

# Cases of Acute Abdomen Radiography With Perforation At General Hospital Haji Adam Malik

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**Abstract-** This examination is discussed on the level of success in doing Techniques Radiography Acute Abdomen By Case Perforations, data was obtained by firstly be the Formation of Shadows with menggunakan Computed Radiography, Aircraft X-ray used is a plane general X-ray unit, with the projection used is Antero-posterior supine, Antero-posterior erect, and Left Lateral Decubitus, on examination Abdomen Perforation Wide Field irradiation should be tailored to the size of the object to reduce the radiation scattering, and use the grid to absorb radiation hamburg and reduce the radiation dose, Placement Marker should be on the object to be photographed, These checks are carried out directly and relate to patients.

**Keywords :** Acute Abdomen, Perforation, Computed Radiography, Aircraft general X-ray unit.

## 1. Introduction

The abdomen is the largest cavity in the body that is oval shaped and extends from the diaphragm at the top until the abdomen, pelvic bawah. Rongga described in section into two parts, namely the upper abdomen that is larger and lower pelvic area is small. (Pearce, 2002). Acute abdomen is a term that indicates a state of emergency in the abdomen that can lead to death if not dealt with surgically. A state of emergency in the abdomen can be caused by bleeding, inflammation, perforation or obstruction of the digestive apparatus. In one study, data showed that the most common cause of acute abdomen is a non-specific abdominal pain (33.0%), followed by acute appendicitis (23.3%) and biliary colic (8.8%). Non-specific abdominal pain abundant in young women, whereas many acute appendicitis in young men, and biliary colic in older women. Nearly half of the cases of acute abdomen requiring operative action. In acute abdomen, whatever the cause, the main symptom is acute pain on a protruding abdomen. Sometimes the main cause is obvious as in the form of vulnus abdominis abdominal trauma penetrans but sometimes the diagnosis of acute abdomen can only be enforced after a physical examination as well as an additional form of pemeriksaan laboratorium examination and radiological examinations are complete and strict observation period. Patients acute abdomen may fall in life-threatening conditions. Therefore, early diagnosis is required in its handling, investigation and appropriate treatment. (Pearce, 2002). Acute abdomen is a sudden state in the abdominal cavity that requires actions that cause acute abdominal segera. Hal one of which is perforated (Rasad, 2005) Perforation of the leaks in the wall of the digestive tract organ located in the abdominal cavity from the innermost lining up the outermost layer so that the contents of the organ layer and in the region of the abdominal peritoneal cavity. In the event of acute perforation, almost always accompanied by severe abdominal pain, pain on palpation pressure and the abdominal muscles are very stiff or tense. To confirm the diagnosis as a doctor then performed radiographic examinations of patients with suspicion of acute abdominal perforation.

## 2. Research methods

### 2.1. Types of research

This study uses descriptive qualitative research.

Qualitative descriptive study is a method in researching the status of human groups, an object with the aim of making descriptive, picture or painting in a systematic, factual and accurate about the facts - facts or phenomena investigated.

## 2.2. Time And Place Research

### 1. Research time

The research was conducted on February 2016

### 2. Research Sites

Where the research was conducted in GENERAL HOSPITAL CENTER ADAM MALIK HAJI MEDAN

## 2.3. Data collection technique

At this research stage so that the data obtained data is valid and can be justified, it can be obtained through:

### 1) Interview

As for the data collection, the researchers conducted interviews with patients, their families, radiographer, radiology specialist doctors and orthopedic specialists (orthopedic surgery). It thus carried out with the aim to obtain broad and comprehensive data in accordance with current conditions.

### 2) Observation

Direct observation conducted by the researchers can be realized by recording the form of information related to the radiology room General Hospital Haji Adam Malik Medan. Also observe how acut abdominal radiographic examination techniques with kasusperforasi.Untuk that researchers can conduct direct observations in obtaining evidence terrkait the object of research.

## 2.4 Data analysis

Phase analyzing the data is the most important stage in the determination of a penelitian.Data were analyzed with the aim of simplifying the data into a form that is easier to read and interpret. In addition, data are deployed and exploited in order to be used to address the issue raised in the study. This analysis is based on field observations or experience based on data obtained from interviews and observations followed and the conclusions drawn.

## 3. Results and Discussion

### 1.1 Results

#### a. patient identification

In conducting an investigation needs to know the identity of the patient is clearly useful for identifying patients who are one with the other patients so there is no misunderstanding. The patient data is as follows:

Name : Mr. M  
Gender : Man  
Age : 2 years  
Inspection Date : February 2016  
Address : Rural Week Besitang

#### b. Examination procedure

##### 1. Letter photo request

Based on a written request to do a photo shoot on patients of physicians sender, the authors conducted a radiographic examination of acute abdominal perforation cases.

#### c. preparation of the patient

In the implementation of acute abdominal radiography with perforation cases do not do any special preparation, but was only given an explanation as may be necessary for the smooth running of the examination with good image results.

For example: the state of the correct patient position and given instructions to the patient not to move during expose ongoing.

#### d. Examination Preparation Tools

Aircraft general radiological

##### 1) Aircraft general x-ray

##### 2) Ascceories, in the form of a cassette containing the film size 30 cm x 40 cm.



Fig 1. Chest X Aircraft Adam Malik

the best brands : Siemens  
 flight Type : MXHF 1500 RF  
 best capacity : 630 mA  
 kV Range : Radiography 50 kV-60 Kv  
 flight services : Radiography and fluoroscopy  
 mA Range : 100 Ma

**e. Mechanical Inspection**

**Antero Posterior supine**

Objective Examination: To memperlihatkan the general state of the abdominal cavity, including show abnormalities.

Patient position: supine (lying flat) in atasmeja examination, midline of the body parallel to the center line of the examination table.

Position Object: Put the patient on the examination table so that the mid line of the body parallel to the mid-line of the examination table, place the object in the middle of the film, with an upper limit to the lower limit xypoideus processus symphysis pubis. Cassette in place horizontally using the grid, place both shoulders at the same transverse plane and both hands placed on the chest, instruct the patient hold breath during the expose.

Movies Focal Length: 90 cm

directions rays : Vertical, perpendicular to the cassette

rays center : Mid processus xypoideus and symphysis pubis.

cassette : 30cm x 40cm, wear grid

irradiation conditions : 70 kV, 30 mAs

criterion Pictures : Shows images of the abdominal cavity denganbatas upper and lower limits xypoideus processus symphysis pubis. Abdomen symmetrically left and right with the columna vertebral in the middle of the film, costae, pelvic, and hipjoint must be the same on both sides. Crista iliacca distance to the left and right side, tampakkedua diaphragm.

**Antero Posterior erect**

Purpose of inspection: To view a free air under the diaphragm

Patient Position: Stand upright facing the tube

Object Position: The patient stands facing the tube, so that the middle line of the body parallel to the standard line of the cassette, place the object in the middle of the film, with an upper limit to the lower limit xypoideus processus sympsis pubis.kaset in place horizontally using the grid, the hands are at your sides, intruksikan in patients hold the breath at the time of exposure.

Movies Focal Length: 90 cm

Directions Rays: Horizontal perpendicular movie

Rays center: Slightly above the umbilicus

cassette : 30cm x 40cm

irradiation conditions : 70 kV, 30 mAs

critierion Pictures : Shows images of the abdominal cavity dengandiafragma cuts, seem free air under the diaphragm. Fluid level is clearly visible.

**f. Results Ekpertise**

After examination and processing of the film, the writer describes the results of the evaluation of acute abdominal shooting with cases of perforation. X-rays are considered, among others:

Examination of the Abdomen photos Perforation AP Supine - AP erect

1. Right-fat Preperitoneal unclear
2. Contour both kidneys is unclear
3. Looking to the air in the pelvic cavity
4. In the upright position, the water fluid level (+), pneumositis intestinalis (+).



**Fig 2.** Criterion Pictures Antero Posterior supine

Information :

- a) The object is less symmetrical layout
- b) Free air seemed subdiafragma
- c) Looks fluid water level



**Fig 3.** Criterion Pictures Antero Posterior erect

Information :

- a. The object is less symmetrical layout.
- b. Looks subdiafragma free air conditioned.
- c. Looks water fluid level

**1.2 Discussion**

From the results of the examination of the abdomen perforation performed on Mr. .M in the General Hospital Haji Adam Malik Medan. Acute Abdomen Is A sudden circumstances in the abdominal cavity that require immediate action. To get a High-contrast images in Acute Abdomen

Radiography perforation using X-ray plane with a capacity of 300 mA or you can also choose the Aircraft General X-ray unit with selecting a large focus. In the perforation abdominal radiographs should use the Marker R for right and L for left made of lead or aluminum so as to provide information on the location of anatomical objects diperiksa. Pada abdominal radiography grid perforations used to obtain optimal picture.

## 2. Conclusion

In closing this paper, entitled "Acute Abdomen Radiography With Perforation case" is the authors conclude as follows:

- 1) Padaradiografi acute abdominal perforation cases, high-contrast images needed to improve the quality of X-rays.
- 2) To obtain optimal picture The use of the grid.
- 3) In acute abdominal radiographs with kasus perforasi, use youkan 3 projection which ap supine, erect ap, lld

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