

Commentary

The indications and contraindications of renal biopsy

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ABOUT THE STUDY

A renal biopsy is a medical procedure that involves removing a small piece of kidney tissue for examination under a microscope. It is a diagnostic tool used to identify the cause of kidney disease or to monitor the progress of treatment. Renal biopsy is performed by a nephrologist, a doctor who specializes in the treatment of kidney disorders (Munoz AT, et al., 2011).

Indications

Renal biopsy is indicated in several conditions, including unexplained proteinuria or hematuria, unexplained acute kidney injury, chronic kidney disease of unknown cause, suspected glomerulonephritis, suspected vasculitis, suspected interstitial nephritis, suspected amyloidosis, and suspected malignancy of the kidneys (Munoz M, et al., 2010).

Contraindications

Renal biopsy is contraindicated in patients with bleeding disorders, uncontrolled hypertension, renal cysts, solitary kidney, urinary tract obstruction, active urinary tract infection, and pregnancy (Woywodt A, et al., 2013).

Preparation

Before the renal biopsy, the patient should inform the doctor about any medications they are taking, especially blood thinners, and any allergies they may have. The doctor may advise the patient to stop taking blood thinners a few days before the biopsy. The patient should also inform the doctor if they have any medical conditions, such as diabetes, liver disease, or heart disease. The patient may need to undergo blood tests, urine tests, and imaging tests to assess the kidneys' size and location (Oliver SW, et al., 2015).

Procedure

Renal biopsy is usually performed under local anesthesia or conscious sedation. The patient lies on their stomach, and the doctor uses ultrasound or CT guidance to locate the kidney and insert a biopsy needle through the skin and into the kidney tissue.

The needle may be inserted once or multiple times, depending on the amount of tissue needed. The needle removes a small piece of tissue, which is sent to a laboratory for examination under a microscope. The entire procedure usually takes less than 30 minutes (Gorrin MR, et al., 2016).

Complications

Renal biopsy is a safe procedure, but it may cause some complications, such as bleeding, pain, infection, and damage to other organs. The patient may experience pain or discomfort at the biopsy site or in the back, which can be managed with pain medications. The patient may need antibiotics to treat the infection. The biopsy needle may accidentally damage other organs, such as the liver, spleen, or lung. This is rare but may require further treatment (Poggio ED, et al., 2020).

Aftercare

After the renal biopsy, the patient may need to lie on their back for a few hours to prevent bleeding. The patient should avoid strenuous activity for a few days and drink plenty of fluids to flush out any remaining contrast dye used during the procedure. The patient should also watch for signs of infection, such as fever, chills, or redness and swelling at the biopsy site (Dawoud D, et al., 2012). If the patient experiences any of these symptoms, they should contact their doctor immediately. Renal biopsy is a safe and effective diagnostic tool used to identify the cause of kidney disease or to monitor the progress of treatment. It is indicated in several conditions, including unexplained proteinuria or hematuria, unexplained acute kidney injury, chronic kidney disease of unknown cause, suspected glomerulonephritis, suspected vasculitis, suspected interstitial nephritis, suspected amyloidosis, and suspected malignancy of the kidneys. The procedure is performed by a nephrologist and usually takes less than 30 minutes. Complications are rare but may include bleeding, pain, infection, and damage to other organs. After the procedure, the patient may need to lie on their back for a few hours to prevent bleeding and avoid strenuous activity for a few days. The patient should also watch for signs of infection and contact their doctor immediately if they experience any symptoms (Wang LC, et al., 2021).

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