

PROTOCOL FOR: Cardiac Angiography: Care of the Patient Undergoing

PURPOSE: To define the nursing care of the patient undergoing cardiac angiography in the Cardiac Catheterization Laboratory.

POLICY: All patients will be contacted within seven working days prior to their scheduled procedure for pre-procedure instructions.

1. Inpatients will be visited on the appropriate nursing unit.
2. Outpatients will be telephoned at home.

SUPPORTIVE DATA: Patients undergoing cardiac angiography present with a variety of medical problems and symptomology. Close assessment and monitoring are necessary to allow for a safe, comfortable and expedient procedure.

DESIRED
PATIENT OUTCOMES: 1. The patient will verbalize understanding of cardiac angiography.

2. The patient will be free of complications.
3. The patient will experience minimal discomfort throughout the procedure.

CLINICAL
ASSESSMENT
AND CARE:

1. Obtain a past medical history, including known allergies and present medications.
2. Assess patient for NPO status of four hours minimum prior to the procedure.
3. Assess the time of last void.
4. Assess initial vital signs upon arrival to the Catheterization Lab/AACU, including pulse, respiration, blood pressure, pulse oximetry and temperature if applicable. Mark peripheral pulses with ink for continued assessment.
5. Assess baseline neurological status, patient understanding of the procedure, and patient's anxiety and ability to cooperate.
6. Obtain a current weight.
7. Assess pre-procedure lab work to include: PT/PTT, BUN, K+, H+H, platelets and creatinine. Obtain if needed.
8. Determine a signed consent form has been obtained.

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GENERAL

- NURSING CARE:
1. Explain and answer questions and listen to concerns about the procedure.
 2. Continued patient assessment to include cardiac rate and rhythm, pulse oximetry, blood pressure, respiratory status, neurological assessment and assessment of puncture site and peripheral pulses.
 - a. Vital signs with pulse oximetry to be documented every 15 minutes throughout the procedure unless conscious sedation is administered -the vital signs with pulse oximetry will be documented every 15 minutes for the first hour, every 30 minutes for the next two hours, and hourly until discharged if an outpatient. Should the patient require admission, follow physician's written orders. If conscious sedation is administered, follow Hospital Conscious Sedation Policy.
 - b. Assessment of puncture site and extremity for bleeding, swelling, changes in color, temperature of loss of feeling and previously marked peripheral pulses to be made with each vital sign assessment.
 3. Assess the patient's need for sedation and discuss with the Cardiologist for appropriate orders. Document this assessment on Conscious Sedation Flowsheet.
 4. Establish IV access and maintain throughout the procedure and recovery period. If possible, a #20 gauge angiocatheter should be used. Heplock unless orders for IV fluid given by physician.
 - a. Patients scheduled for cardiac angioplasty need hydration fluid. Request an order for fluid type and rate from Cardiologist.
 5. Position the patient safely and appropriately on the angiography table, promoting comfort. Use medical immobilization as necessary to maintain proper positioning during procedure.
 6. Administer medication as ordered by the Cardiologist.
 7. Obtain lab specimens as ordered.
 8. Offer emotional support throughout the procedure.
 9. Maintain accurate account of contrast given.
 10. Reinforce Cardiologist's instructions as needed throughout the procedure.

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11. Apply appropriate dressing to puncture site after sheath discontinued.
12. Admit patient to recovery unit and maintain strict bedrest unless otherwise ordered.
13. Encourage diet and fluids unless contraindicated.

- PATIENT TEACHING:
1. Inform the patient of his/her scheduled procedure time and to arrive 1 ½ hours early.
 2. Inform the patient that he/she must remain NPO for four hours prior to the procedure, except medications are to be taken with a sip of water. Insulin and oral hypoglycemics are to be held or taken as ordered by MD.
 3. Inform the patient that he/she will remain in the AACU until approximately 4:00 p.m. or possibly longer, if needed.
 4. Inform the patient that a responsible adult must drive him/her home and remain with him/her for a 24 hour period if possible.
 5. Explain the procedure to the patient.
 - a. Patient will lie on a hard radiographic table.
 - b. Patient will be placed on a cardiac monitor, pulse oximeter and blood pressure monitor which will inflate every 15 minutes or more frequently, if deemed necessary.
 - c. The procedure will be done under sterile technique, therefore, the medical team will wear masks, caps, gloves and sterile gowns as necessary.
 - d. An IV will be placed for any fluids or medications necessary during the procedure and will be removed just prior to discharge.
 - e. The puncture site will be prepped with a cool bacteriocidal liquid and a sterile drape will be placed.
 - f. A local anesthetic will be administered.
 - g. After the area is numb, the physician will palpate the area and a needle will be placed into the appropriate vessel. A plastic catheter will then be threaded into

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- the appropriate site for injection.
- h. A contrast agent will be injected and the patient may feel an increasing hot sensation during the contrast injection. This will subside.
 - i. After the test is complete, the physician will remove the plastic catheter from the vessel and will apply firm pressure at the site for insertion of approximately 20 minutes or longer if necessary. In some instances, a suture device will be used to close the artery.
 - j. Betadine and a small dressing will be placed on the insertion site.
6. Inpatients will be returned to the appropriate nursing unit.
7. Outpatients will remain in the recovery area until approximately 4:00 p.m.
- a. While in the recovery area, inform the patient that vital signs and peripheral pulses will be checked frequently.
 - b. Lunch will be ordered for the patient and fluids will be encouraged.
 - c. Strict bed rest will be enforced and the patient must use a bedpan and/or urinal.
 - d. Splinting of the access site will be enforced during any type of straining, moving, laughing, coughing or walking for 24 hours.
8. Upon discharge, "Angiography Discharge Instructions" will be reviewed with patient and a copy sent home with him/her to use as a reference.
9. A follow-up phone call or visit will be made the second working day after procedure.

REPORTABLE
CONDITIONS:

Notify Cardiologist if any of the following occur:

- 1. Patient discomfort or significant complaints.
- 2. Abnormal lab values.
- 3. Abnormal EKG rhythm strip.

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4. Hypertension or a 10% rise or fall in vital signs.
5. Contrast amount of 2cc per pound or greater.
6. Post-procedure bleeding, swelling or color, temperature or pulse changes.
7. Nausea or vomiting.

DOCUMENTATION: Document history, assessments, findings, medications and contrast administered, vital signs and follow-up on the patient record.

APPROVAL: Radiology Nursing Committee
Nursing Standards Committee

CREDENTIALS: RN

EFFECTIVE DATE: 6/95

REVISION DATES: 1/98, 11/00