

Case Presentation #11: Embolic Stroke

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2/22/00

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Q. 1. A. (Embolic Stroke)

What are his RISK FACTORS?

- advanced age.....68 y/o
  - atrial fibrillation\*
  - HTN.....15 yr hx\*
  - smoking.....1ppd x 40 yrs\*
  - cholesterol.....dx'd 1 yr ago\*
  - gender.....male
  - race.....AA
- \*modifiable

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RISK FACTORS? (cont'd)

Other risk factors pt doesn't seem to exhibit (FYI)

- hx TIA(1/3), prior stroke, CAD, CHF, DM
- heredity
- hypercoagulopathy states like CA, pregnancy, sickle cell, high RBC count
- carotid bruit

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Q. 1. b. What are signs, symptoms, lab abnormalities consistent with ES?

- “..R arm & leg became weak...couldn't get up fr chair..”,
- R pronator drift,
- RUE 4/5, RLE 4/5, vs 5/5 L side
- A-fib on EKG
- Labs-not helpful to dx ES

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Q.2. What are immediate and long-term goals?

- Prevention of second embolic stroke! (Fisher 1979)
- Supportive/medical management of acute phase
- reduce morbid effects (and mortality) of evolving stroke
- Minimize s/e of pharmacological therapies
- Rehab and PT programs (QOL)
- Risk factor modification/elimination

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Q.3.a. What are pharmacotherapeutic options for ACUTE treatment of ES?

Immediate anticoagulation (12% have 2nd stroke within 2 wks)

- **Heparin.** Especially for patients with acute cardioembolic stroke, 3-5 days, IV. (okay since CT scan was “neg for hemorrhage or hemorrhagic transformation).
- **ASA.** Now approved in some cases if not given t-PA or IV heparin (5th AACP Consensus Conference on Antithrombotic Therapy, 1998).
- **t-PA.** Now approved in some cases (5th AACP Consensus Conference on Antithrombotic Therapy, 1998). But not for this patient; exclusion criteria “minor symptoms or signs”.

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Q.3.b. What are LONG TERM TREATMENTS for prevention of recurrent embolic stroke?

Summary of Recommendations(AACP Cons. Conf. 1998)

Age	Risk Fcts.	Recomm.
<65 yr	Absent	Asa
	Present	Warfarin
65-75 yr	Absent	Asa or warf.
	<i>Present</i>	<i>Warfarin</i>
>75 yr	All pts.	

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Q.4.a. A pharmacotherapeutic plan for the acute treatment of this patient?

- Continuous IV heparin for 3-5 days (>bleeding by other routes as less stable levels with boluses).
- IV Heparin adjusted based on q 4 hrs aPTT initially. 15-20 U/kg/hr (18 is popular dose so 1600 U/hr).

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Q.4.b. What long term pharm. therapy and how to switch fr acute to chronic therapy?

- Warfarin should overlap heparin for 5 days.
- Initiate with 5-10 mg/day for 2-4 days; adjust daily dosage according to INR. Don't use large loading dose->>hemorrhagic complications.
- Maintenance: 2-10 mg/day based on PT or INR.

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Q.5a how to monitor and assess safety and efficacy of therapy?.

■ **Acute therapy with Heparin** monitored by activated partial thromboplastin time (aPTT) q 4-6 hrs initially then q day after target reached. Target 1.5 X control value.

■ **Long term therapy with WARFARIN:** Adjust daily dose for first 2-4 days based on INR daily, then weekly x 1 month, then monthly. Overlap heparin and warfarin for approx. 5 days until INR within target range (INR target 2.5, range 2.0-3.0)

■ Efficacy? Are CVA s/s resolving? Bleeding s/s?

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Q.5.b. Clinical course: pt started on warfarin 5 mg po on day 3 of hep therapy. Rec'd dose 9 p.m. for 2 days. On morning of 3rd day, INR is 1.8.

What change in therapy would you make at this time?

■ (Hart 1999 meta-analysis showed 2 trials with largest reduction in stroke had target INRs b/w 1.4 and 2.8, though recommendation is generally 2.0-3.0, and INR 1.5 or less does little.)

■ Therefore, would just continue to monitor at this dose for 2 more days while still lapped over with heparin, especially as pt is elderly and lower end of target range is desirable anyway.

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Q.6 What info regarding warfarin therapy do you need to tell the patient prior to discharge from hospital? (dc'd on 5mg po/d.)

■ Take as directed, no more or less.

■ Missed dose-take ASAP if on same day. If remember next day, don't take missed one.

■ Blood work must be checked regularly.

■ Store in cool dry place away from kids.

■ S/E: report immed. Signs of bleeding.....

allergies Vs those that don't need

reporting immed. (medic alert jewelry)

■ Don't suddenly eat more food hi in vit K....

■ Don't drink green tea, Ginseng, giner or herbal teas with coumarin, limit grapefruit juice. Don't take vitamins with vit E or K.

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