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Examination of Upper Abdominal Computed Tomography Scan on suspicion of Kidney Tumors General Hospital Haji Adam Malik

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Abstract-*Kidney tumor is an abnormal mass in the abdominal cavity that develop in the kidneys. Kidney tumor or nephroblastoma is a type of tumor that often occurs in children - children under 10 years old and is rarely found in adults. Interest CT scan of the abdomen on suspicion of renal tumors is to determine the location, size, tumor in the kidney radiologically by using CT scans. These checks are carried out on the children's names: S, age: 10 years, in February 2017 using a CT scan tool brands General Elektonic (GE) Light Speed PRO 16 Type Multisync. LDC 1880 SX.*
The results of radiological examination showed a tumor in the kidney

Keywords: *Abdominal tumors, CT Scan, kidney tumor.*

1. Introduction

Abdomen, is the largest in the body cavity. Is oval shaped and extends from the diaphragm to the pelvis below. Described the abdominal cavity into two parts, namely the actual abdominal cavity next to the top (upper abdomen) that is bigger and pelvis is the cavity bottom (lower abdomen) that is smaller (Pearce, 2008). According to Hima (1973), is a collection of abnormal cell tumors formed by cells that grow continuously indefinitely, not coordinated with the surrounding tissue and are not useful to the body. The tumor consists of malignant tumors (malignant) and benign tumors (benign). Kidney tumors are often called hypernephroma, alveolar carcinoma and clear cell carcinoma. Kidney tumor is an abnormal mass that developed the kidney. Kidney tumor or nephroblastoma is a type of tumor that often occurs in children under the age of 10 years, is rarely found in adults. Computed Tomography is a picture that was built by computer using X-rays collected from various points around and form part of the so-called scanned so as to produce cross-sectional tomographic picture plane (slice) is sliced from the body (Ballinger, 1986). Examination of the abdomen on a radiograph usual with tumor cases are not easily identified clearly as it will superposition with the surrounding tissue and every organ tissue does not have the characteristics of good will but with the advent of Computer Tomography (CT) ability to diagnose abnormalities in the abdomen, especially in the upper abdomen has increased by well.

2. Inspection method

A. Patient identity

Name	: By. S
Age	: 10 mths
Gender	: Male
No.RM	: 63.60.45
Date of inspection	: March 13, 2015
Examination	: CT scan of the upper abdomen
doctors sender	: Dr. M. Taufik, Sp.PD
DokterPembaca	: Dr.ElvitaR.Daulay, Mked, Rad, Sp.Rad

B. Examination Procedure Upper Abdominal CT scan.

A CT-Scan Upper Abdomen with suspicion of renal tumors Guide General Hospital Haji Adam Malik CT Scan section Jl. Flowers Lau No. 17 FIELD

1) Aircraft Specifications CT Scan

brands	: General Electronic (GE) Lightspeed PRO 16
Type	: Multisync LDC 1880 SX
Scanning time	: 0.4 sec / rotation

flow Tubes : 5-400 mA
voltage max : 100-130 kV
Focus : Focus Focus Large and Small
capacity Pictures :3300

Fig 1. CT scan RSUP.H. Adam Malik

2) Procedure best use of CT scans

a) Press the power button and press the ON button on the CPU.
b) Wait until the screen turns on.
c) Display the menu screen monitor and click ok for warming up and calibration.
d) Then click New patient to enter patient data.
e) The tool is ready for use

3) patient preparation

In a CT scan examination of upper abdomen make special preparations are fasting.
When the shooting will be completed in the morning, the patient should be fasted for 4 hours prior to the examination which adjusted right with the queue of patients. Likewise if Ct-scan examinations scheduled in the afternoon or evening. Preparation for abdominal CT examination could greatly alter the appearance for each image slightly.

4) Preparation Tools and Materials

Preparation tools and materials used for a CT-Scan Upper Abdomen with tumor cases in the department of radiology installations. H. Adam Malik is as follows
Tools and materials used for upper abdominal examination is divided into two, namely:

a. Sterile equipment:
   1) injector
   2) syringe
   3) Alcohol
   4) Handshoen
   5) Abocath
   6) threeway
   7) Pastik (alcohol swabs)
   8) Hypaque
   9) NaCl / distilled
b. Non-sterile equipment:
   1) Aircraft CT-Scan
   2) contrast media
   3) Oxygen tube
   4) Anesthetic and sedative drugs (tranquilizers)

C. Mechanical Inspection

1) patient position

The patient is positioned supine on the examination table. Both upper extremities of the patient's head lifted and placed on the lower extremities and the second straight over the examination table.

Figure 2. Position the patient (Dr. H.Adam Malik)

2) Position Objects

The patient is placed on an exam table with the supine position and MSP were right on an exam table. Both arms are lifted and placed above the head. The position of first feet first into the gantry and indicator lights outline set right on the sternal notch.

3) Examination procedure

a. Scan Upper Abdomen plain

1) Enter patient data
2) Select the button showing abdominal examination
3) The patient is positioned supine on an exam table feet first.
4) The patient's arm in a straight position on a cushion or buffer at the upper side with the patient's head is mounted infuse the cubital vein.
5) Enter into the patient's abdomen gantry position in setting amid the gantry at the local field of view (FOV), with an upper limit on proccesus xypoideus.
6) Make topogram to obtain lateral and coronal cuts of the upper abdomen.
7) At the time of scanning with the cue "inhale, exhale and hold the breath" to manufacture the finished picture (in adults, for infants not recommended).
8) Planning made plain upper abdominal scan area of the picture topogram with an upper limit and a lower limit xypoideus proccesus crista iliaca.
9) Create an axial cuts of the diaphragm until the Count with 10 mm thickness and interval, then click "Confirm" and press the "START".

b. Upper Abdomen scan with contrast

1) Next make the upper abdomen with contrast media.
2) Connect both the injector tube containing a solution of NaCl kesaluran contrast and patient infusion.
3) Make planning the same area with the plain scan. Yet changed slice thickness to 5 mm.
4) Create an axial cuts of the diaphragm until Crista illiaca the interval thickness and 0,625 mm or 1.25 mm (to reformat / reconstruction). Then click "Confirm".
5) Set the speed of contrast that will be given at 3 cc / second and its many contrasts 15 cc.
6) Furthermore, simultaneously press the START and START SCAN CONTRAST.
7) The scan is complete, mounted on the patient's infusion is released. And advised patients to drink more water.
8) Furthermore, the process reformat a picture with pieces of axial, coronal and sagittal planes.

c. reformat Image
   1) Of reconstruction made reformatted coronal, axial, in the abdominal area from the diaphragm to the crista iliaca at intervals of 5 mm thickness.
   2) Of reconstruction made reformatted coronal, axial, at the start of the anterior abdominal abdominal area to the posterior abdominal thickness 5mm intervals.
   3) Of reconstruction made reformatted sagittal, axial, in the abdominal area ranging from abdominal dextra up to the left abdomen with a thickness of 5mm intervals.
   4) Printing images.

3. Analysis Results

a. Name: By. S
   Inspection Date: 13/03/2015
   Age: 10 Bln
   No. R: 636 045

Fig 3. Results Ct-Scan Upper Abdomen Pre and Post Contrast Contrast

4. Conclusion

After the authors carry out observations of the CT-scan examination of upper abdomen with suspicion of renal tumors in Radiology Hospital. H.Adam Malik and based on the results of the discussion of formulation of the problem that has been described, it can take several conclusions, namely:

1. A CT scan of the abdomen with suspicion upper Kidney Tumor Hospital. Malik H.Adam enforced by using a CT scan where shooting is done before and after injection of intravenous contrast media.
2. CT-scan examination of upper abdomen in the department. H.Adam Malik on suspicion of renal tumors must be able to show the results of a CT scan picture optimal by considering the patient's general condition.
3. CT scan examination of upper abdomen in the department. H. Adam Malik besides pemeriksaanya is non-invasive, rapid, and the density of each organ can be evaluated by unit HU (Hounsfield Unit) so that it can be distinguished a variety of abnormalities in the abdominal cavity, is also a clinical examination has the disadvantage that the radiation received by the patient is greater and the cost of scanning is relatively expensive.

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