

## A 42-Year-Old Woman with Respiratory Distress in the ED: A Case Report

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### Abstract

Increased respiratory distress is seen frequently in the Emergency Department. There can be many different causes, including infection, non-infectious inflammation, malignancy and a side effect of various medications.

We present a case of a 42-year-old woman who presented to the ED with respiratory distress. Several weeks previously the patient had suffered from dry cough, progressive weakness and weight loss. Because of rapid deterioration in her condition, with evidence of bilateral pulmonary infiltrates and low saturation, in addition to abdominal discomfort, the patient was hospitalized.

An uncommon diagnosis of signet-ring cell carcinoma was found, with a grave prognosis.

**Keywords:** *Respiratory Distress; Emergency Department*

### Introduction

The case described below presented as acute respiratory distress with the development of multi-organ failure within a short period of time. Clarification for such a patient requires many resources and even the performance of invasive procedures, such as bronchoscopy, open abdominal exploration with relevant biopsies, etc.

### Aim of the Study

This case of increasing respiratory distress, illustrates a dramatic presentation of gastric malignancy; specifically metastatic signet-ring cell carcinoma. The study's aim is to point out that this differential diagnosis should be taken into account by Emergency Medicine physicians.

### Case Report

A usually healthy 42-year-old woman, resident in Israel for the previous 5 years, worked in an office.

During the past two weeks, previous to her current symptoms, she felt a general weakness, had lost weight, and had a dry cough. The day before her admission she experienced increasing shortness of breath accompanied by hemoptysis.

Clinical examination of the patient revealed the following: alert patient in respiratory distress, blood pressure 132/77 MmHg., 103/min regular pulse, temperature PR37.50c.

She was extremely thin and was very pale with no cyanosis and had decreased breathing sounds with crepitation. Her blood oxygen saturation was 90% in the room's air and her ECG-showed sinus tachycardia, with no evidence of ischemia.

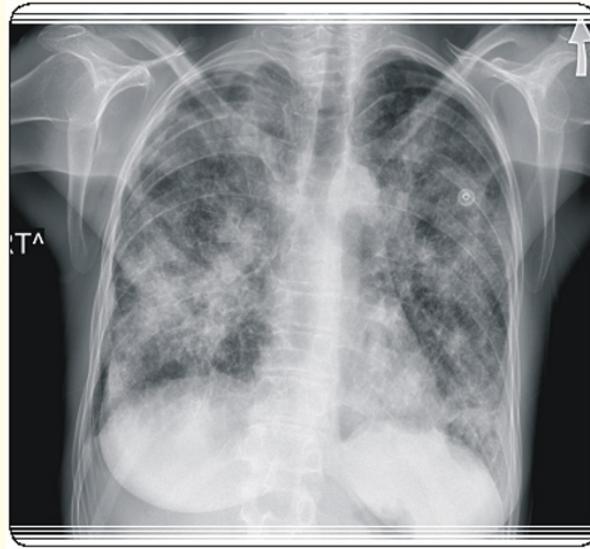


Figure 1

Her physical examination:

- The patient was in respiratory distress.
- Blood saturation 88% (with oxygen) Lungs - decreased breathing sounds with crepitation Abdomen- mild diffuse tenderness with no peritoneal signs.
- Impression of a mass in the right groin.
- Lower Limbs - non-pitting edema along right leg.
- PR - no evidence of melena or palpable mass.

Because of the clinical results and the physical examination findings, a broad differential diagnosis was made, which included:

**Differential diagnosis**

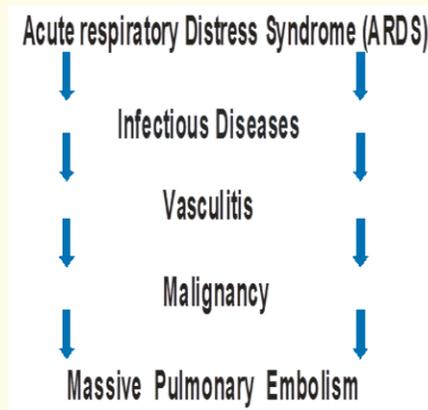


Figure 2

Following the clinical and physical examination, the following laboratory tests were performed:

- HB g/dl- 15.6
- WBC/ml- 21000
- Neut- 88%
- PLT- 369
- SRP- 75.7
- D-dimer- 5.7
- Arterial blood gases (room air): PH-7.4, PO<sub>2</sub> - 88 mmHg, PCO<sub>2</sub>-30mmHg, HCO<sub>3</sub>-24 mmol/dl, SAT-88%
- HBV: Negative
- HCV: Negative
- HIV: Negative
- EBV IgM: Negative
- CMV IgM: Negative
- *Coxiella burnetii* screen test: Negative
- Brucella Ab screen test: Negative
- Blood cultures: Negative
- Extensive rheumatologic screen panel was negative

The patient required the following treatment:

- Mechanical ventilation with PEEP- ARDS?!
- Wide-spectrum antibiotics IV- Sepsis-pneumonia?!
- Low molecular weight heparin (LMWH)- DVT and possible pulmonary embolism?!

Following deliberation, and in order to proceed with a diagnosis, a CTA test was performed and the results were as follows:

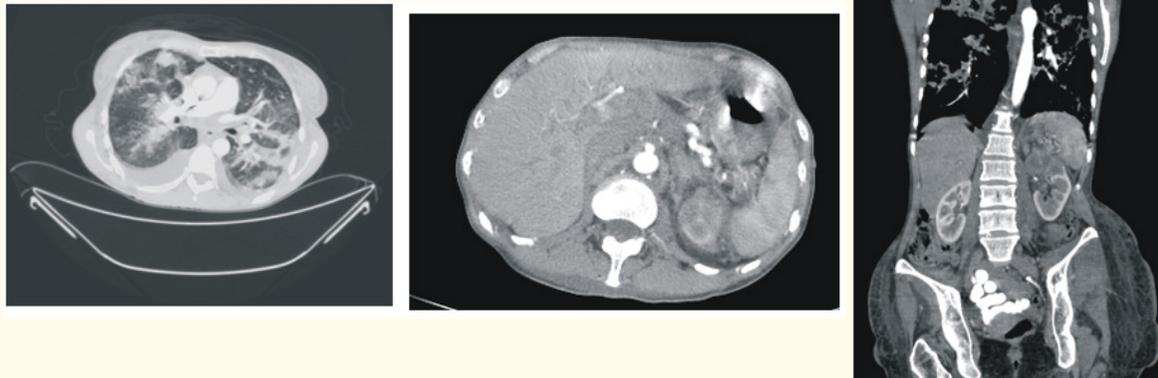


Figure 3

Results of CTA:

- Pathological enlarged lymph nodes and fat infiltration at the mesenteric root
- Mild retroperitoneal adenopathy
- Left kidney infiltration

After receiving imaging results, a decision needed to be made regarding how to proceed with diagnosis, when the options were as follows:

1. Bronchoscopy with bronchial lavage
2. Cultures and cytology
3. PCR to -TB and -PCP

Due to further deterioration on the second day of the patient's hospitalization, laparoscopy was performed and several enlarged lymph nodes were excised around the stomach. On the third day of hospitalization there was additional further deterioration in the patient's condition with multi-organ failure which led to the patient's death.

### Discussion

Signet-cell carcinoma can present a diagnostic challenge for the physician. This is because it is usually found in a younger population and because it is usually diagnosed at an advanced stage and with a poor prognosis.

A review of the literature reveals that:

- Signet ring-cell carcinoma is rare and accounts for 1 - 2% of all colorectal cancers.
- The disease attacks young women.
- There are aggressive variants, with extensive intramural spread, and peritoneal carcinomatosis
- The prognosis is worse when:
  - 93% stage III or IV ds at diagnosis.
  - 64% had peritoneal spread.

According to biopsy findings, we have determined that our patient suffered from metastatic signet ring-cell carcinoma with multi-organ failure that developed quickly and caused her rapid death [1-10].

### Conclusion

It is important to note that malignancies, including the one found in our case, can present with multi-organ failure. The emergency physician must be aware of this possibility, which may require a multi-disciplinary approach.

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