Post Acute Care

Coronary artery Bypass Graft (CABG) Care

Nebraska Heart Hospital Education Department
Disclosure Statement

- No conflict of interest
- No financial relationships
- No sponsorship or commercial support
- Non-endorsement of products
- Off-label use products
Acknowledgement

Every facility may have different policies on patient assessments and vital sign monitoring as well as activity involvement with patients. Please utilize paper and pens to write questions down. We encourage dialogue and questions.
Objectives

0 Discuss Coronary artery bypass graft procedure.
0 Create care plan for post CABG patients utilizing discharge/home instructions
0 Recognize 3 physicals assessments that would indicate respiratory and cardiac distress.
0 Outline 3 early physical assessments that would justify calling the physician.
0 List 3 complications that can occur during rehab
What is Coronary Artery Bypass

- Alternative cardiac intervention when stenting, ballooning and medical treatment are not successful or possible
  - Location of blockages
  - Number of blockage
- Creates new routes for blood flow to reach affected areas of the heart – preventing further damage and preserving heart function
- Types of bypass
CABG vs OpCab

- http://www.youtube.com/watch?feature=player_embedded&v=3Nf6Q2skGOM
- Review:
  - CABG – on cardiac bypass machine (ie: heart lung machine), heart is stopped
  - OPCAB – bypasses performed on beating heart
NHH Standard Post Care

Clinical Pathway: Open Heart Surgery

- Patient up to chair post op day 1 – 3x a day for meals
- Ambulates 4-6 times in hallways approx. 100ft-150 ft. per time, with nurse or PT
  - Evaluate walking ability prior to surgery
- Offer naps in morning and afternoon
- Monitor intake and output every shift
- Encourage incentive spirometer use every 1-2hrs 10 deep breaths followed by cough; breathing treatments
- Reinforce sternal precautions – involve family position changes
- Develop pain medication schedule
- Monitor blood sugars
- Emotional Support of patient and care-giver
First Walk
Patient on admission to your facility

- Central line insertion site – Right jugular
- Mid Sternal Incision – OTA
- Chest tube insertion sites – open to air or covered with dressing (may remove dressing and cover with bandaid)
- Leg incisions 1-3 – graft harvesting sites – OTA
- Right wrist – possible graft site – open to air
- Bruising to right wrist – art line insertion site
- Edematous in hands and lower extremities
Promoting Activity
Why the resistance / Why we have to push

**Resistance**
I just had surgery mind set – I need to rest
Pain and fatigue
Heart Rhythm issues such as A-fib – decrease tolerance
PT/OT following patient

**Risks to the patient**
Increase risk for clot formation
Increase risk for pneumonia & atelectasis
Decrease activity tolerance and muscle wasting – decrease strength
Risk for altered mood
Increase risk of skin breakdown
Delayed wound healing
Increase risk of infection
Decrease orthostatic tolerance
Aspiration of food
Interventions

- Promoting Positive Attitude
  - Great job!
  - I can tell you have been working hard on your IS your lungs sound great!

- Making progress visible to them
  - “you have increased your distance from being admitted”
  - Use heart stickers to track walks for the day

- Praising them for what they do participate in
  - “Thank you for sitting in the chair for 30 minutes”

- Set small goals and work up
  - Looks like you could walk 150ft at NHH lets start there this morning and strive for 200ft after lunch.

- Balance rest with activity and communicate that to them
  - We will be doing activity this morning but we can schedule naps at 9 and 1300 – do you want me to hang a sign for family during those times you are resting

- Establish a pain control regimen

- Encourage pillow use

- Refer to activity prior to hospitalization ie. hobbies, independence and the goal to return to that level

- Promote a good nights sleep
Ambulation Benefits

- Improve Muscle Strength
- Decrease Emotional distress
- Less fatigue – increase endurance
- Better prepared to return home or to pre surgery activity level
- Decrease risk of clot formation
- Decrease risk of atelectasis and pneumonia
Encourage small frequent meals

**What happens to taste**

- Taste sensation diminished after age 60 especially sweet and salty.
- Surgery causes:
  - Decrease appetite
  - Further diminished sense of taste
  - Nausea with smell of food

**Risk to Patient**

- Risk for malnutrition
- Muscle Wasting – decrease strength and return to pre surgery activity level
- Risk for infection
- Increase incision healing time
- Constipation
Interventions

- Encourage small frequent meals
- High protein meals
- Consider protein supplemental drinks
- Add fruits and vegetables to aid in bowel motility
Monitoring intake and output

**Importance**

- Let’s you know their fluid balance
- Depending on their ejection fraction – may not tolerate fluids
- Help support physical assessments
  - Crackles
  - Edema
  - Dyspnea
- Indicator of kidney function and med clearance

**Risks to patients**

- Fluid overload – flash pulmonary edema
- Pneumonia
- Atelectasis – decrease ease of breathing
- Decrease activity tolerance
- Decrease clearance of medications and potential for additive affect
Interventions

- Make it a point to know their ejection fraction and if they have CHF
  - **Heart failure**
- Established intake and output protocols and enforce
- Educate family
- Graduated drinking containers – work with dietary to measure meal intake on trays
- Urinals and hats in toilet
Incentive Spirometer............why the resistance

Resistance
Do not understand how to work the device
Using IS
Painful to take deep breaths
Too weak to take deep breaths

Risks to patient
Increase risk of pneumonia and atelectasis
Decrease ability to clear secretions
Decrease activity tolerance
Instruct patient and family on use of IS – then using Teach back method have patient demonstrate use

Teach Back Video

Establish pain regimen

Use positive reinforcement / be honest and persistent

If patient has temp: measure then have patient use IS and measure again, will usually drop with deep breathing

Squeeze pillow tight for added reinforcement of sternum during and with cough
Sternal Precautions

**Importance**
- Reinforce sternum stability
- Decrease risk of infection
- Decrease risk of dehiscence
- Increase healing

**Risks to Patients**
- Increase risk of infection
- Increase risk of dehiscence
- Risk of needing rewire
- Risk of needing debridement
- Risk of losing entire sternum bone – replaced with muscle flap.
Interventions

- "Your sternum was one bone, then it became 2 bones and then it was wired together with wire, I am unsure of the gauge but like a paperclip if you bend it back and forth enough times it will break"

  Sara Stevenson, RN BSN

- Use visuals
- Have it within reach at all times
- "Use your pillow" for everything the strong your squeeze to your chest the less painful it will be.
Pain medications

Importance of evaluation

“Pain is a completely subjective and multidimensional phenomenon”

Risks to the patient

- Anxiety /Fear and irritability
- Decrease ability to concentrate
- Interfere with learning, and self care
- Potential for cardiac instability
- Nausea
- Decrease appetite
- Increase atelectasis
- Decrease compliance with rehab plan
Interventions

- Evaluate how their pain has been during hospital.
- Reinforce that we can assist with comfort but not take all the pain away. “Protective Pain”
- Develop a schedule so they know when to expect pain medication – monitor response daily and adjust pain regimen
- Involve family so they know what the plan is for pain coverage
- Add stool softener if needed
Blood sugars

“poor perioperative glycemic control is associated with increased mortality and morbidity”

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<thead>
<tr>
<th>Importance</th>
<th>Risk to patient</th>
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<tr>
<td>Big affect on patient ability to heal and prevent infection and achieve the best possible outcomes.</td>
<td>Increase mortality</td>
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<td>Increase morbidity</td>
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<td>Increases incidence of wound infections</td>
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<td>Increases hospital length of stay</td>
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<td>Decreases long term survival</td>
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Interventions

- Patient and family education...again utilize teach back
- Monitor blood sugars before meals and at night
- Treat appropriately
- Monitor incisions for signs and symptoms of infection
- Have trending information on what sugars have been running.
- Patient education
Physical assessment

- What to assess
- What is normal
- What can wait
- What warrants a call to the physician
Cardiac

Assessment

Physical assessment:
- Color – pink/pale
- Nail beds
- Blood pressure
- Heart rate
- Saturation
- Edema?
- Peripheral pulses – warm feet
- good circulation
- Radial pulses - regular

When to notify Surgeon

- Lab results abnormal
- Nail bed bluish in color
- Blood pressure less than parameters indicated or given in report from facility
- Heart rate / pulse noted as irregular or fast >150
- Patient persistent complaint of fatigue
- Oxygen saturation less than 90%
- Noted increase in edema in lower extremities, hands
- Sudden reports of numbness in arms or legs
- Weight gain of 1 – 2 pounds in 2 days
Lungs

**Assessment**

- Saturations / nail beds / lips
- Temperature
- Ease of breathing
- Cough - strong/ weak / mucus
  - Enc this hourly or bihourly after IS use – to prevent pneumonia
- Audible sounds anterior and posterior
  - Wheezing
  - Crackles
  - Absent

**When to call the Surgeon**

- Oxygen saturation <90 %
- New onset dyspnea
- Bluish discoloration or lips and nailbeds
- Ineffective cough
- Audibly wheezy
- Crackles or absent lung sounds
- Sharp pain with deep breaths
- Temperature > 100 degrees F x 2 in 24hr
- Coughing up blood
- Pain and warmth in lower extremity
Incisions

**Assessment**

- **DAILY MONITORING**
  - Approximated
  - Drainage
  - Healing
  - Red around the edges
  - Tender to touch
  - Stability of Sternum
  - Leg incisions very tender in upper thigh due to location

  - Prone to infection and swelling – elevate extremities

**When to call the Surgeon**

- Redness at incision site
- Drainage – brown/pus
- Odor from incisions
- Gaping incision
- Unstable sternum or asymmetry of chest when patient takes deep breath
- Increased pain
Emotions

- Approx 20-40% of people get depressed after CABG surgery
- Monitor for:
  - Sadness most of the day
  - Diminished pleasure or interest in most if not all activities
  - Insomnia or excessive sleep
  - Feelings of worthlessness or guilt
- Continue to encourage patient with activities and let them know it is **Normal** to have good days and bad days.
- Report to healthcare provider if symptoms last for 2 weeks
- Increased confusion: Monitor urine for UTI as culprit and report to surgeon.
Reference

Progressive Mobility in the Critically Ill: Kathleen M. Vollman
CE Article: Introduction to Progressive Mobility Crit Care Nurse April 2010 30:S3-S5; doi:10.4037/ccn2010803


Thank you

We appreciate you taking care of our patients and encourage you to contact the education department with any questions you might have regarding how to care for post CABG patients.

We are here to collaborate and support you.

NHH Education Department