

Abdominal Pain as Extrapulmonary Presentation of Pneumonia in an Adult: A Case Report

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Abstract- Pneumonia is considered as the main cause of abdominal pain in children whereas it presents mostly by respiratory symptoms in adults. Here we present a 71-year-old Iranian female who complained specifically of abdominal pain on admission to our emergency department. We had found nothing as an etiology in our first evaluations. After several hours chest pain was added to the symptoms and the following chest X-Ray showed a consolidation in the right lung base. She was treated by pneumonia antibiotic regimen and discharged after seven days in a good clinical condition. In conclusion, pneumonia should be considered as a differential diagnosis of abdominal pain in adults as well as in children.

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Introduction

Pneumonia can present with extrapulmonary symptoms. Abdominal pain is one of them occurring in eight percent of patients (1). In children the association of pneumonia and abdominal pain has been studied and revealed that pneumonia is the most frequent extra-abdominal cause of acute abdominal pain (2). However, this association is less studied in adults.

Here we describe an adult presented with abdominal pain as the only symptom at beginning in the emergency department and subsequently found to have a consolidation in the right lung representing pneumonia.

Case Report

A 71-year-old female presented with a severe one-day long abdominal pain in her right upper quadrant which was started gradually two days after coronary angiography and had been progressing since the beginning. The patient's medical history included systemic hypertension since several years ago which had never been controlled properly and coronary artery disease since last year. The patient was not a smoker and had no drug history before hospitalization.

On presentation at the emergency department, she specifically complained of a severe abdominal pain which was more prominent in her right upper quadrant.

Vital signs were: oral temperature 38.3° C, respiratory rate 20 breaths per minute, blood pressure 150/85 mmHg and pulse rate 104 beats per minute.

On examination, the only finding was tenderness in right abdominal quadrants, mainly the upper one, without rebound tenderness or guarding. She had no chest discomfort, no cough, no sputum and no dyspnea and her lungs were clear in auscultation.

The performed abdominal ultrasound showed no evidence of acute cholecystitis but a diffuse mild increase in liver parenchymal echogenicity concordant with mild fatty liver due to radiologist's idea. No other abnormality was seen. Surgery consult ruled out the surgical acute abdomen.

Till that point, we had found nothing as an etiology, so the patient was admitted to the department to be directly observed.

She was monitored and rechecked every hour. The abdominal discomfort had no resolving. After about three to four hours chest pain was added to her symptoms. Ischemic heart disease was our first diagnosis and Electrocardiography (ECG) was done, but it showed no abnormality. Then Chest X-Ray was performed, and a consolidation in the lower lobe of the right lung was detected (Figure 1). Chest CT scan also confirmed the consolidation (Figure 2).

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Figure 1. Chest X-Ray

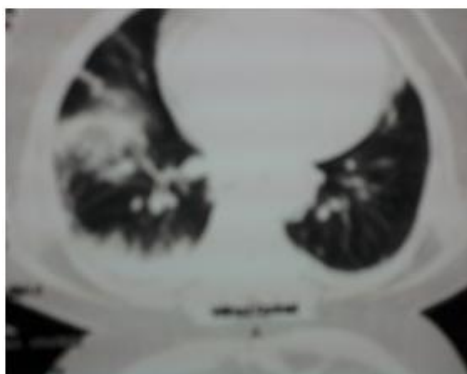


Figure 2. CT-Scan

The patient was admitted to the infectious ward. Since she had the history of hospitalization last week, Tazocine (Piperacillin-Tazobactam) and Vancomycin, as the proper antibiotic regimen for hospital-acquired pneumonia were intravenously administered.

After about one day there was a decrease in breath sounds in the base of the right lung.

At the third day, great improvement occurred in general condition, and the body temperature decreased to normal levels, but the abdominal pain resolving continued till the fifth day.

Among the laboratory examinations initially in the emergency room, the complete blood count showed: white blood cells 10900/ μ L (microliter) (76% neutrophils), hemoglobin 10.4 g/dl and platelet 164000/ μ L. As another marker of inflammation, C-reactive protein was mildly elevated on admission. All biochemical markers were within the normal levels: urea 24 mg/dL, creatinine 0.9 mg/dL, total bilirubin 1.2 mg/dL, direct bilirubin 0.3 mg/dL, alkaline phosphatase 229 IU/L, SGPT 20 IU/L, SGOT 18 IU/L, amylase 27 IU/L, LDH 462 IU/L, CPK 77 IU/L, blood sugar 108 mg/dl, sodium 138 mEq/L and potassium 4.1 mEq/L.

The complete blood count of the second day of admission showed: white blood cells 11600/ μ L, hemoglobin 10.6 g/dl and platelet 236000/ μ L.

The patient was discharged from the hospital after seven days in a good clinical condition and without abdominal pain. Her laboratory results in the day before discharge were: white blood cells 6200/ μ L, hemoglobin 10.7 g/dl, platelet 203000/ μ L and C-reactive protein within the normal range.

Discussion

Typical signs and symptoms of pneumonia are a cough, alterations in color of respiratory secretions, dyspnea, chest discomfort, fever or hypothermia and sweating but it may present with nonspecific symptoms like fatigue, myalgia, anorexia, and headache, as well as abdominal pain (3).

Abdominal pain occurs in eight percent of pneumonia and in most cases it makes little diagnostic difficulty since it is easily recognized as functional dyspepsia resulting from toxemia.

However, abdominal pain and its associated symptoms may be so violent to overshadow the respiratory symptoms and focuses attention on the digestive tract. In these cases, the digestive symptoms may be so pronounced and sharply localized that simulate acute surgical crises of the abdomen as cholecystitis, appendicitis, peptic ulcer, obstruction, etc. (1).

Although pneumonia is considered as the most frequent extra-abdominal cause of acute abdominal pain in children but the lack of association of pneumonia with abdominal pain in adults results in the delay in the diagnosis and administration of appropriate treatment (2,4).

In our case, the same problem happened. Since she had severe pain in the right quadrant of the abdomen at emergency department, all attentions were focused on the gastrointestinal tract and its appendices.

In another scenario, she had the history of coronary angiography in last three days and we could at first think of its complications such as emboli in digestive tract arteries for example in hepatobiliary branches.

We can say that fortunately, she presented chest pain not too late to be treated properly, but the overall conclusion is that pneumonia must be taken into account in the differential diagnosis of abdominal pain in adults as well as in children to prevent unnecessary diagnostic work up and delay in therapeutic interventions.

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