August 2018 Tracings

Questions?
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Visit the web site!
www.nelsonsekgsite.com
Clue: This Tracing carries consequential conclusions!
I suspect that I did not fool anyone with this Holter artifact -- in fact, I provided you a solid clue to its cause. This recording was obtained while the patient was brushing her teeth during the Holter monitoring -- the resulting baseline artifact renders the underlying sinus rhythm less evident.

Remember the 5th EKG Commandment:

“Be cautious of the capricious patient!”

Patients rarely go out of their way to fool us, but sometimes can provide confusion -- particularly during ambulatory monitoring.
87 Year old man.

"Group Beating" cause may be?
Let’s agree on the following points:

1) There is LVH voltage with repolarization abnormality, but the rhythm is what is interesting.
2) There are no P waves evident.
3) The R-R cycle is regular but is separated by consistent pauses. The ladder diagram depicts a possible cause (and will be regarded as the official solution). The measurement (A) implies that there is a missing beat and that it really represents three complexes requiring a 72 mm.

An explanation: there is a junctional focus firing at +/- 71 per min (24 mm) with 3:2 exit block from the ectopic site. Digitalis excess would be likely cause.
August 2018
47 Year old woman
Congestive Cardiomyopathy

Tracing 3
AV Dissociation? AV Block?
Why the pause?
An interesting example of the interplay of sinus impulses and an accelerated junctional focus (A-V dissociation by usurpation).

Clearly the two are divorced, but why no capture beats? The artistic ladder diagram provides a solution.

The majority of atrial stimuli occur after the junctional discharge and find the A-V bridge refractory. However, three of the dissociated P waves occur at just the right moment and find that the junction has recovered. Although not transmitted to the ventricle as “capture beats”, atrial impulses reach the home (*) of the junctional focus, depolarize and “reset” it. This might be termed “pseudo capture.” (I just made that up.)

The arrhythmologists call this “concealed anterograde conduction”.
If you have an alternate solution, it will be carefully reviewed before being discarded.
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77 Year old man.

Tracing 4

Why the peculiar bigeminy??

Home
There is regular sinus rhythm @ 70/min. All the QRS complexes show marked left axis deviation consistent with left anterior fascicular block, and an alternating duration and morphology. Note, in the rhythm strip of V1, that the initial portion of the QRS is unchanged.
The late forces show R.B.B.B. in every other beat. The prominent R waves in V1-2-3 point to an age? posterior M.I....Thus, the “peculiar bigeminy” is due to the combination of L.A.F.B. and alternating R.B.B.B...Agree?
89 Year old woman.

How many observations?
The rhythm begins with a junctional focus at 50/min. Its discharge is conducted retrogradely to the atrium. An atrial site awakens after the 4th QRS complex. Initially its rate is 100/min. and the P waves are tall and pointed. The P wave then slows to 80/min. and it becomes smaller and flatter. (Two different atrial sources?) There is evident LVH voltage, and less evident, but prominent, negative precordial U waves suggesting ongoing myocardial ischemia or hypokalemia.
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81 Year old man.

Tracing 6

Any corrections for the computer? Was the prior EKG ignored?

December 7th

November 16th - Any significant difference?
### Tracing 6: Answer

**81 Year old man.**

#### December 7th

Despite the availability of a previous tracing, the computer makes the inane call of “probably normal anterior ST elevation”. Let’s change this to read -- acute anterolateral MI, not present in the prior EKG.

#### November 16th - Any significant difference?