Anticoagulation for AF in Patient with acute CV stroke

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NHI

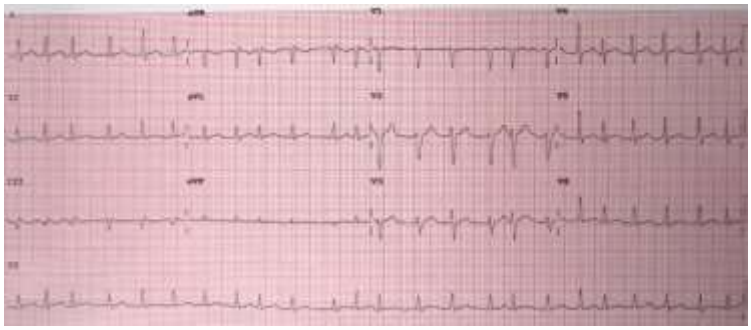
- 65 years old male patient presented to the ER with SOB and palpitations.
- Symptoms started in the morning after performing elfajr prayer and climbing 3 floors stairs to his home and lasted till evening at time of arrival to ER.

- His medical history was irrelevant except for HTN, 10 years ago, on Candesartan 8 mg bid & Type II DM, 3 years ago, on oral hypoglycemic.
- He is married, has two daughters and one son, youngest is 25 years old. He was a Taxi driver and stopped working 2 years ago.

- Upon arrival in the ER, the patient looks anxious but is speaking in full sentences, does not look dyspneic, and is complaining of palpitations. His vitals are:
  - BP: 150/82 mm Hg
  - HR: 160 (irregular)
  - Respiration rate: 17
  - Body temperature: 96.8º F
  - Room air oxygen saturation: 95%

- The patient has IV access established and connected to a monitor and blood sample was withdrawn for lab work to evaluate and potentially correct underlying causes of arrhythmia . Such tests include:
  - Troponins to rule out acute coronary syndrome
  - CBC
  - Chemistry panel to rule out electrolyte abnormalities (for example, hypokalemia, hypomagnesemia)and evaluate Renal functions

- His 12-lead ECG reveals a narrow complex tachycardia with an irregularly irregular rhythm, with no discernible P waves. A telemetry monitor is placed on the patient and shows a heart rate averaging 130 to 150 beats per minute



- In conjunction with this patient's clinical scenario, the irregularly irregular rhythm and lack of P waves indicate that this is AF. If the patient truly feels this is the first time he's had these symptoms and prior medical records don't indicate otherwise, this may be considered new-onset AF, as it is less than 48 hours old.

QUESTION 1

What is the next step to be done?

A. Establishing Rhythm control strategy
B. Establishing Rate control strategy
C. Rhythm control + Anticoagulant
D. Rate control + Anticoagulant

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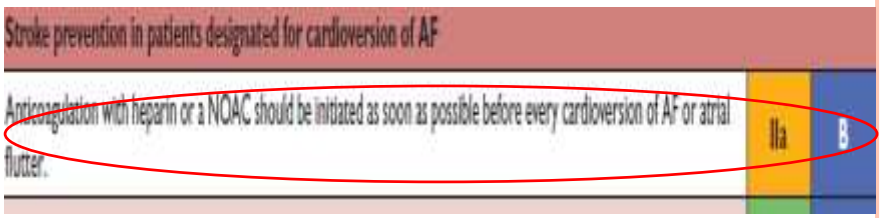
- As the patient is hemodynamically stable & symptoms was less 48 hrs duration then according to Esc recommendations, a rhythm control strategy should be done according to patient choice whether by electrical or pharmacological cardioversion under the cover of Anticoagulation with Heparin or NOAC before every cardioversion of AF.



- TTE was done and showed Good LV function with EF=65% and mild septal hypertrophy and grade I diastolic dysfunction .

Patient received :

- Heparin 5000 IU IV bolus for anticoagulation
- Verapamil 10 mg IV to reduce HR and enhance Cardioversion.
- Amiodarone IVI for cardioversion

- Once the patient has been successfully cardioverted & potentially reversible causes of AF have been ruled out, stroke risk has been calculated according to CHA2DS2-VASc score.

QUESTION 2

According to this patient stroke risk, he should receive which of the following:

A. OACs
B. Aspirin
C. OACs+ aspirin
D. nothing

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Since his CHA2DS2-VASc is > 2, then the correct answer is A

QUESTION 3

- What is your plan for long term treatment for this patient?

A. NOAC + AAD
B. VKAs + AAD
C. OACs only
D. Either A or B

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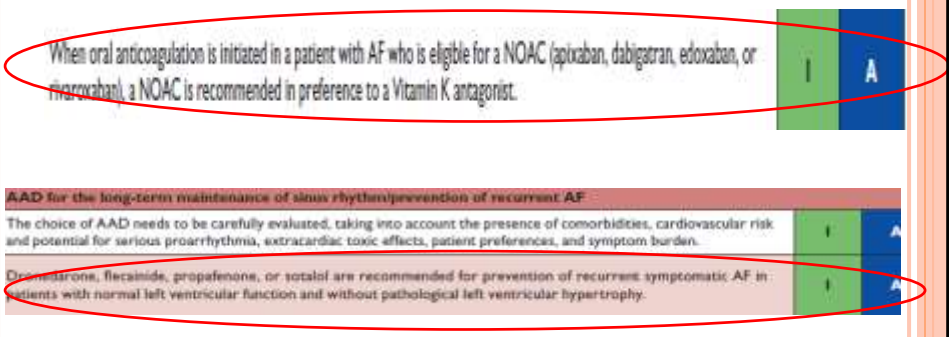
CORRECT ANSWER IS D



When oral anticoagulation is initiated in a patient with AF who is eligible for a NOAC (apixaban, dabigatran, edoxaban, or rivaroxaban), a NOAC is recommended in preference to a Vitamin K antagonist. | I | A

AAD for the long-term maintenance of sinus rhythm/prevention of recurrent AF

The choice of AAD needs to be carefully evaluated, taking into account the presence of comorbidities, cardiovascular risk and potential for serious proarrhythmia, extracardiac toxic effects, patient preferences, and symptom burden. | I | A

Dronedarone, flecainide, propafenone, or sotalol are recommended for prevention of recurrent symptomatic AF in patients with normal left ventricular function and without pathological left ventricular hypertrophy. | I | A

- Patient was discharged on Sotalol 80 mg bid for maintenance of SR and prevention of recurrent AF + VKA(for financial reasons) 5 mg once daily as initial dose with confirming to check patient's INR after 4 days and weekly follow up till reaching INR target of 2.0 to 3.0

- Seven months later, the patient developed left arm weakness, left leg weakness and slurred speech. a ¢t perfusion study of the head revealed a peripheral wedge-shaped area of decreased perfusion in the right frontal lobe in the anterior middle cerebral artery (m¢a)
- the patient was diagnosed with an ais.

- At time of stroke the patient was already on VKA with INR 1.7.
- His ECG showed SR with HR = 90 bpm
- His lab. Test showed normal renal & hepatic function, normal electrolytes & within normal CBC and RBS
- His national institutes of Health stroke scale (niHss) was 15 which indicates moderate stroke.

QUESTION 4

- What is the proper anticoagulant management for this patient during this acute event?

A. Stop anticoagulation
B. Increase its dose
C. Continue on same dose
D. Shift to Heparin

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QUESTION 5

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A. 3 days
B. 6 days
C. 12 days
D. forever

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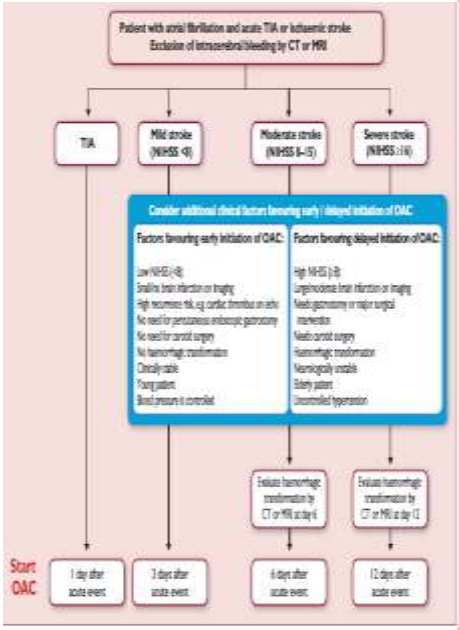
- Since it is moderate stroke with NHISS = 15 stop anticoagulation for 6 days is recommended and he was put on Aspirin until re-initiation of OAC.
- Patient was properly managed with his neurologist regarding his neurological status with improvement of symptoms on treatment.



- Since this patient developed stroke in spite of being on VKA for stroke prevention due to AF , a more proper and strict OAC regimen should be considered

QUESTION 6

- What is the best secondary stroke prevention management for this patient?

A. Higher dose of VKA
B. OAC + aspirin
C. NOAC
D. LAA occlusion

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Recommendations for occlusion or exclusion of the left atrial appendage

Recommendations	Class[a]	Level[b]	Ref[c]
After surgical occlusion or exclusion of the LAA, it is recommended to continue anticoagulation in at-risk patients with AF for stroke prevention.	I	B	461, 462
LAA occlusion may be considered for stroke prevention in patients with AF and contra-indications for long-term anticoagulant treatment (e.g. those with a previous life-threatening bleed without a reversible cause).	IIb	B	449, 453, 454
Surgical occlusion or exclusion of the LAA may be considered for stroke prevention in patients with AF undergoing cardiac surgery.	IIb	B	463
Surgical occlusion or exclusion of the LAA may be considered for stroke prevention in patients undergoing thoracoscopic AF surgery.	IIb	B	468

NOACs are recommended in preference to VKAs or aspirin in AF patients with a previous stroke.	I	B	363,482
After TIA or stroke, combination therapy of OAC and an antiplatelet is not recommended.	III (harm)	B	486

- After assessing the patients bleeding risk and kidney functions, patient was discharged on neuro-tonics medications + Antihypertensive ttt (Candesartan 8 mg) + Rivaroxaban 20 mg once daily instead of VKA.
- Patient was instructed to keep on adherence of his OAC and all medications with instruction on the importance of follow up in outpatient clinic.

Thank You