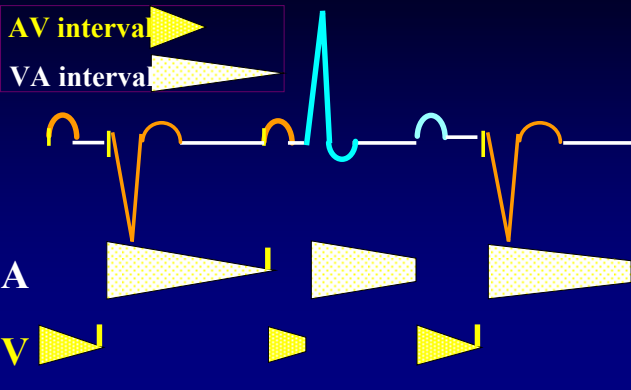


No capture



Basic timing cycles: DDD pacing.

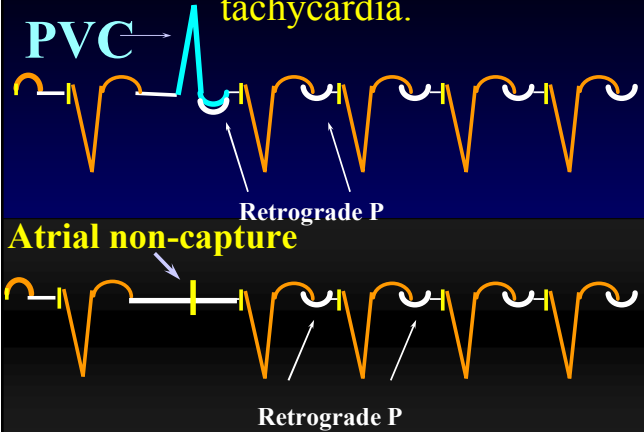
Lower rate limit = AV interval + VA interval



Undersensing / oversensing.

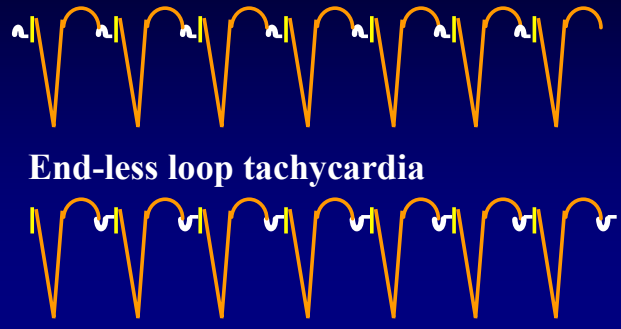
- Lead dislodgment
- Poor lead position
- Lead insulation break
- Inappropriate programming

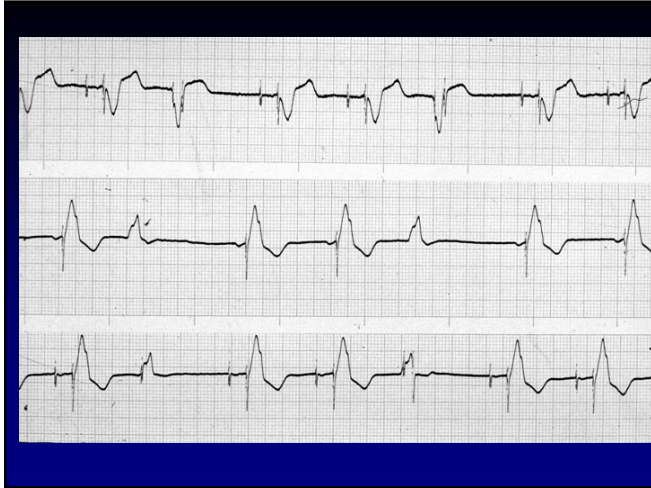
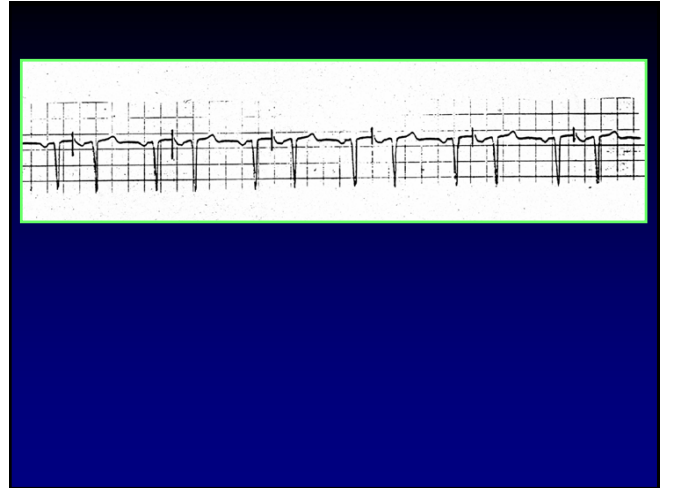
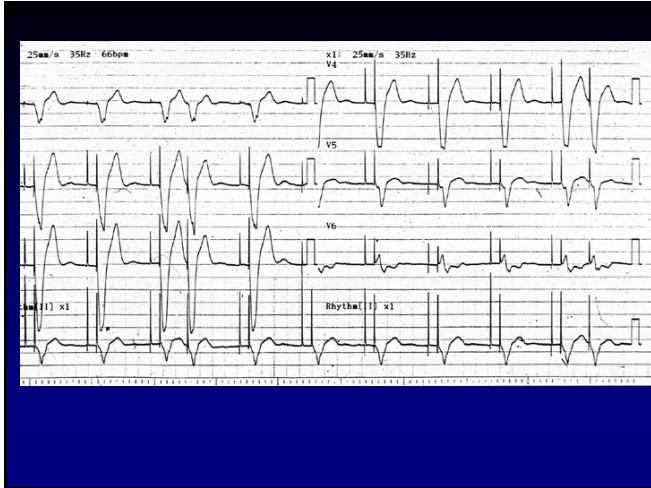
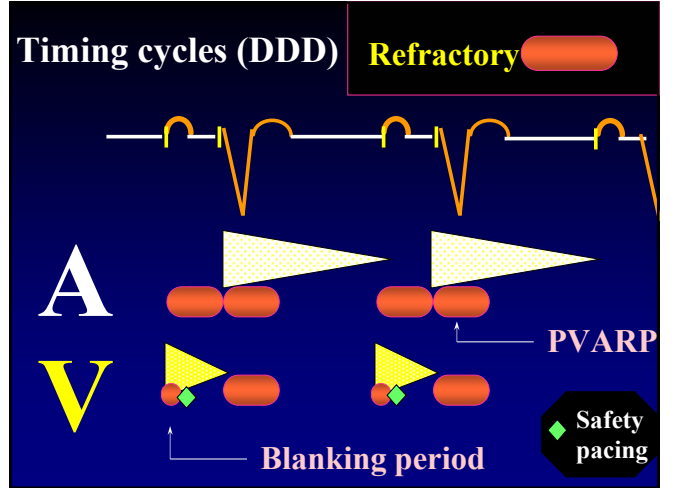
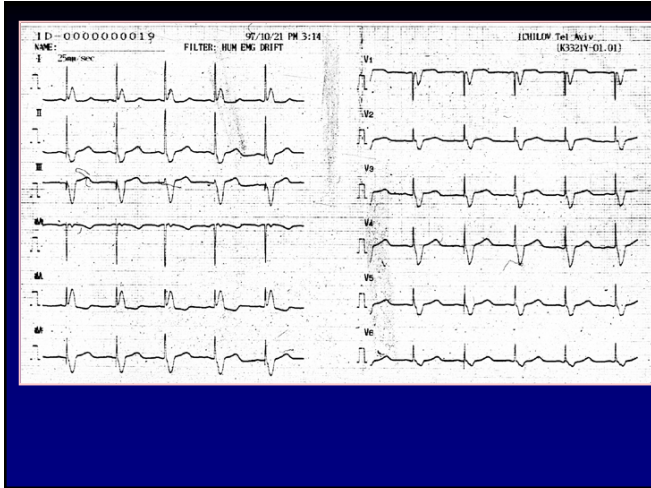
Initiation of end-less loop tachycardia.

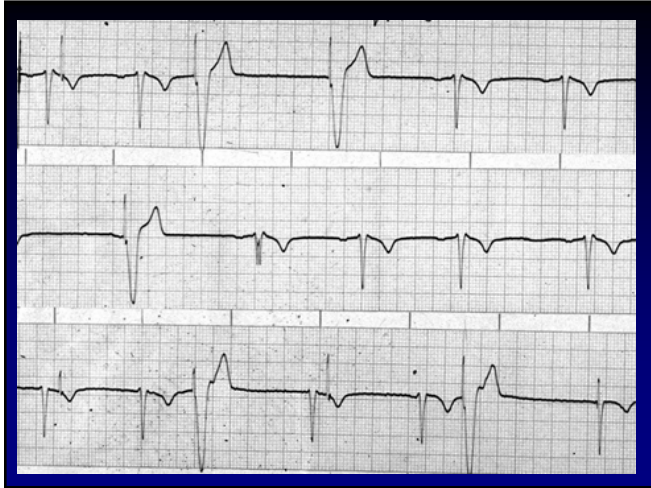
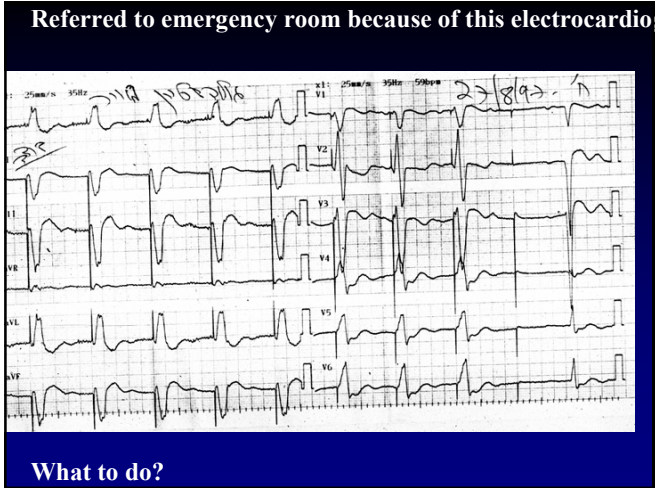


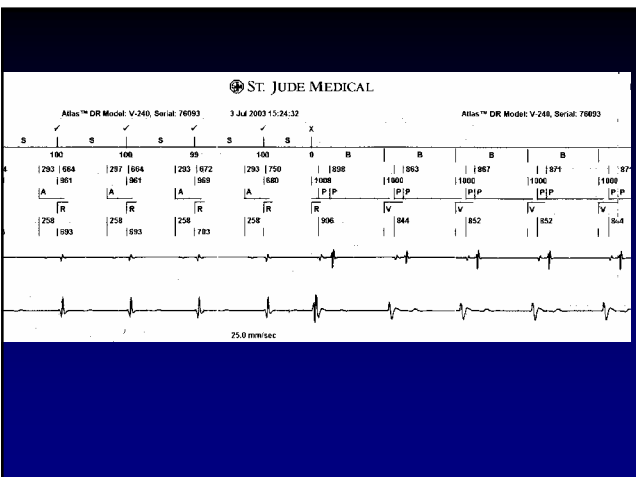
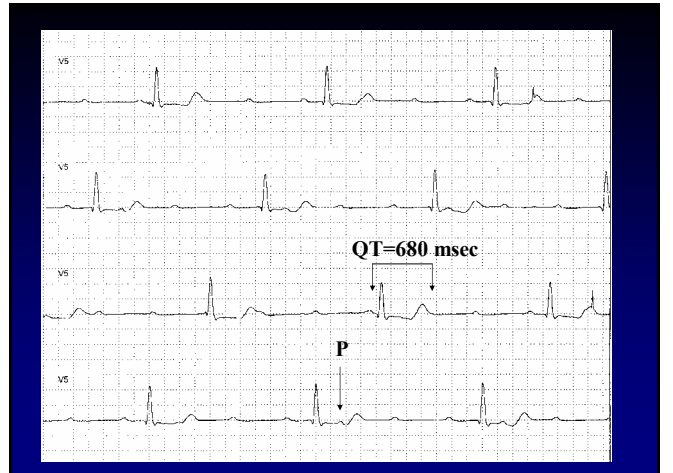
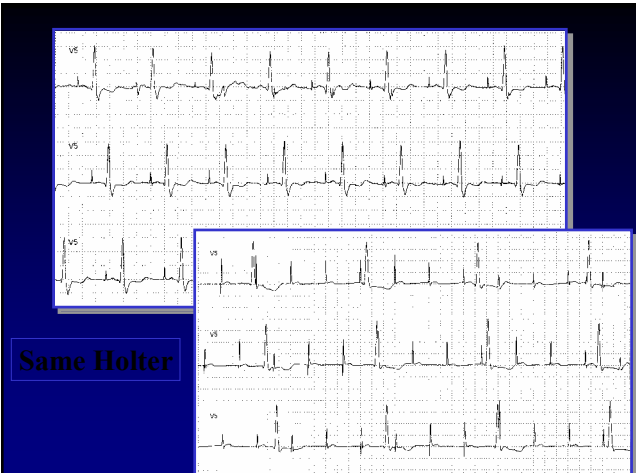
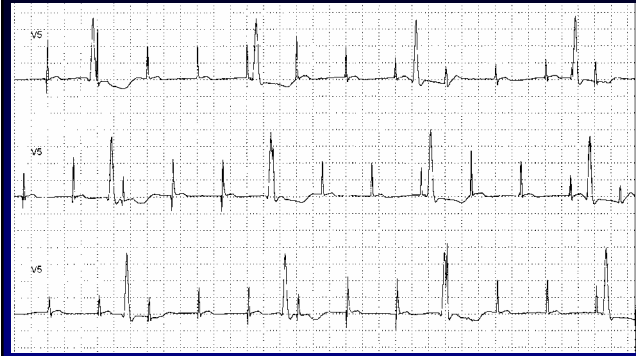
Pacemaker-mediated tachycardia (DDD mode)

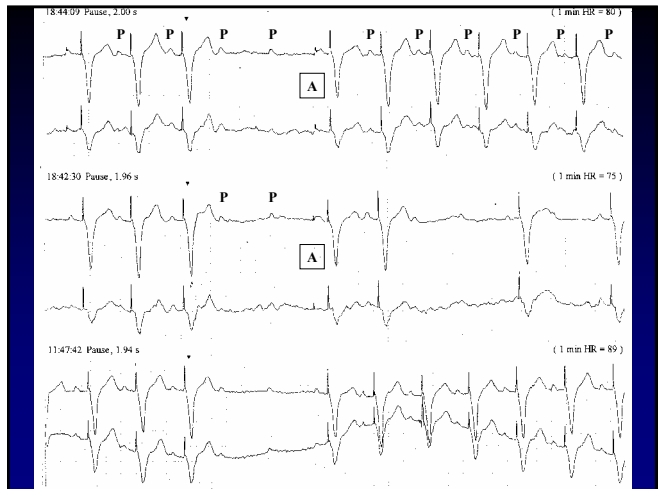
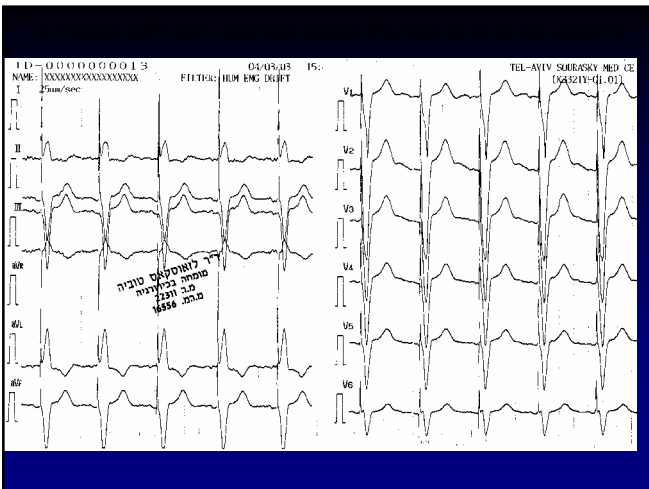
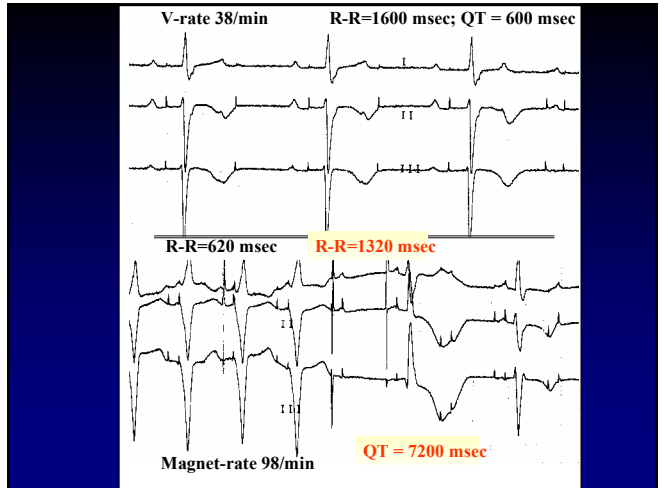
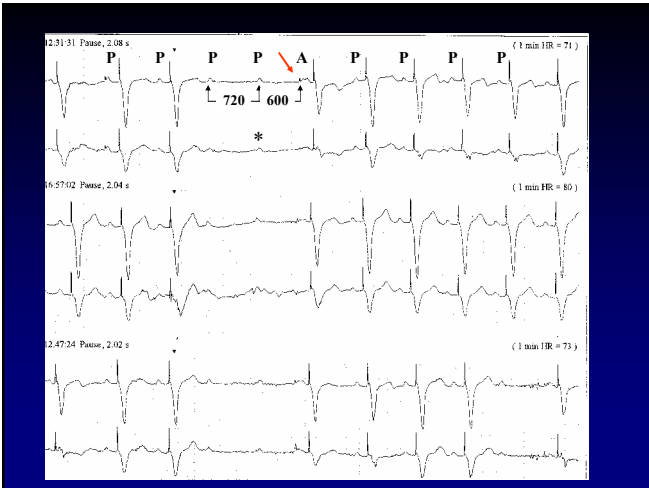
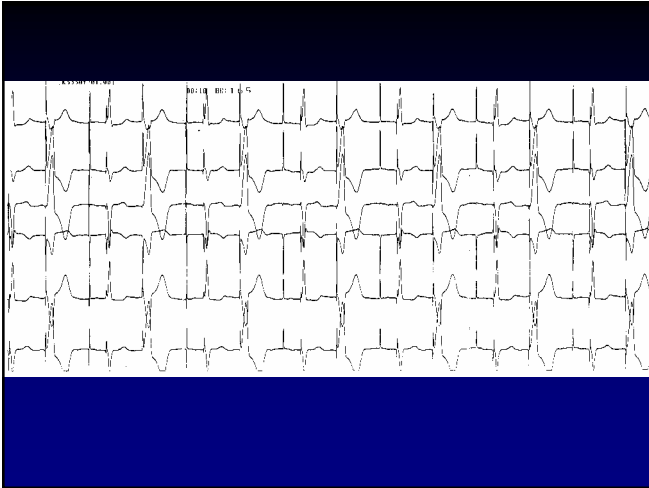
Tracking of a fast atrial rhythm.



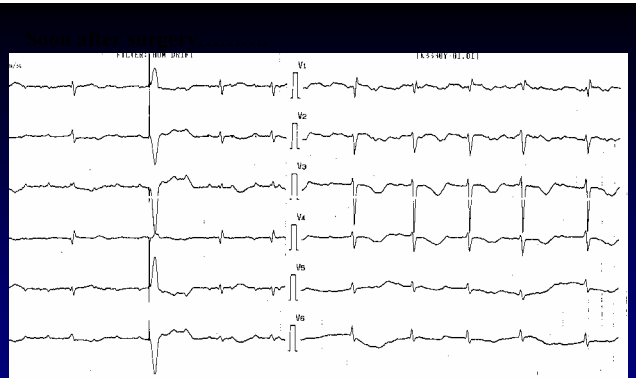
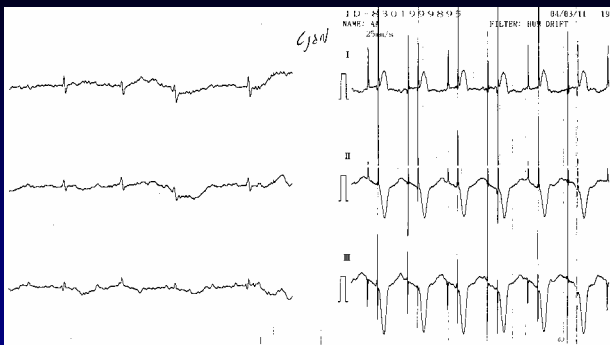








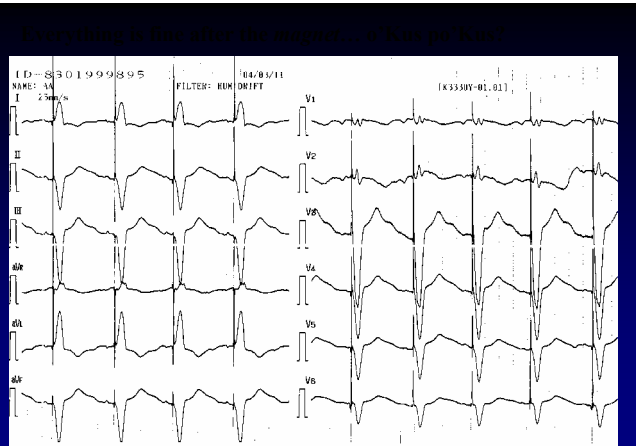
Toran placed magnet on pacemaker



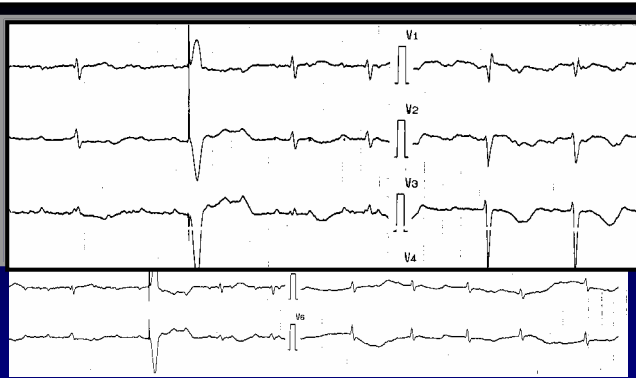
Toran called because of pacemaker malfunction

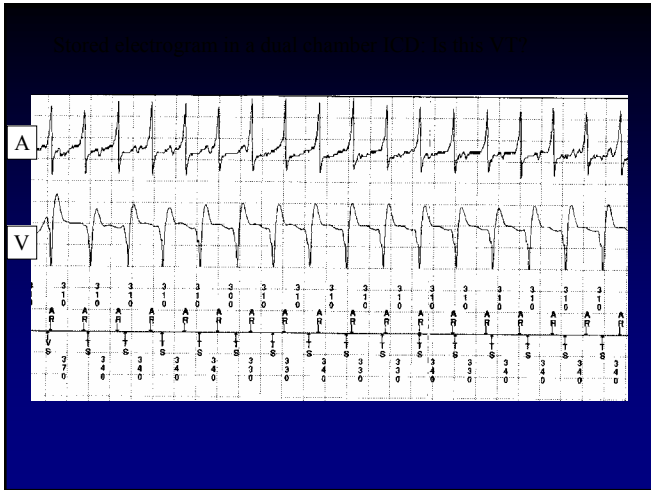
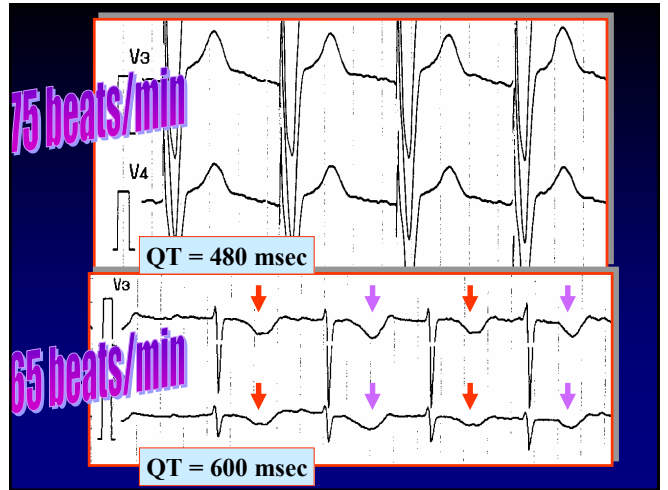
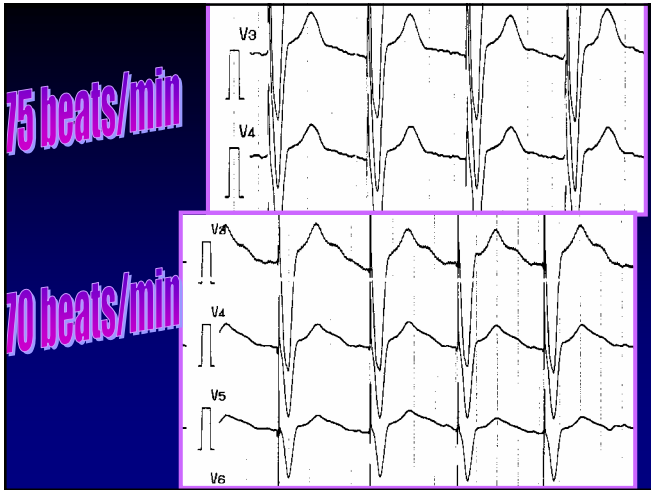
What to do?

- Questions:**
- 1) What was the pacemaker malfunction?
 - 2) How did the magnet fix it?
 - 3) What next?



- Answer:**
- 1) No pacemaker malfunction.
 - 2) Atrial tachycardia with automatic mode-switch.
 - 3) Everything OK?





Conclusions:

1) Magneto-therapy has antiarrhythmic effects.

2) Once QT, allways QT

