



Introduction

1. FNA or biopsy is a medical procedure performed to identify the nature of a lump or a mass or other abnormal condition in the body. The procedure can be done under X-Ray, ultrasound or CT guidance through the overlying skin (i.e. percutaneous). Small amount of tissue or fluid sample inside the lesion can be obtained by inserting a very small needle to the region of interest, so called the fine needle aspiration (FNA). Or a complete core of tissue can be obtained via a larger biopsy needle under imaging guidance, so called the core biopsy.
2. The nature of an adrenal mass may not be determined by imaging studies and other clinical investigations. Biopsy / FNA will then be required for a more definitive diagnosis.
3. The procedure will be performed by trained specialists. The procedure will generally be performed in the Department of Radiology under imaging guidance, such as computed tomography (CT) or ultrasound.

The Procedure

1. The procedure will be performed under local anesthesia and aseptic technique. The nurse will sterilize the field of procedure and cover it with sterilized towel.
2. FNA is usually performed via a very fine needle inserting into the lesion concerned.
3. Core biopsy is usually performed via two or more passes of biopsy needle in order to obtain adequate tissue for optimal assessment. A “click” sound will be encountered due to movement of needle parts during the biopsy procedure.
4. Duration of the procedure varies, depending on the complexity of the condition. It may take only 30 minutes though you may need to stay in the Department of Radiology for over an hour altogether.
5. Before, during and after the procedure, your vital signs (like blood pressure and pulse rate) will be monitored.
6. Specimen will be sent to pathological laboratory for examination which may take a few days to complete.

Before the Procedure

1. A written consent is required.
2. Inform our staff before the examination if the patient thinks she is pregnant.
3. Check clotting profile for any bleeding tendency, to be corrected if abnormality detected.
4. Except medication, fast for 4 hours before examination.
5. Inform doctor if the patient is on anticoagulant or antiplatelet drugs.

After the Procedure

1. Medical staff will apply sterile spray and dressing to the wound, which will then be covered with pressure bandage to prevent bleeding.
2. Patient is advised to remain bed-rested to minimize the risk of bleeding.
3. For early detection of blood loss, a nurse will frequently check the patient's blood pressure. The patient's urine will be examined to see if there is profuse bleeding.
4. Except for some special cases, the patient should drink more water to prevent urinary obstruction.



Risk and Complication

1. Overall complication is less than 5% (1-11%). These include:
 - 1.1 Pneumothorax, when pleural space is traversed during posterior approach.
 - 1.2 Bleeding around kidney or adrenal.
 - 1.3 Bleeding in liver, when liver is traversed during right adrenal biopsy.
 - 1.4 Pancreatitis, when pancreas is traversed during left adrenal biopsy.
 - 1.5 Precipitation of acute hypertension, during biopsy of an unsuspected pheochromocytoma, a tumour that secretes adrenaline.
 - 1.6 Metastasis along needle tract.
2. Unfortunately, not all biopsies / FNAs are successful. They are subjected to sampling error, or rarely the abnormal tissue obtained is not adequate for diagnosis. In such circumstances, the biopsy / FNA may have to be repeated on another day.
3. Despite these potential complications, percutaneous biopsy / FNA is normally very safe and is designed to save you from having a major procedure. A positive diagnosis can help you to get the appropriate treatment.

Should a complication occur, another life-saving procedure or treatment may be required immediately.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

1. The Hong Kong Society of Interventional Radiology Limited, Patient Information Leaflet: Percutaneous FNA (Fine Needle Aspiration) / Biopsy of Adrenal Mass (2010)
2. Smart Patient Website by Hospital Authority: Renal Biopsy (2021)