

BEEBE HEALTHCARE
MARGARET H. ROLLINS SCHOOL OF NURSING
NURSING 202 - ADVANCED CONCEPTS OF NURSING
MULTIDISCIPLINARY CARE MAP - TEMPLATE
2023

S	<p>Situation:</p> <ol style="list-style-type: none"> 1. J.F.G, 84yrs old, MRN: 173309848, ACT/FIN number: 82277534 2. Severe Aortic Stenosis 3. 03/29/23 4. 03/30/23 5. Shortness of breath, Dyspnea on exertion, and worsening fatigue. Planned for Transcatheter aortic valve replacement (TAVR) on 3/29/23
B	<p>Background:</p> <ol style="list-style-type: none"> 1. Medical History: Hypertension, Hyperlipidaemia, Coronary artery disease, dementia, cataracts, sleep apnea. Surgical History: knee surgery, Right foot surgery., removal of skin lesions, rotator cuff surgery Code Status: Full Code 2. Worsening shortness of breath, dyspnea on exertion, and fatigue 3. J.G. came in for a TAVR on 03/29/23 for severe aortic stenosis with dyspnea on exertion and worsening fatigue. The plan was to admit to the ICU post-procedure. There was a complete heart block (3rd-degree heart block) during the insertion of the temporary transvenous pacemaker (TRAN) and needed a permanent pacemaker placement. After admission to the ICU, it was noted the pacemaker was only Ventricular paced and the Atrial Wires/leads were not in the correct placement. Both leads were in the ventricles. Pacer spikes were showing up during the QRS complex and after. Plan as of 3/30, J.G will be NPO after midnight and revisions will be done on 3/31 in the morning. 4. A. Echocardiogram indication: TAVR, LVEF 60-65% Mild concentric left ventricular hypertrophy. The right ventricle was normal, the left ventricle was normal size visually, mitral valve and tricuspid valve had trace amounts of regurgitation. No Evidence of pericardial effusion, Aortic root normal size. 3/30 – post-implant ECG Normal sinus rhythm XR chest Frontal: (3/30) indication: Pacemaker, ICD placement, post-implant Impression: No pneumothorax following subclavian approach pacemaker placement with leads extending towards the right atrium and ventricle. Diffuse interstitial prominence, which may be related to pulmonary edema. Repeat on 03/30 Portable Chest X-ray, indication: pacemaker wires into the ventricle. Impression: the atrial lead of the dual-lead placement could be either in the distal atrium or the proximal right ventricle. Patchy bilateral infiltrates are not changed.

03/31—

ECG atrial sensed ventricular paced rhythm

Chest X-ray impression—mild infiltrates at both lung bases suggest areas of atelectasis and small left pleural fusion. No consolidation

B. Labs: **03/29**- Blood Gases – PH 7.27(acidotic/low), CO₂ 55.2(high), PO₂ 260(high) the amount of oxygen gas dissolved in the blood. Hyperinflation. HCO₃ 26(WNL), Blood Gases indicated, Respiratory acidosis holding onto too much CO₂, wasn't taking deep breaths and not blowing off CO₂ due to fatigue/shortness of breath and aortic stenosis. SO₂ 100(WNL) saturation of oxygen in the blood vessels/red blood cells, POC base Excess -2.0(WNL)

Hemoglobin-11.9(low), Hematocrit -35(low) H&H low because the blood flow is obstructed due to aortic stenosis and not circulating body effectively. Bleeding from the surgical procedure, Activated clotting time-275(high) risk for bleeding and post-procedure, sodium 142 (WNL), potassium 4.0 (WNL)

Labs: **03/30** – WBC – 10.5(high) due to stress on the body from the pacemaker implantation, RBC 3.60(low) blood loss from the surgical procedure, Hematocrit 33.9(low) trending down, Hemoglobin 11.2(low) trending down. platelet 131, sodium 136 trending down, potassium 4.0 (wnl), CO₂ 24 (wnl) trending down

Labs: **03/31** – WBC- 10.2(high) trending down, Hct- 32.8(low) trending down, hgb- 10.9(low) trending down plt- 99(low) trending down, on dual antiplatelet therapy

C. **Medications:** Aspirin 81mg = 1 tablet PO for heart health, Clopidogrel (Plavix) 75mg PO (antiplatelet) daily --- dual antiplatelet therapy for post-implantation and the aortic stenosis

Lisinopril 20mg PO, daily for hypertension (ace inhibitor, helps to remodel the heart)

Atorvastatin 10mg PO, daily for cholesterol

Sodium chloride 0.9% 1000ml @ 80ml/hr continuous infusion

Cefazolin IVP 1gm= 10ml over 5 minutes q 8hr, indication—antibiotic prophylaxis post-surgical, 2 doses.

Cephalexin (Keflex) 500mg PO q8hr antibiotic prophylaxis post pacemaker insertion

D. Orders: 03/29

Hibiclens shower, scrub chest morning of the procedure

SCDs bilateral calves

I&O q8hr measure urine output q1hr

Dressing change –gauze dressing left groin dry sterile dressing change everyday ad PRN.

Modified NIH stroke scale.

Pacemaker setting temporary transvenous (ventricular demand)

Turn cough and deep breath q1 hour

Incentive spirometer.

Bedrest 4hours

OOB up to chair Day of surgery after bed rest

Orders: 03/30

Cardiac monitoring (Telemetry) daily 2 post-Angio, permanent pacemaker (PPM) surgery, and stable

Neurovascular checks q 15mins then q 30mins, then q 4hrs

	<p>Sling to the affected extremity. A cardiac heart-healthy diet, post-procedure VTE risk level(low) Ambulate (when sedation wears off) New order 03/30- NPO after midnight except for medications Communication orders: 3/30 No heparin products for 24hr after the implant Notify the provider if bleeding or swelling occurs, apply pressure call the cardiologist and Cath lab STAT No lifting affected arm over the shoulder under any circumstance. D/C all lines/tubes once the patient shows no signs of bleeding, vitals, and vascular checks are stable. Keep the incision clean and dry</p>
<p>A</p>	<p>Assessment: 1. Focused Assessment- Alert and oriented x4, GCS 15, Apical 62, BP 115/63(81), RR 20 unlabored and clear bilaterally, Spo2 99% on room air, radial pulses +2 equal bilaterally, distal pedal pulses equal +2 bilaterally, SCDs bilaterally on calves, no edema, Cap refill less than 3, No hematoma at the femoral insertion site. denies pain. Ventricular pacer spikes note on the monitor. Dressings are clean, dry, and intact. 2. Collaborative care team: Recommendation consult note -- 03/29 Complete heart block following TAVR, developed during insertion of a TRAN, will need a permanent pacemaker. Fatigue, tired shortly after TAVR procedure. BP 86/45, on 2L NC, HR 64, RR19. EKG confirmed complete heart block with normal sinus node and no AV conduction.</p> <p>Operative Note – 03/30, left subclavian, moderate sedation, intravenous versed, and fentanyl low dose. The area was infiltrated with 1% lidocaine with and without Epi for local anesthesia. Patency was confirmed. Blunt dissection electrocautery a pacemaker pocket 2 sequential 7 French sheaths were utilized to introduce the ventricular and atrial leads, guided under fluoroscopic vision, the micro screw was deployed. Adequate sensing and pacing films obtained were secured to the fascia and the pocket was irrigated with a saline solution containing vancomycin. The wound was closed in 2 layers, and well tolerated. Medtronic pacing system, Azure XT DR MRI compatible, WI DR 014 model number. Serial number RNB241281G. Atrial lead Medtronic model number 507 6152cm serial number PJN 8773067. Ventricular lead number 5067, 58cm serial PJN AAA 670V Progress note 03/30 – permanent pacemaker implant, dual chamber. Indication documented non-reversible symptomatic bradycardia due to 2nd/3rd AV block, HR less than 60. Progress note – updated assessment/plan TAVR on 03/29 Dr. Freih and Dr. Stephenson 29mm Medtronic Evolut Fx bioprosthetic aortic valve. The patient went into a complete heart block following valve deployment. The right internal jugular venous pacemaker was placed prior to</p>

the end of the procedure. Closure devices R CFA and Angioseal. A permanent pacemaker in the morning. Cardiac rehab, dual antiplatelet (aspirin and Plavix) Revision of pacemaker in the morning on 03/31/23

03/31 Note: Atrial lead revision, indication for atrial dislodgement.

The previous pacemaker insertion/wound was opened with a scalpel. A safety electrocautery was utilized to dissect down the area of the device. The device was extracted from the pocket. The atrial lead was disconnected, and the lead was repositioned to the right atrial appendage with good signal, good sensing, and pacing pressures obtained. The lead was secured to the fascia and the pocket, The pocket was irrigated with a saline solution containing vancomycin. The lead was connected to the generator and covered with an antibiotic mesh instructed into the pocket and sutured to the fascia closed in 2 layers. Well tolerated, moved to recovery, In stable condition.

Assessment/Plan: J.G is going to be sent home on a 7-day supply of antibiotics. Make sure his left arm is in a sling for at least 5 days with supervision from the family because of his baseline dementia.

3. Nursing Diagnosis: decrease cardiac output due to the complete AV heart block and history of aortic stenosis.

Risk for bleeding due to aspirin and clopidogrel (Plavix)

Risk for falls due to sedation from surgical procedure of permanent pacemaker and history of dementia

4. Nursing interventions:

Administered aspirin 81mg— prevention of platelet aggregation, decreasing the risk of stroke

Administered Clopidogrel (Plavix) 75mg --- — prevention of platelet aggregation, decreasing the risk for stroke

Educated on using the call bed if needed and before trying to get up to reduce the risk of falls after the TAVR procedure and weaning from sedation.

Administered Lisinopril 20mg - for high blood pressure, reducing the workload of the heart. prevents remodeling of the heart

Administered 1000ml 0.9% @ 80ml/hr – keeping the veins open/patent.

Hydrating the body, the blood vessel is less likely to clump together.

Educated not to lift the left arm above the shoulder. – this allows the incision to heal, and you want to avoid strenuous activity post procedure

Maintained cardiac monitoring. —indicated to continuously monitor status and pacemaker function post insertion of permanent pacemaker

Maintained SCDs bilaterally q 4hrs – prevention of DVTs and venous thromboembolism. On bed, rest, and blood is pooling in the lower extremities.

Administered atorvastatin 10mg PO tab for cholesterol. – this is indicated for high cholesterol and triglyceride and may reduce the risk of stroke, heart attack

Administered cefazolin IVP 1g=10ml over 5 minutes, surgical prophylaxis post pacemaker implantation to prevent infection – this is indicated because

	<p>the pacemaker is a foreign body and rejection, or infection may occur due to the incision itself or the pacemaker inside the body Apply sling to the left arm – the sling is indicated to stabilize the left arm in place and prevent weight and or tension on the affected arm. This promotes healing and reinforces not lifting above the shoulder.</p>
R	<p>Recommendation:</p> <ol style="list-style-type: none"> Goals – Reports no fatigue, shortness of breath, or dyspnea on exertion by the end of my care Patient and family verbalize post-pacemaker care/restrictions by the end of my care. The patient and family will verbalize bleeding precautions, such as using a soft bristle toothbrush, and electric razor, and applying extra pressure when bleeding by the end of my care. Patient and family will verbalize the new medication dosage and times given, as well as side effects/precautions (Plavix) by the end of care. J.G will be resting in bed with eyes closed, and as needed during my time of care. J.G will use the call bed before getting up to reduce the risk of falls, as needed during my time of care. Consults – Case management, cardiologist, cardiac rehab phase I and II Test/Treatments – Cardiac Rehab, follow up in 2-4 weeks. 7-day supply of antibiotics Discharge needs – cardiac rehab, bleeding education/precautions, aquacel change 7 days after the procedure. No strenuous exercise for the next 3 weeks Do not push or pull more than 10lbs with the left arm/hand. No driving for a week Follow up with Dr. Rosa 2-4 weeks. In the sling for at least 5 days with supervision from family because J.G has baseline dementia pacemaker booklet, education of infection signs and symptoms. Education on complete heart block and education on learning CPR
	<p>Evaluation of Care:</p> <ol style="list-style-type: none"> what interventions worked well? I believe educating the patient and family(wife) about keeping J.G.’s left arm down, not above his shoulder. Administering aspirin and Plavix helped reduce his risk of stroke and clots forming. Maintaining J.G SCDs bilaterally also helped prevent Venous thromboembolism while on bedrest post pacemaker placement. Maintaining continuous fluids through J.G IV and ensuing patency helps to make his blood vessel less viscous while also keeping him hydrated. J.G. was asymptomatic and denied shortness of breath, pain, and fatigue during rest and exertion from rolling/turning in bed. The pacemaker was not in the correct placement, therefore not completely improved but moving in that direction.

3. what was their status at the end of your shift? At the end of the J.G. was still on room air, normal saline running @80ml/hr, SCD applied bilaterally, turned on his left side, and his wife at the bedside. HR paced at 60, BP 112/58(69), temperature 37.4. RR20 Unlabored, regular, and clear. He will be NPO after midnight except for medications and a Revision will be done in the morning on 03/31 from there he will need cardiac rehab phases I and II.

4. Did you meet the goals of your time of care? Yes, the goals were met however, J.G. has a history of dementia so I anticipate his wife will reinforce the education provided to her during my time of care. He could verbalize himself and denied shortness of breath.

5. My patient's problems did not change because the medications remained the same and revisions to the pacemaker needed to be made due to both leads being in the ventricle.

- Identify the multidisciplinary team members involved in the care of your patient. Include the role they had in providing care.

