

Nephrology: Renal Biopsy – Care following

Site Applicability

St. Paul's Hospital acute care (Renal Short Stay and Inpatient Units)

Practice Level

Basic: LPN, RPN, RN

Need to Know

Clinical Indication: Care of patients in the renal short stay unit or inpatient units immediately prior to and following a renal biopsy procedure

Renal biopsy results are used to determine the etiology and extend of renal disease for diagnosis, treatment and prognosis. When performed on a transplanted kidney it is often used to diagnose rejection or recurrence of primary kidney disease.

Renal biopsies are performed percutaneously. Patients may be outpatients or inpatients.

Given the nature of the kidney there is a risk of bleeding post biopsy, including hematuria, passage of clots or perinephric hematoma. Bleeding can occur up to 24 hours post biopsy. Other possible complications include infection, peri-renal and/or intrarenal arteriovenous fistula, aneurysm, laceration of other organs and/or blood vessels

Protocol

Pre-Procedure Assessment and Interventions

1. Initiate pre-procedure phase of NEPH Renal Biopsy PowerPlan (order), if not initiated already
2. Patients are not required to be NPO prior to biopsy
3. Ensure ultrasound has been performed
4. Assess last dose of anticoagulant or antiplatelet medications. The physician is to inform patient when to have stopped taking these medications. Typically the patient is instructed to stop taking ASA and NSAIDS 7 days prior to biopsy and warfarin 3 to 4 days prior to biopsy. Physician is to inform patient when to resume taking these medications.
5. Start PIV and saline lock.
6. Obtain baseline vital signs. Report any significant findings to the physician prior to the procedure.
 - a. Acceptable blood pressure for biopsy is below 150/90. If it is above this limit, follow orders on the NEPH Renal Biopsy pre-procedure phase. Notify the ordering physician if blood pressure is still above 150/90 after administering PRN blood pressure medication. High blood pressure increases the risk of bleeding

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7. Ensure all pre-procedure lab work is done. Order CBC, INR and PTT if the result is not available. Report any significant results to the physician prior to the procedure. Physician's orders may be written for medications to prevent bleeding (e.g. DDAVP)
8. Ensure renal biopsy request form ([form](#)) is completed and sent with the patient to radiology.

Immediate Post Procedure Intervention

1. Put a gentle pressure using a rolled cloth on the puncture site immediately after the procedure either by asking the patient to hold it or lie on it.

Post Procedure Assessment

1. Initiate post procedure phase of NEPH Renal Biopsy and discontinue pre procedure phase if not done already
2. Monitor vital signs every 15 minutes for one hour, every 30 minutes for one hour then every hour until discharge
3. Assess for signs and symptoms of bleeding e.g. flank pain, hematuria, decreased BP, increased heart rate, dizziness pallor.
4. With each set of vital signs check the biopsy site for bleeding, bruising, signs of inflammation or hematoma

Interventions

1. Keep patient bed rest with bathroom privileges for 4 hours post procedure
2. Instruct patient to collect three separate urine samples in clear plastic cups and save at the bedside or in washroom for nurse to visually inspect for hematuria. Samples should be clear or hematuria decreasing with each sample.
3. If bleeding occurs or is suspected, maintain the patient on bed rest with head of the bed flat and notify the Physician. Monitor vital signs and follow instructions given by the physician.
4. If patient has difficulty voiding or is unable to void, notify the physician
5. Encourage oral fluids (unless patient on a fluid restriction) to dilute urine and prevent intrarenal clot formation.
6. Administer PRN analgesia as ordered by physician
7. Discharge patient, if BP stable, 6 hours post procedure for native kidney and 4 hours post procedure for transplanted kidney, as per provider orders.

Documentation

Document assessments and interventions in Interactive View and I & O in Cerner

Patient and Family Education

1. Instruct the patient to notify the nurse of any pain or any increase in pain.

2. Instruct the patient to notify the nurse of any difficulty voiding.
3. Discharge teaching: patient to monitor for bleeding, infection, or difficulty voiding. Significant bleeding can occur up to 24 hours post biopsy. If urine remains red or brown longer than one week, patient is to contact physician or seek medical attention.
4. Instruct no heavy lifting or contact sports for 1 week.
5. Provide patient with patient handouts (e.g., "kidney biopsy discharge information" and "ultrasound kidney biopsy").

References

1. Thomas, N (2019). Renal Nursing. Wiley Blackwell.
2. Whittier, W., Korbet, S. (Jul 22, 2016.). Indications for and complications of renal biopsy. Retrieved October 27, 2021 from: <https://www.uptodate.com>
3. Whittier, W., Korbet, S. (Dec 04, 2015). Patient information: Renal (kidney) biopsy (Beyond the Basics). Retrieved October 27, 2021 from: <https://www.uptodate.com>

Persons/Groups Consulted

6B Physician Lead

RN 6B Renal Unit

RN Clinical nurse Leader/ Educator Radiology

RN Renal Short Stay Unit

Developed By

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