January 2019 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
January 2019

Tracing 1

Recurrent Syncope. What is the cause?

Home
Tracing 1: Answer

This is a "collector’s item" tracing. How many 12 lead EKGs have you seen that consists only of P waves? This serious evidence of disturbed impulse conduction shows a transient return to conduction with 2:1 A-V transmission in the rhythm strip. Perhaps an electronic pacemaker is warranted???
January 2019

57 Year Old Man

Tracing 2

What is unusual about this rhythm?
VPCs are a "dime a dozen" and are due to "reentry" with a fixed-coupled relationship of the VPC to the previous conducted complex.

Much less common is ventricular ectopy due to "parasystole" -- indicating an independent ventricular ectopic focus. In this example, features include:
1. Lack of fixed coupling
2. A reasonably regular discharge interval of 1.8 seconds ("interectopic interval")
3. Coincidental timing of sinus and ventricular discharge resulting in fusion complexes (F).

Ventricular parasystole is regarded as a more benign ventricular arrhythmia, rarely leading to more serious arrhythmias.
January 2019

22 Year Old Man.

Tracing 3

Please suggest his history:

Home
This young lad has a number of problems! There is evident right atrial abnormality. The “deepest S wave, plus tallest R wave” in the precordial leads is 55 mm — too much even at age 22. Dx = LVH. The QT interval is significantly prolonged and there are negative T waves in both frontal and horizontal planes, consistent with a “ischemia”.

His problems culminate in the rhythm strip. An APC initiates a rapid ventricular arrhythmia (? ventricular flutter - - ? coarse ventricular fibrillation). Cardioversion was required. The cause was crack cocaine.
79 Year old woman.

Block in which bundle?
Proof of the possibility of block in the bundle of His (?Her) awaited EP studies. Since this is an infranodal conduction problem, it is a variety of TYPE II second degree AV block. It is suggested by stable PR intervals and unexpected non-conducted P waves - in the face of normal QRS complexes. Pacemaker therapy is indicated. Do you agree??
51 Year old man

July 22 - 1:50 - Chest pain 1 hour ago -
Locus of this focus is _____?

July 22 - 2:15 -
Locus of this focus is _____?
Both upper and lower tracings show a regular, wide-QRS rhythms at 90/minute, with retrograde P waves (arrows). They represent discharge of an accelerated ventricular focus.

The morphology in V1 in the upper EKG is “like RBBB”, with right axis deviation in the frontal plane. This suggests that the ectopic focus is located in the left ventricle, and probably in the left anterior fascicle.

In the lower tracing, 25 minutes later, the V1 morphology is now “like LBBB”. Its origin is in the right ventricle -- probably the right side of the ventricular septum. Thus, the rhythm represents accelerated ventricular sites of biventricular origin.

An elevated troponin indicated ongoing myocardial infarction.
Tracing 6

January 2019

71 Year old man.

Hoover’s sign should prompt you to request ______?
The virtually isoelectric Lead 1 ("Schamworth’s sign") identifies advanced COPD. It is supported by the right atrial abnormality and “dyspnea pattern” in the V6 strip. The evident concern is the Q waves in V1-3, consistent with an anteroseptal MI of uncertain age. The beside finding of a (+) Hoovers sign indicates that the diaphragms and cardiac position are low. The normal location of the precordial electrodes may be “too high” and simulate an anterior infarction. The request should be to repeat the EKG with leads 1 and 2 interspaces lower than normal. When this was done in this man, the evidence of MI disappeared.
In Hoover’s sign, the palms are placed on the lowest portion of the lateral rib cage. Normally, with a deep breath, the ribs move up and out. If the diaphragms are low lying (COPD or pleural effusion) the lower ribs move under.