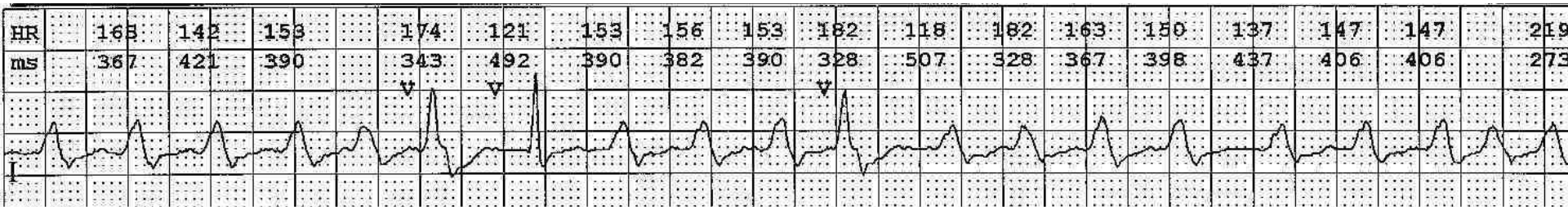
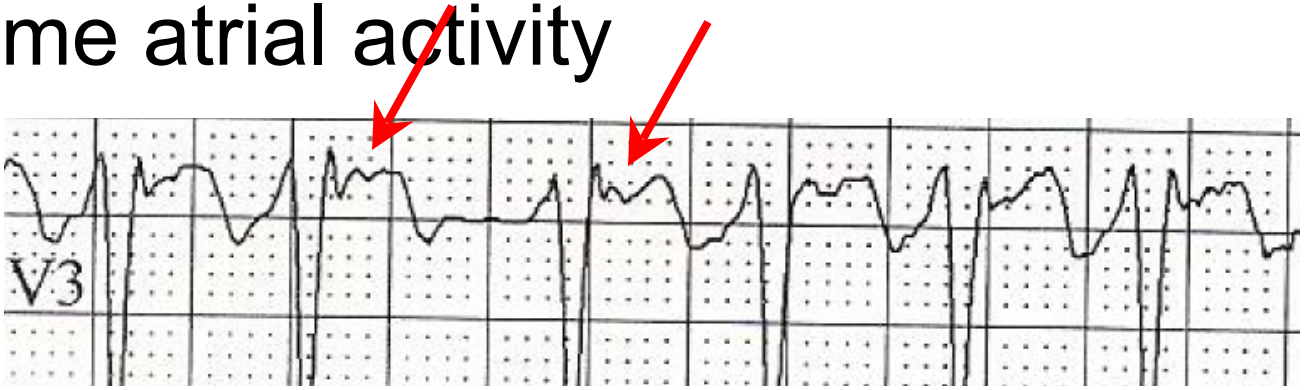
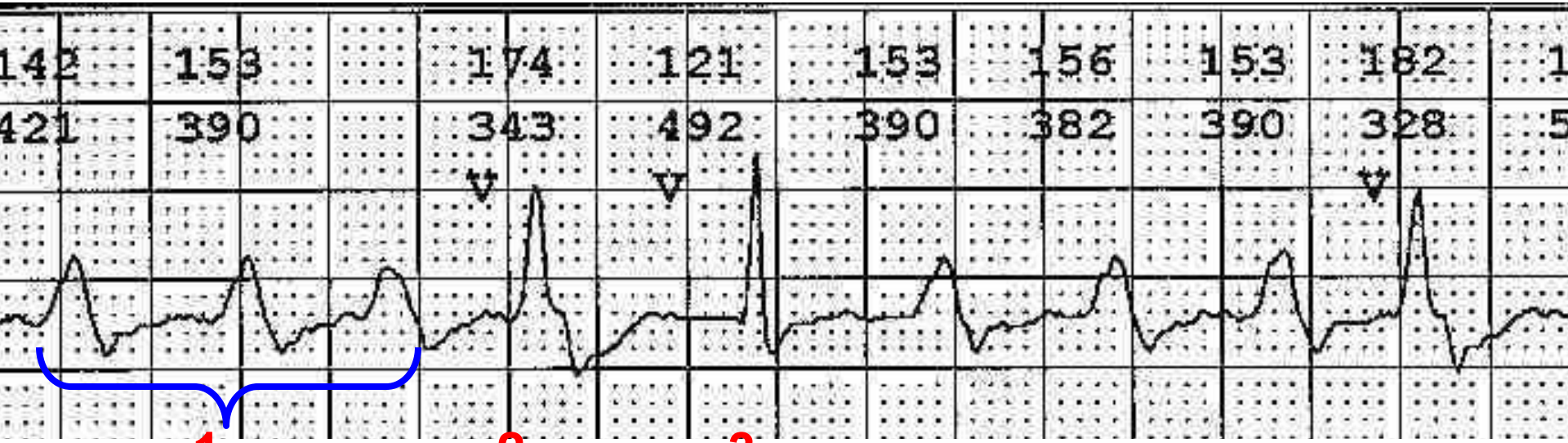
Thank you for this difficult ECG

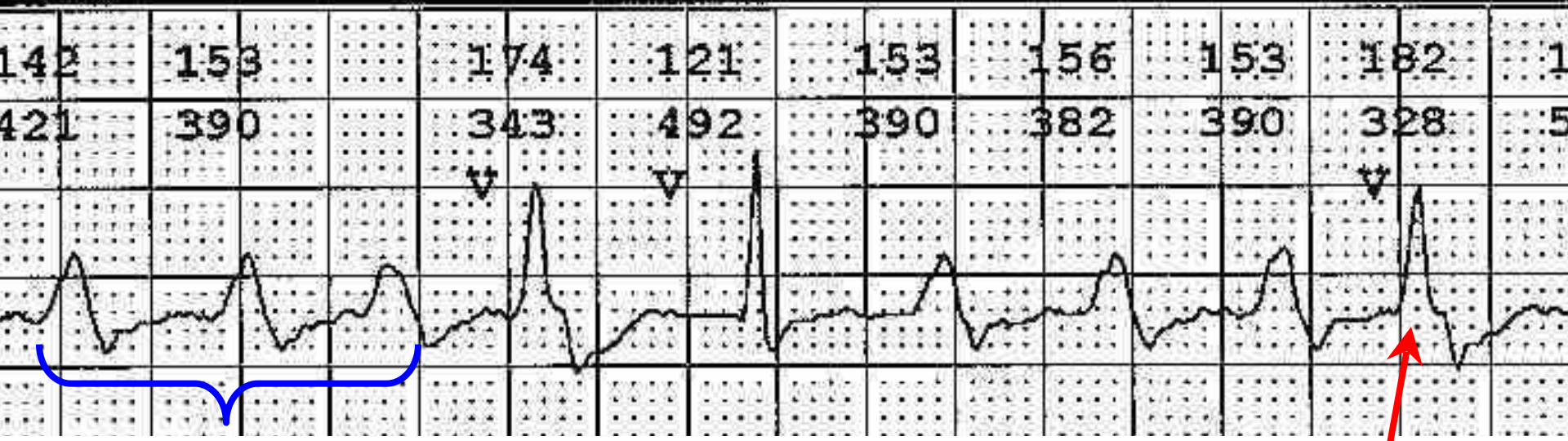


- This is totally irregular rhythm
- This suggest AF, (DD: Atrial Tachycardia)
- There is no clear P waves, despite there is some atrial activity



- The QRS is wide, >160 ms, this may be due underlying structural heart disease or tachycardia induced aberrancy.
- The presence of irregularity and no clear AV dissociation excludes VT
- BUT, there is 2 beats with different morphology from 1

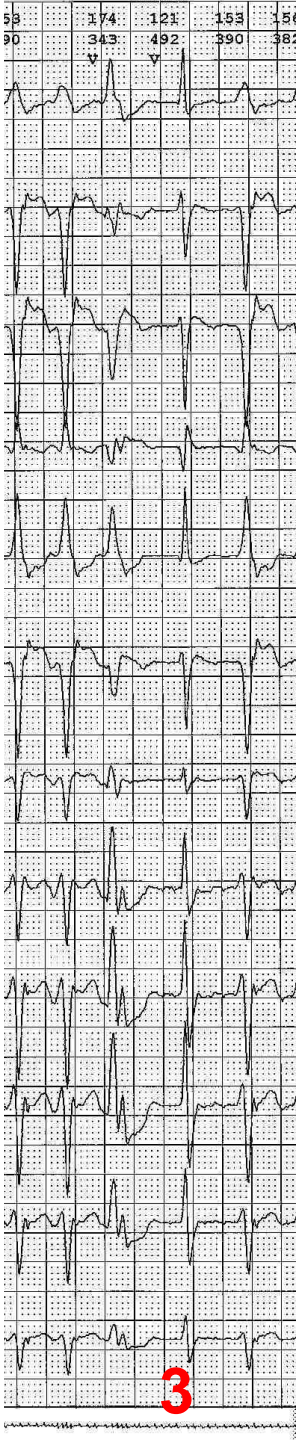




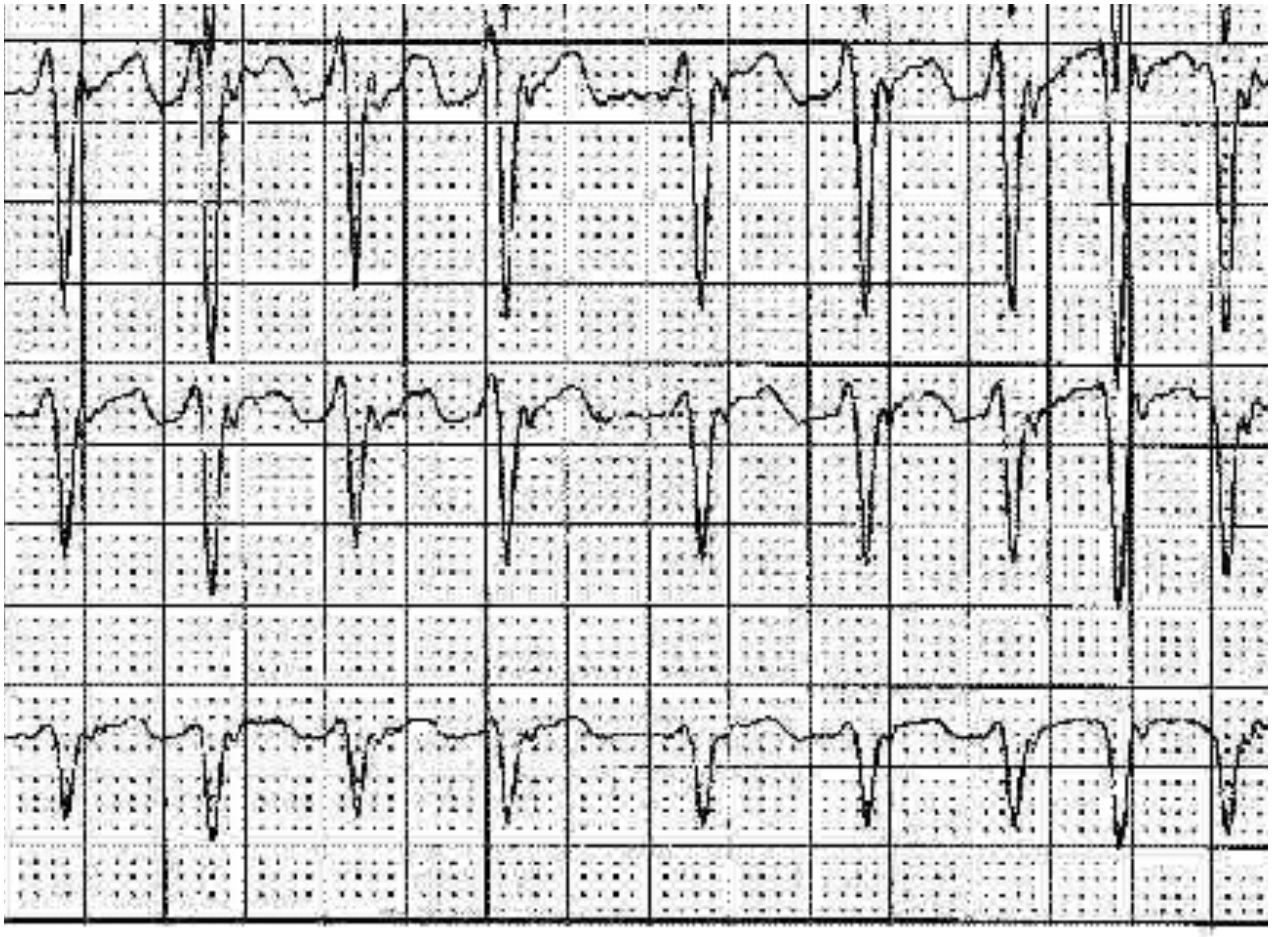
- Number 2 is a VPC and it reoccurred again

- The other is looks here narrow, but when we look in other leads it is wide and changes the axis of RBBB pattern

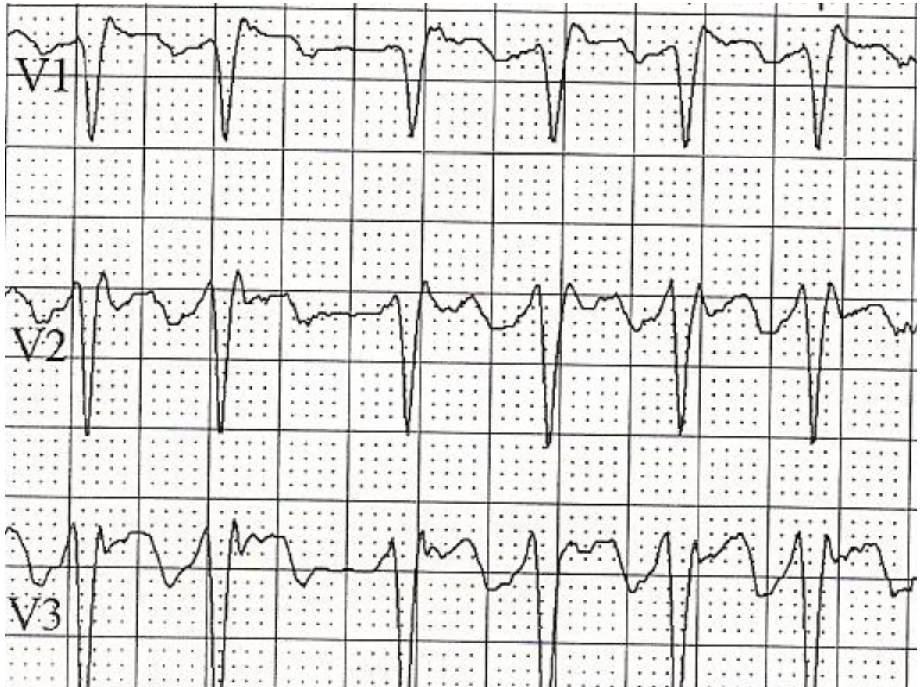
- I think this again is another VPC of different origin



- The patient has also Electrical Alternance which is more clear in the chest leads



- He also has Qs in the inferior leads, and loss of forces in the chest leads which may suggest underlying structural heart disease.
- BUT he also has ST segment elevation in the chest leads in V1- V3 suggestive of Brugada Syndrome type 2
- Despite its appearance is atypical due to the presence of the atrial activity and it is not characteristic of BrS and



Now…….

- Can you give me some clinical hints.
- Thank you very much

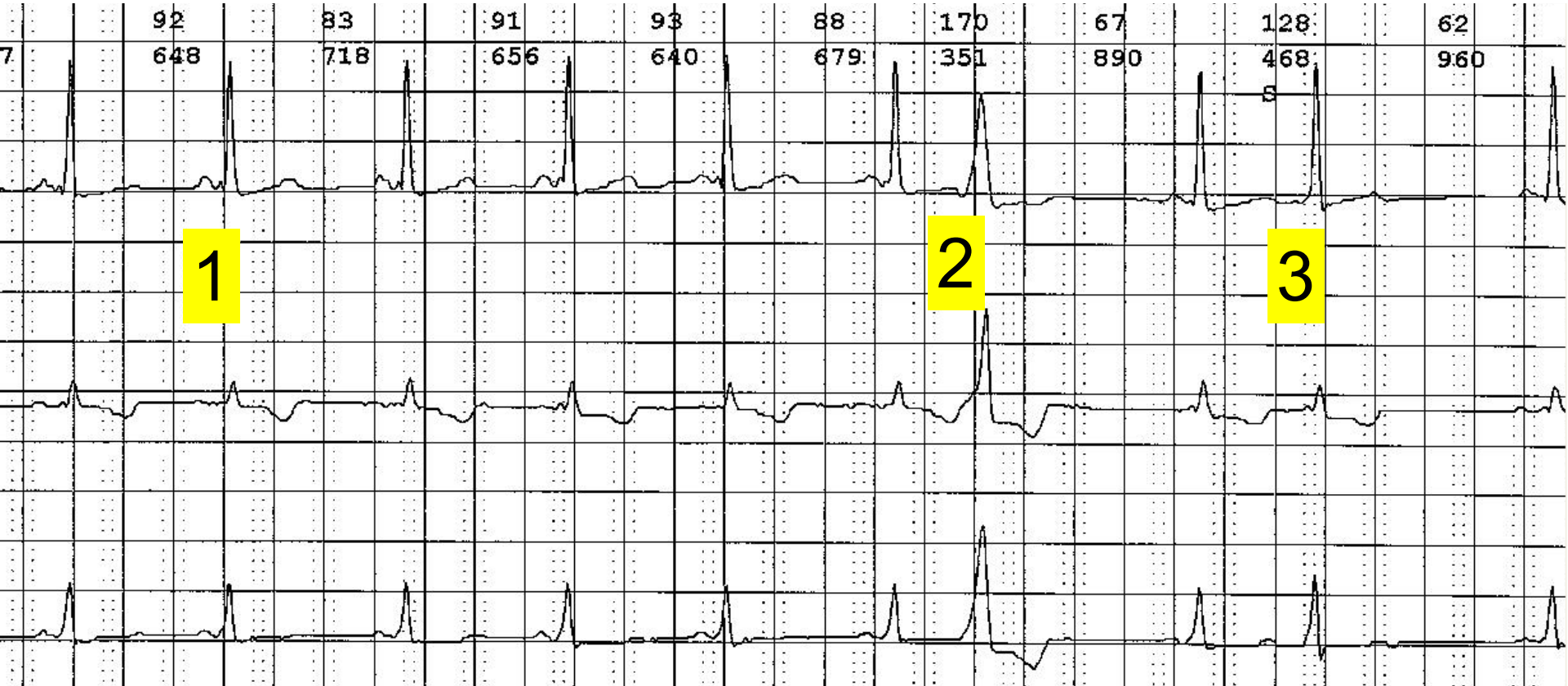
Raed

Thank you for this challenge

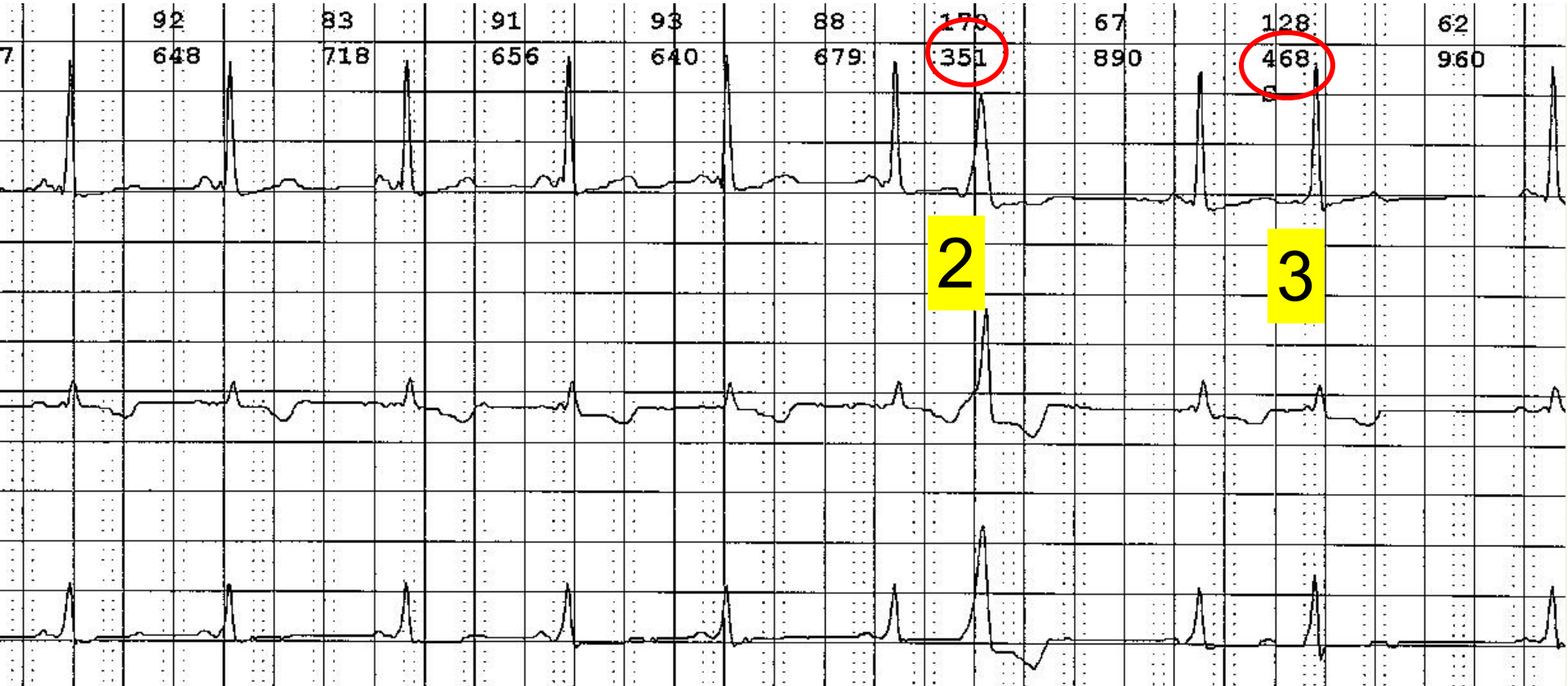
Raed Abu Sham’a

- Sinus Rhythm
- Frequent APCs
- Three different QRS morphology:

1. **regular sinus**
2. **narrow pre-excited**
3. **wide pre-excited**

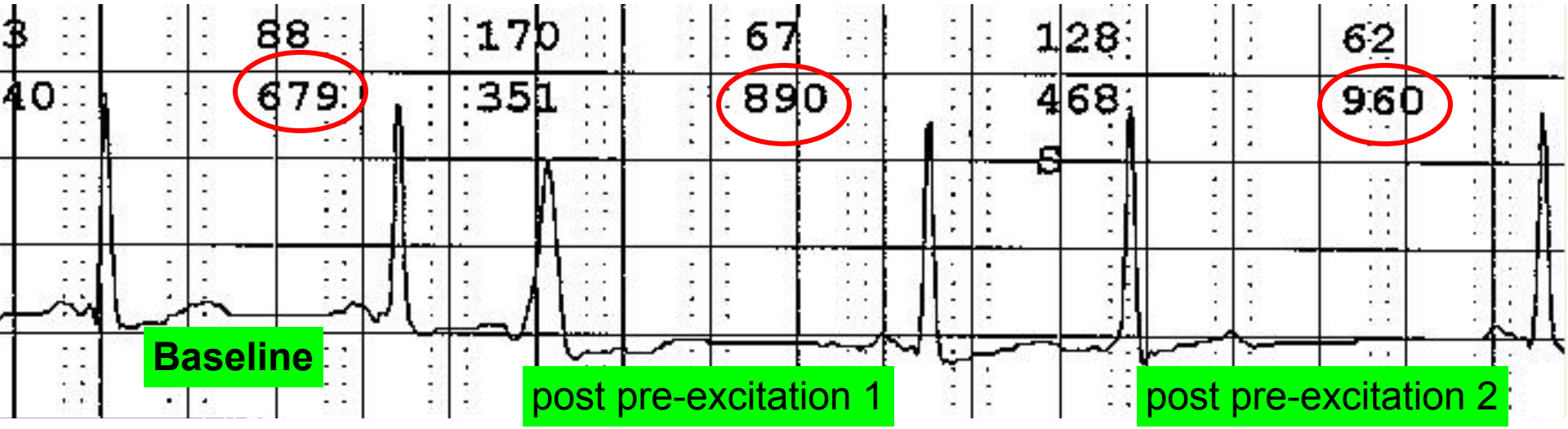


- The narrow pre-excited beat (3)always has a longer cycle length before the APC
- While the wide pre-excited (2) has a shorter CL
- The wider QRS with shorter CL because the normal pathway is still refractory, while the other one may be fusion due to partial refractory period



Now…….

- Why post the pre-excited there is a long CL (R - R or P- P) and longer pause than the baseline cycle length?



- I think there is some non conducted APCs after the pre-excited beats
- So… we have 3 different P wave morphologies.

In Conclusion

- A case of WPW syndrome
- ? Multi-focal Atrial Tachycardia
- 12 lead ECG would be more helpful
- I would recommend Exercise Stress Test for more evaluation
- RF ablation is the treatment of choice
- If not available or the patient refused, then class Ia drugs may be a reasonable option

Thank you very much