

Clinical Setting: 71 y M with history of heavy smoking, but otherwise does not see a doctor or have any known medical problems, presents with tachycardia, and a month of fatigue with exertional dyspnea.

HR - 136

BP - 158/95

RR - 22

SpO₂ - 93% on AR

Temp - 99.1 F

This is a case of **Atrial Flutter with RVR.**

So on first glance (and computer read) this ECG can be mistaken for sinus tachycardia. However, some clinical and ECG signs can be helpful in differentiation. First, the patient was not in any distress, and had no reason to have such a profound sinus tachycardia. His examination was otherwise unremarkable. Second, the heart rate stayed right at 134-136, without budging. This should always raise your suspicion for atrial flutter - the usual rate is 150 (young atria will fire around 290-300, so with a 2:1 block, you see a rate of 145-150) but the older you get, the lower the maximum atrial rate will be. Third, if you look closely at the initial ECG, you can see buried p-waves - mostly right after the T waves you can see a deflection representing a t-wave. This again should raise your suspicion for a-flutter.

In this case, fluids and a diltiazem bolus was given, with the below ECG then obtained. You can now clearly see the flutter waves.

Regarding treatment - atrial flutter should be treated as nearly equivalent to atrial fibrillation. Initiate anticoagulation based on risk factors (CHADS2-VASC score) and rate control or cardiovert based on the patient's clinical condition and history. This patient was admitted, had an ECHO with a moderately reduced EF to 40%, and underwent TEE cardioversion and was discharged on rate control and anticoagulation.

