# Nursing Care and Considerations for Patients with Atrial Fibrillation

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# Case Study

- 66 y/o female  (Mrs. Olus A. Blader)
- Admitted with c/o palpitations and lightheadedness
- PMH:  HTN, PAfib
- Home meds:  Metoprolol 25 mg BID, Rythmol 225 mg BID, ASA 81mg daily
- ECG demonstrates AF with RVR, incomplete LBBB – rate approx 122 bmp

# Data

- Mag level 2
- Sodium 139, K+ 4.2, creatinine 0.9, BUN 21, chloride 105, CO2 24, glucose 111
- Hgb 16, Hct 47
- T. chol 202, Trig 106, HDL 67, LDL 114
- INR 1.04, Protime 10.9
- TSH  1.68, T4,free  1.20
- CXR -  normal
- Adm BP 146/112 > 102/60;  Adm pulse 140 > 110-122.

# Case Study – Additional Information

- Pt adm for AF and initial tx with cardioversion. AF recurred and pt adm and converted to NSR with Ibutilide. Started on Rythmol. Has had PAfib at least 3 times in the last year.
- Echocardiogram – mild concentric LVH with normal wall motion and overall normal LV systolic function.
- Outpatient Cardiolite myocardial perfusion scan which was normal.
- Drinks 2 cups coffee per day.  No alcohol.
- Ongoing tobacco use.

# Data- VCT Mini Maze

- LA – mod enlarged; no filling defects to suggest thrombus; appendage is norm in size – no suggestion of thrombus or spontaneous contrast.
- Pulm venous anatomy – no evidence of anomalous pulmonary venous return.
- Myocardial and pericardial structures – evidence of either a PFO or small secundum ASD; otherwise, normal.
- Great vessels - normal

# Treatment Plan

- Given Cardizem bolus and drip started- AF rate decreased to 60 – 70s.
- Started on Lovenox now and q 12 hrs.
- Approx 2 ½ hours later, converted to NSR
- Cardizem drip DCd.
- Rythmol DCd and Multaq initiated.
- EP consult

# Discharge Plans

- Pt wishes to pursue outpatient EP study and radiofrequency ablation after discussing options with EP
- Pt DCd on ASA, Toprol XL, and Multaq.

# Clinical Pathway

**Treatment Goals**

- Reduce hemodynamic symptoms – focus on rate control
- Prevent the development of thrombi – anticoagulation.

# Clinical Pathway

**Assess Patient Stability – <u>if:</u>**

- *Decreased level of consciousness*
- *Shortness of breath*
- *Low blood pressure*
- *Uncontrolled ventricular rate*
- *Myocardial ischemia*

<u>Notify physician</u> – consider cardioversion

# Clinical Pathway - Assessment

- Administer O2
- Start IV
- Attach monitor, pulse oximeter, automatic BP cuff
- Vital signs
- Review pt hx
- Perform exam
- 12-lead ECG
- Portable CXR
- Review labs – electrolytes, thyroid function, CBC, cardiac markers, BNP
- Echocardiogram

# Case Study – thus far:

- The pt is hemodynamically stable.
- Given Lovenox
- Labs and CXR unremarkable
- BP 146/112 upon arrival; now 102/60
- Pulse 140 upon arrival; now 122
- Echo - Mild concentric LVH; otherwise unremarkable
- Pt alert, pleasant and cooperative
- Irreg, irreg HR, otherwise, normal PE.

# Clinical Pathway- Assessment

**Assess for potentially reversible causes and for comorbidities**

- *Ischemia, anemia, electrolyte imbalance, thyroid disease, surgery, sepsis. alcohol intoxication.*
- *HTN, valvular dz, HF, CAD, pericarditis, pulmonary dz, OSA, obesity, embolism*

# Clinical Pathway-Assessment

- Classify (label) AF
- Newly diagnosed can be paroxysmal or persistent
- Paroxysmal – resolves spontaneously within 7 days.
- Persistent – lasts more than 7 days; AF that lasts less than 7 days, but requires intervention.
- Permanent – continuous for more than 1 year and /or fails cardioversion or pharm tx.
- Lone – <60 y/o; no structural heart disease or HTN and no progression

# Clinical Pathway-Assessment

Identify those at increased risk for stroke:

- *HF, HTN, advanced age, prior stroke or TIA, DM, h/o DVT.*
- *Determine CHADS 2 score: 1 pt ea for CHF, HTN, age >75, DM; 2 pts for stroke or TIA.*

# AF Stroke Risk

| CHADS | Annual Stroke Risk |
|---|---|
| 0 | 1.9% |
| 1 | 2.8% |
| 2 | 4.0% |
| 3 | 5.9% |
| 4 | 8.5% |
| 5 | 12.5% |
| 6 | 18.2% |

# Case Study – a bit more information

**Pt risks for AF**

- *HTN*
- *Daily caffeine intake*
- *Ongoing tobacco use*

**Pt risks for Stroke**

- *Persistent AF*
- *CHADS 2 score of 1*
- *Ongoing tobacco use*

# Clinical Pathway - Treatment

- Cardioversion
- Rate control (vent rate 60-80 with rest; 90-115 with mod exercise)
- Rhythm control
- Anticoagulation
- Ablation
- Surgical Procedures – MAZE, removing left atrial appendage

# Clinical Pathway – Treatment

**Consequences of AF if rate is not adequately controlled**:

- *HF – including tachycardia-mediated cardiomyopathy*
- *Structural Heart Disease*
- *Embolus*
- *Stroke*
- *Increased Mortality*

# Case Study – Treatment Plans

- Cardioversion – failed
- Rhythm control – failed
- Rate control with BB and Multaq and anticoagulation with ASA for interim until EP study.  Advise caffeine elimination and smoking cessation.

# Clinical Pathway - Educate

- Teach pt that tx is individualized.
- Medication compliance is essential
- Compliance with lab F/U – esp if on anticoagulants.
- Emphasize smoking cessation – decrease stroke risk.
- Lose wt if indicated.
- Adhere to a healthy diet
- Eliminate caffeine
- Minimize or eliminate alcohol
- Avoid recreational drugs
- Obtain regular exercise
- Maintain adequate hydration

# Case Study – End of Story

- Pt had EP study with subsequent successful ablation. Placed on Coumadin therapy for 6 months.