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Ct-Scan inspection Lower Abdomen on suspicion of cervical carcinoma at Dr Haji Adam Malik

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Abstract*-The abdomen is the largest cavity in the body that is oval shaped and extends from the pelvic diaphragm at the top to the bottom. Cervical carcinoma is a malignant tumor in the lower part of the uterus. For Carsinoma by disclosing cervicks uteri using aircraft CT Scan 4 (four) with a slice helical techniques that produce 4 slides per one rotation tehadap tube detector. Aircraft used CT scans of the Toshiba brand, generation III / Helicle Capabilities.*
The test results showed suspicion Ca cervix.

Keywords: Cervix uteri, CT Scan, Cervical Ca

1. Introduction

The 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, 2009). Malignant epithelial tumor called carcinoma. Cell carcinoma usually in groups. Connective tissue stroma surrounding the cell groups and not megelilingi each cell (Hima, 1973). Uterine cervix is the lowest part of the uterus, consisting of pars vaginalis (bordering / penetrate the walls of the vagina) and pars supravaginalis. It consists of three main components, namely smooth muscle, connective tissue braid (collagen and glikosamin) and elastin. In patients with cervical carcinoma with no signs or symptoms that are specific for cervical carcinoma. Pre-invasive cervical carcinoma can cause vaginal discharge or vaginal bleeding. Although bleeding is a significant symptom, bleeding does not always appear in the early moments, so that already in advanced state at the time of diagnosis. Evaluation for cervical carcinoma is by inspection or palpation examination, biochemical state (liver and kidney), thorax, cystoscopy, proktosigmoidoskopi, and CT-Scan. The use of CT scan increased due to the findings of several studies related to the pathological-surgical 97% specific in patients with advanced disease (Price, 2006). In other words, a CT-scan technique is one technique that can be used to diagnose a pathological specifically in this case is a cervical carcinoma. 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 (Balingger, 1999).

2. Methods of Implementation

2.1. Patient identity

Name : Ny. RA
Age : 36 years old
Gender : Women
No. RM : 564 275
Date of inspection: February 2017
Examination : CT-Scan Lower Abdomen
doctors Readers : Dr. Armen H. Rangkuti, Sp.Rad

2.2. Examination procedure

1. patient preparation
   In a CT-Scan Lower Abdomen make special preparations are fasting.
   a. The day before the examination of patients is recommended only eat soft foods (soy pulp).
   b. 19:00 pm last meal.
   c. Fasting to complete the examination.

d. 09.00 am (tomorrow) patients and families come to the CT-Scan.

2. Preparation tools and materials
   a. tools preparation
      Preparation tool used for a CT-Scan Lower Abdomen on suspicion of hepatoma in Radiology Haji Adam Malik Hospital are as follows:
      CT-Scan plane with specification:
      1) Brand / Type Type : TOSHIBA
      2) No. series Tube: A5592098, A5592097
      3) voltage max : 120kV-130kV
      4) Strong currents : 270-300 mA
      5) filter default : Al
      6) generation tool : III / Helicle capabilities

      With the following advantages:
      1) Able to produce whole organs in a short scanning.
      2) Scanning time becomes shorter because no ISD (InterScan delay).
      3) Slices can be taken at random at the time of scanning volume
      4) Misregistrasi anatomy bias is removed.
      5) Enhancement with contrast medium can be displayed as a whole
   b. preparation Materials
      1) Emergency medicine / sedative
      2) Oxygen
      3) Immobilizing tools such as pillows, belt fastener, blankets and others.

Fig 1. Computed tomography

3. Mechanical Inspection:
   a. patient position
      The patient is positioned supine on an exam table, above the two extremities of patients with head lifted and placed on the lower extremity and the second straight over the examination table. Adjust the position of the patient in order to MSP (Mid Sagittal Plane) body parallel / parallel to the longitudinal positioning lights.

Fig 2: Position the patient in the hospital H.Adam Malik

   b. object possisi
      Diposisikam lower abdominal area is the area to be discanning to arrange the examination table and light indicators to determine the upper limit and lower limit.

4. Examination procedure:
   a. Enter your information / personal data of patients include: name, age, gender, number RM (Medical Records) in the available space on the screen by clicking one of the menu is the start menu of existing studies on the monitor screen to fill in the patient data.
   b. Select / click protocol group by selecting a helical abdomen.
   c. Wait smapai blinker on x-ray button lights up, then press 2 times.
   d. Then came the scanogram.

Fig 3. Display Scanogram (Coronal Pieces)

   e. Set the start line with a piece of coronal upper limit to the lower limit crista iliaca pubic bones and draw a line FOV (field of view) to the area (object) wide and press the OK button.
   f. When the light on the button lights up x-ray press 1 time will appear first slice.
   g. Lights on x-ray button will turn on again and press the button: Abort then set the appropriate image magnification and press OK.
   h. Then the lights in the x-ray button lights up and press the button 2 times.
   i. Scan will run automatically samapai slices yangterakhir
   j. Press and rotate the stop, then press the exam quit at the control desk.
5. printing Images
   The printing system using the image in this examination dryview sony imager and the film UPT 517-BL including blue thermal film types are specifically designed for the Sony UP-Df500 dry film imager films station and packed 125 pieces in one package. Sony blue thermal films have been designed specifically for the movie stations that provide high contrast, high density images with higher durability, and the film can be handled in place the light so that all procedures can be handled easily

2.3. Evaluation results Examination

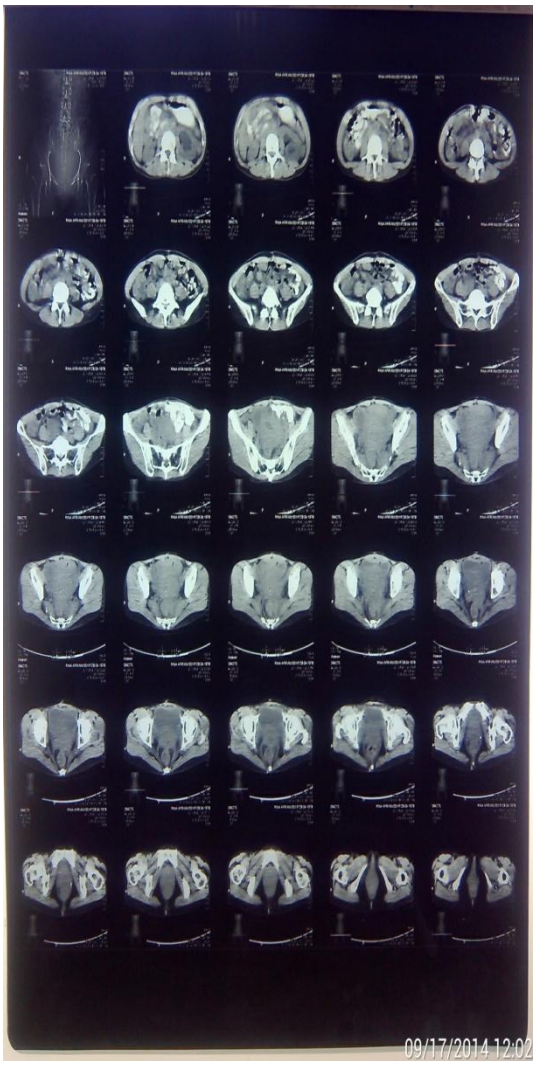
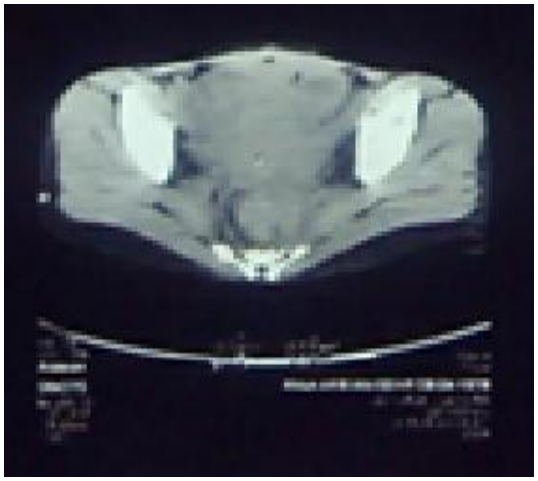


Fig 4. A CT scan of the Upper Abdomen Pieces Axial



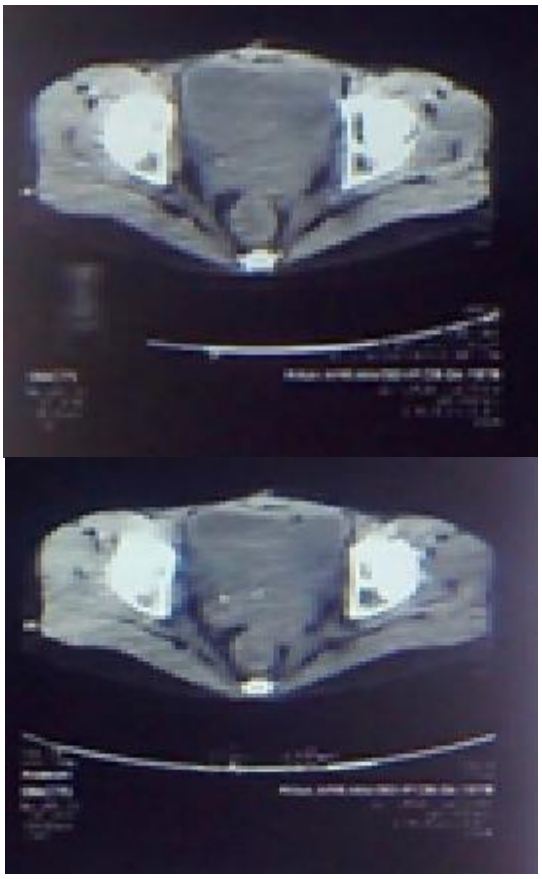


Fig 5. The CT-Scan LowervAbdomen Pieces Axial

3. Discussion

3.1. Formulation of the problem

In a CT-Scan Lower Abdomen on suspicion of cervical carcinoma in Radiology installation Haji Adam Malik Hospital in Medan, the author will discuss about:

"What efforts should be made to get an overview of Lower Abdominal CT scan on suspicion of cervical carcinoma so as to provide optimal diagnostic information with?"

3.2. Cause of the problem

The cause of the problems that arise in the implementation of a CT-Scan optimal lower abdomen on suspicion of cervical carcinoma are:

a) Patients who are less cooperative when a CT scan is underway diakbatkan fear, shame or awkward to the examiner.
b) Patients do not perform the procedure fast that the image is less than optimal.
c) The use of multislice CT scan plane is less precise and the magnitude of the amount of radiation received patients.

3.3 Initiatives by

The efforts made to obtain the lower abdominal CT scan on suspicion of cervical carcinoma so as to provide optimal diagnostic information and picture quality are:

a) Before the exam begins officer must explain to the patient about the procedure to be performed, using restraining straps / seatbelt minimize the movement of the object, in addition to the clerk using a scan / scan a short time because the scan time has an influence on image blur due to movement of the object. The smaller the scan time then the less blurring due to movement of the object.
b) Before the inspection is done should the officer ask the patient whether it is preparing (fasting) in accordance with the procedures recommended by the physician or attendant. It is expected that the patient has to do with good preparation, if the patient does not do the preparation, the authors expect the implementation of the examination should be considered.

c) Aircraft CT scan used in the examination of the lower abdomen at Dr Haji Adam Malik is using the best CT-Scan 4 (four) slice with the technique of helical which results in 4 slice each one round tube toward the detector, thus less revealing detail image disorders Abdominal optimal and less short scan time. To improve the quality of the CT scan, according to the author should be minimal use of multislice CT scan that can produce 16 (sixteen) or 32 (thirty-two) slice each one scan, because it can increase the number of images and slice thickness thinner. Slice thickness influence on the ability to distinguish two objects that are very close / spatial resolution for a thick slice generate lower image resolution and thin slices produce high-resolution images.

4) Conclusion

After the authors follow and observe the inspection of lower abdominal CT scan on suspicion of cervical carcinoma in Radiology installation Haji Adam Malik Hospital and based on the discussion of the problems that have manifested in Scientific Writing this, then grab some conclusions and suggestions are:

a) On examination of the lower abdomen CT scan on suspicion of cervical carcinoma, needs to be done in cooperation with patients and provide sedation for uncooperative patients (anxiety) when necessary for the smooth running of examinations and to avoid blurring the shadow due to the movement of patients on the examination results.
b) The abdomen is a large cavity in the body and are mostly found in the gastrointestinal tract which there are remnants of food, air and feces (stool). To reduce that remains of food, air and feces did not affect the result of an idea then do the preparation that is fast so that the abdominal cavity looks clean and easy to diagnose a disease.
c) A CT scan of the lower abdomen in the installation Radioogi Dr Haji Adam Malik using plane CT-Scan generation III with a capacity of 4 (four) slice that produces four (4) slice each one scan, so that the picture less than the maximum due to thick slices (slice thickness) is not too thin and its scan time long enough creates large amount of radiation received by the patient.
d) In a CT-Scan lower abdomen, especially on suspicion of cervical carcinoma, a CT scan taken at axial pieces.
e) A CT scan of the abdomen to the lower cervical carcinoma suspicion does not use contrast agents in tenik examines media either through intravenous, oral and anal sex.

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