

Enough Fuss; She Wants Lunch!

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During morning rounds at a skilled nursing facility (SNF), a 74-year-old woman is found to have a rapid heart rate. She is placed on telemetry, which reveals a wide complex tachycardia. Concerned about possible ventricular tachycardia, the charge nurse contacts the on-call physician, who recommends calling 911. The patient is transferred via ACLS ambulance to your facility.

When you see her, she seems embarrassed by all the attention she's receiving and expresses her desire to return to the SNF before she misses lunch. She is in no pain or discomfort, is not particularly short of breath, and does not feel dizzy or lightheaded. According to reports, she was friendly and conversive with both the nursing staff at the SNF and the paramedics during transport.

History is remarkable for several transient ischemic attacks with no residual sequelae, hypertension (under good control), and hypothyroidism (treated

with medication). Surgical history includes a hysterectomy, a cholecystectomy, and an open reduction and metal plate fixation of a high (right) ankle break—all of which were performed more than 10 years ago.

Her medications include warfarin, hydrochlorothiazide, atorvastatin, and levothyroxine. She has no known drug allergies.

The patient is a retired junior high school principal. Her husband died of lung cancer 4 years ago. She has 3 adult children who are all in good health. She has never smoked but does enjoy a daily nightcap. She denies alcohol abuse or illicit drug use.

Family history reveals her parents died in a train accident and her paternal grandparents died of tuberculosis. She does not know her maternal grandparents' medical history.

Review of systems is positive for chronic constipation and chronic hip and knee discomfort. Vital signs include a blood pressure of 124/88 mm Hg; pulse, 140 beats/min; respiratory rate, 14 breaths/min; and temperature, 97.6°F. Her weight is 158 lb, and her height is not measured.

Physical exam reveals a pleasant elderly woman in no distress. She is dressed appropriately, her hair is



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styled, and she is wearing makeup as she usually does. The HEENT exam reveals hearing aids and corrective lenses. Her neck has no jugular venous distention, carotid bruits, or thyromegaly.

Her lungs are clear in all fields. Her heart has a rapid and questionably irregular rhythm. There are no appreciable murmurs or rubs. Her abdominal exam is normal, with the exception of well-healed surgical scars. There is no peripheral edema, and all pulses are equal bilaterally in both upper and lower extremities. The neurologic exam is grossly normal with normal affect and mood.

An ECG reveals a ventricular rate of 152 beats/min; PR interval, 128 ms; QRS duration, 88 ms; QT/QTc interval, 280/445 ms; P axis, 27°; R axis, 23°; and T axis, 232°. What is your interpretation?

ANSWER

The correct interpretation is atrial fibrillation with aberrantly conducted complexes. The lead I rhythm strip at the bottom of the ECG shows the irregularly irregular rate. There are narrow complexes (see beats 3-7 and 16-18), indicating normal conduction through the atrioventricular node and His-Purkinje system. The remainder of the complexes are wide and aberrantly conducted and are in the same vector as the normally conducted (narrow) complexes.

An important take-away from this case: The computer reading includes a PR interval as well as a QRS duration of 88 ms. There is no PR interval in atrial fibrillation—highlighting the importance of reading the ECG and not relying on the computer's interpretation. The QRS duration is measured in the normally conducted beats only; it does not include the aberrantly conducted beats. **CR**