April 2017 Tracings

Tracing 1
Tracing 1 Answer
Tracing 2
Tracing 2 Answer
Tracing 3
Tracing 3 Answer

Tracing 4
Tracing 4 Answer
Tracing 5
Tracing 5 Answer
Tracing 6
Tracing 6 Answer

Questions?
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Visit the web site!
www.nelsonsekgsite.com
April 2017
2 Day old male
Cyanotic continuous sternal lead

Tracing 1
What is the rhythm?

[ECG Tracing]

Home
This poor little tyke was deeply cyanotic, not because of cardiac disease but because of respiratory difficulty, (who wouldn’t be with a hiccup rate of 140 per minute -- a rate of diaphragmatic excursion too rapid to allow adequate air exchange.) The electrical-mechanical artifacts of diaphragm motion appear as broad biphasic “P-Waves.” Inspection reveals no relationship between these and the QRS. The enclosed composite of “searching leads” (a bonus) reveals the true P-Waves.

Therapy was unsuccessful; postmortem examination revealed an acute meningoencephalitis -- one of the reported causes of “diaphragmatic flutter.” Isn’t that interesting?

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This is an interesting and instructive tracing -- your interest in rhythm was that of a choreographer, you might want to call this the “singultus stomp” -- or maybe the “hiccup hop.” As a sophisticated and staid arrhythmologist, you would call this: Sinus rhythm with the superimposed artifacts of diaphragmatic “flutter” (“tic of the diaphragm”). -- Dr. H.J.L. Marriott has emphasized that one of the first rules of arrhythmia analysis is “Cherchez Le P-Wave;” --a close second might be: “Make sure the P-Waves that you cherchez are really P's!!”
Tracing 2

72 Year Old Woman

How many pacing sites do you count?
An easy one! I count three pacing sites: The sinus node; a low atrial ectopic focus; and ventricular ectopy.

Did you notice that the “VPCs” show non-fixed coupling and a reasonably constant interectopic interval, identifying a ventricular parasystolic site?
April 2017

65 Year old man.
C.O.L.D.

Tracing 3

Your observations please:

Home
Here’s a beautiful example of coexisting atrial pacemakers—the sinus node and an independent parasystolic ectopic focus.

The intervals between discharges of the ectopic site show minor variations in regularity (from 176 to 184 centiseconds, or multiples of this). When both pacemakers coincide, an atrial fusion beat occurs (bottom tracing). When the non-fixed coupling results in early location of the parasystolic P wave, aberrant conduction results (see arrows).
84 year old woman.

Observations?

The rhythm abnormality suggests?

PR 139 = Tachycardia of undetermined origin, rate 106 (Remains)
QRSD 92 + Right axis deviation (Now Present)
QT 326 + Right ventricular hypertrophy (Now Present)
QTC 433 + Borderline low voltage in frontal leads (Now Present)
= Inferior infarct (Remains)
= Consider Anterior infarct (Remains)

—AXES—

P IND
Q 166
T 85

—ABNORMAL ECG—
84 year old woman.

Tracing 4: Answer

The rhythm abnormality suggests?

Both the 12 lead tracing and the rhythm strip are troubling and subject to varying interpretations...the official one is that the right axis deviation, “inferior” Q-waves, and prominent R waves in V1-2 are consistent with an age-undetermined infero-postero-lateral M.I. —And not to R.V.H., Or bifascicular block (RBBB & LPFB)...

The rhythm strip shows an atrial tachycardia @200/min. —Basically 2:1 conduction with periods of Wenckebach block.

This arrhythmia should always suggest digitalis excess... (in this elderly lady, the plasma dig. Level was 3.5).
76 Year old woman. Pulmonary edema after 2 weeks of “heart-racing”

Tracing 5

Her rhythm is?

After 6 mg. Adenosine - were you right?
76 Year old woman. Pulmonary edema after 2 weeks of “heart-racing”

Tracing 5: Answer

Her rhythm is?

There is a regular, narrow complex tachycardia at 185/min. The terminal (+) in lead V1 would be consistent with a “pseudo r” as seen with AV nodal tachycardia. If that was your vote—congratulations—but you’re wrong!

Note what results when IV adenosine is given. AV transmission ceases, and the P waves of an ectopic atrial tachycardia are seen. The lengthy pause permits a ventricular focus to save the day.

After 6 mg. Adenosine - were you right?
October 20th - 19:19

76 Year old man. Your observations include??

October 20th - 20:15 - What has happened?? His potassium level is??
In the top tracing there is left axis deviation of -45 degrees, due to inferior myocardial infarction. Diffuse T wave abnormalities are present.

In the lower EKG, I hoped to sucker you into a diagnosis of hyperkalemia. The tall pointed T waves are the so-called "hyperacute T waves" of acute M.I. His potassium was 3.9 — disappointed?