

PROTOCOL FOR: Total Knee Arthroplasty (TKA): Care of the Post-Operative Patient

DESIRED

- PATIENT OUTCOMES:
1. The patient will regain optimal mobility post-surgery.
 2. The patient will experience minimal/no complications from surgery.

ASSESSMENT AND

NURSING CARE:

1. Cardiovascular/Circulation:
 - a. Check VS every four hours x 24 hours, then every eight hours, and prn.
 - b. Check CSM to bilateral lower extremities q four hours x 24 hours, then q 8 hours. For CSM checks, inspect and palpate for: color; temperature; blanching/capillary refill; sensation; peripheral pulses; flexion/extension of foot, ability to spread toes; swelling.
 - c. Assess application of antiembolytic stockings (TEDS) and AV-Foot Pumps to bilateral lower extremities. Remove and reapply stockings and foot pumps at least every 8 hours and prn. Perform a thorough skin assessment after the stockings and foot pumps are removed and document any changes from baseline in the condition of the skin.
 - d. Administer anticoagulants as ordered.
 - e. Monitor labs as ordered: HCT, PT/INR
 - f. Monitor output from Hemovac: Hemovac is attached to self suction. Empty and record amount q 8 hours. Hemovac often removed POD #1.
2. Pulmonary:
 - a. Assess lung sounds every four hours x 24 hours; then every eight hours and prn.
 - b. Assess patient's ability/compliance to cough, deep breathe, and use IS every hour while awake.
 - c. Maintain O₂ by nasal cannula per MD order.
3. Fluid Volume Status:
 - a. Maintain IV infusion as ordered. Heplock per MD order.
 - b. Monitor I + O, record QS.
 - c. Monitor/manage urine output as follows:

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- 1) Patient will have indwelling foley catheter until POD #2.
 - 2) Foley will be discontinued at 8:00 AM POD #2; patient will be due to void by 2:00 PM.
 - 3) Check post-void residual with bladder scanner x 3. Straight cath patient if volume is \geq amount voided.
4. Wound Care/Skin Care:
- a. Do not change dressing immediately post-op. Observe and document condition of dressing every four hours until first dressing change. Reinforce dressing prn; M.D. performs first dressing change. Then change dressing as ordered, using sterile technique.
 - b. Assess wound for symptoms of infection: redness, heat, swelling, pain, drainage, odor. Notify HO if symptoms develop.
 - c. Assess wound/dressing for symptoms of bleeding especially after Hemovac is removed. Notify HO for excessive bleeding.
 - d. Assess skin every four hours x 24 hours, then every eight hours and prn for signs of friction/irritation along: heel and buttock/upper thigh 2° CPM machine placement. Insure that sheepskin padding is flat under patient and protecting skin along all contact/friction points. Remove elastic stockings for heel care ONLY. Notify HO if irritation develops.
 - e. Administer antibiotics as ordered.
5. Pain Management:
- a. Initiate appropriate Pain Management Protocol.
 - b. Assess and document patient's report of pain with vital signs using the following scale: 0 = no pain; 10 = worst pain imaginable.
 - c. Medicate for pain, as needed. Assess patient response to medication regimen.
 - d. Pre-medicate appropriately before PT, exercise, ADL's per LIP order.
 - e. Institute comfort measures as needed: re-positioning, relaxation and reassurance.

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6. Progressive Activity:

a. Day of Surgery:

- 1) Check the alignment of affected extremity on the CPM machine (see CPM section). Avoid external rotation and pressure on the heel.
- 2) Lift patient for back care, use of bedpan and linen change. Patient may assist with lifting by flexing good leg and pushing down with foot while using trapeze.

b. POD #1:

- 1) Maintain proper alignment in CPM machine per M.D. order.
- 2) Dangle with P.T. BID, OOB as tolerated per P.T. protocol.
- 3) Reinforce P.T. exercise protocol.

c. POD #2:

- 1) Maintain proper alignment in CPM machine per M.D. order.
- 2) OOB into chair BID with P.T., ambulate as tolerated per P.T. protocol.
- 3) Reinforce P.T. exercise protocol.

d. POD #3-4:

- 1) Maintain proper alignment in CPM machine per M.D. order.
- 2) Ambulate BID with P.T., stair climbing as indicated.
- 3) Reinforce P.T. exercise protocol.
- 4) May be assisted OOB and sit in chair once patient has done so with P.T. Keep affected extremity elevated while in chair.

7. CPM MACHINE:

- a. Patient is placed on CPM machine on the surgical unit.
- b. Extension and flexion range limits are set and changed by the M.D. or P.T..

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- c. Patient remains on CPM machine while in bed. Patients may be removed from the machine for: PT, BRP's or for OOB activity.
 - d. Assess patient's complaints of pain while on machine. Patient should not experience pain from machine and should therefore be monitored to insure that motion does not surpass the patient's tolerance.
 - e. Assess/monitor correct placement on CPM machine:
 - 1) Patient's knee should be parallel to articulating joints of apparatus.
 - 2) Leg should not be internally or externally rotated (patella and toes must be pointing toward the ceiling at all times).
8. Notify House Officer if:
- a. Temperature > 101.5 PO.
 - b. Pulse > 120 per minute
 - c. SBP < 100 or >160, DBP >110
 - d. Respirations < 8 per minute or > 30 per minute
 - e. HCT < 25
 - f. Wound shows signs of infection, bleeding.
 - g. Patient complaining of pain on CPM machine.

SAFETY

- MEASURES:**
- 1. CPM machine must be secured firmly to the trapeze frame using the attachment mechanism provided with machine.
 - 2. The wire from the CPM control box should go over the machine, not under it.

APPROVAL: Medical-Surgical Standards Review
Nursing Standards Committee

EFFECTIVE DATE: 12/90

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REVISION DATES: 11/94, 7/96, 12/97, 11/03, 6/06