Internet Journal of Allied Health Sciences and Practice

Volume 21 | Number 1 Article 19

January 2023

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Abstract

The following is a case presentation of a 31-year-old healthy female that presented to the emergency department with right anterior flank pain for one day. The day before she was blow drying her hair while leaning forward, and when she flicked her hair back with forceful extension of her torso, she felt the right flank pain immediately. The patient took over-the-counter NSAIDs that did not relieve her symptoms which prompted her visit to the emergency department. Upon arrival to the emergency department, she was examined in the triage area. At the initial exam of the patient, there was consideration of all differential diagnoses which included a mass, but based on her history of the pain being caused by her traumatic event, a muscle strain to the area was much higher on the list of potential diagnoses. However, a routine chest radiograph was ordered, and it came back demonstrating a right sided mass.

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IJAHSP™
The Internet Journal of Allied Health Sciences and Practice
Dedicated to allied health professional practice and education
Vol. 21 No. 1 ISSN 1540-580X

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ABSTRACT

The following is a case presentation of a 31-year-old healthy female that presented to the emergency department with right anterior flank pain for one day. The day before she was blow drying her hair while leaning forward, and when she flicked her hair back with forceful extension of her torso, she felt the right flank pain immediately. The patient took over-the-counter NSAIDs that did not relieve her symptoms which prompted her visit to the emergency department. Upon arrival to the emergency department, she was examined in the triage area. At the initial exam of the patient, there was consideration of all differential diagnoses which included a mass, but based on her history of the pain being caused by her traumatic event, a muscle strain to the area was much higher on the list of potential diagnoses. However, a routine chest radiograph was ordered, and it came back demonstrating a right sided mass.

Keywords: pericardial cyst, chest mass, cardiac mass

CASE PRESENTATION

The following is a case presentation of a 31-year-old healthy female that presented to the emergency department with right anterior flank pain for one day. The day before she was blow drying her hair while leaning forward, and when she flicked her hair back with forceful extension of her torso, she felt the right flank pain immediately. The patient took over the counter NSAIDs that did not relieve her symptoms which prompted her visit to the emergency department. The patient denied shortness of breath, chest pain, palpitations, and cough. The patient denied any previous medical conditions. She was not on any regular medications, no allergies, and no past surgeries. She denied smoking and illicit drug use.

Upon arrival to the emergency department, she was examined in the triage area and a chest radiograph was ordered. At this point in time, there was consideration of all differential diagnoses which included a mass, but based on her history of the pain being caused by her traumatic event, a muscle strain to the area was considered as the primary diagnosis.

Blood examination revealed normal CBC, CMP, UA with only elevated ESR at 27 mm/hr. Vital signs were as follows: weight = 62kg; height = 5'7"; RR = 16; HR = 76; temp = 36.5°C.

The patient's chest radiograph demonstrated a large mediastinal mass occupying the right middle and lower region of the chest as seen in Figure 1. Further workup consisted of labs, CT scan and MRI scan of the chest in preparation for open surgical excision.

The CT of the thorax demonstrated a smooth ovoid mass in the right anterior and lower chest abutting the chest wall. The MRI demonstrated a large cystic mass 10 x 10 x 8cm in the right anterior hemithorax with no characteristics of a vascular lesion or a lipoma with direct contact with the pericardium and consistent with a pericardial cyst.

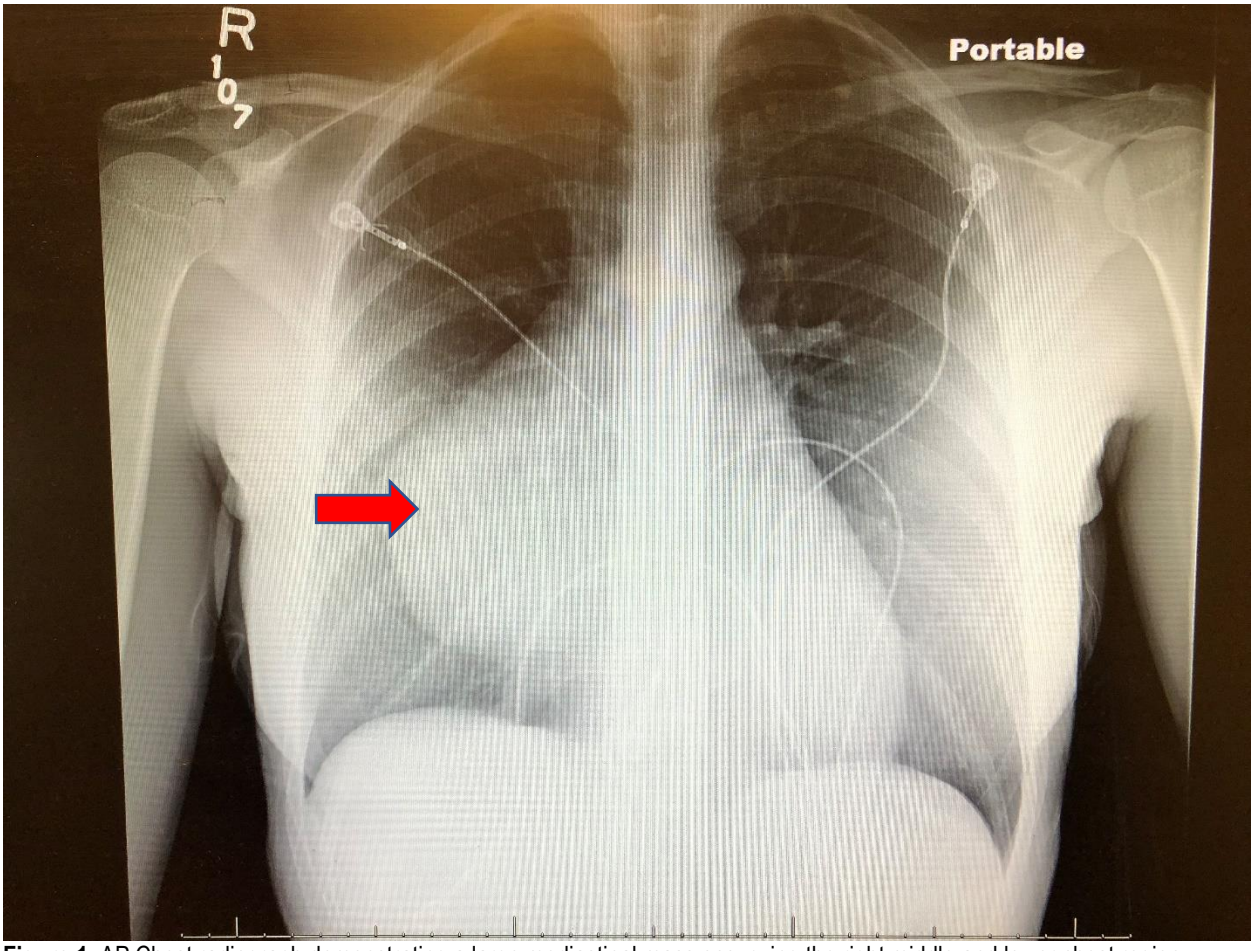

Figure 1. AP Chest radiograph demonstrating a large mediastinal mass occupying the right middle and lower chest region

Treatment was centered around surgical excision and sent to pathology for confirmation. Surgical removal of the cyst resulted in complete resolution of symptoms and further potential complications that could have resulted in obstruction of the superior vena cava[1] (see Figure 2). In some cases, pericardial cysts can resolve spontaneously, but it is not uncommon to attempt aspiration or surgical resection depending on location and size of the cyst.[2] In this case, surgical management was recommended based on the size and location, and the benefits and risks were discussed with the patient in a team management approach.

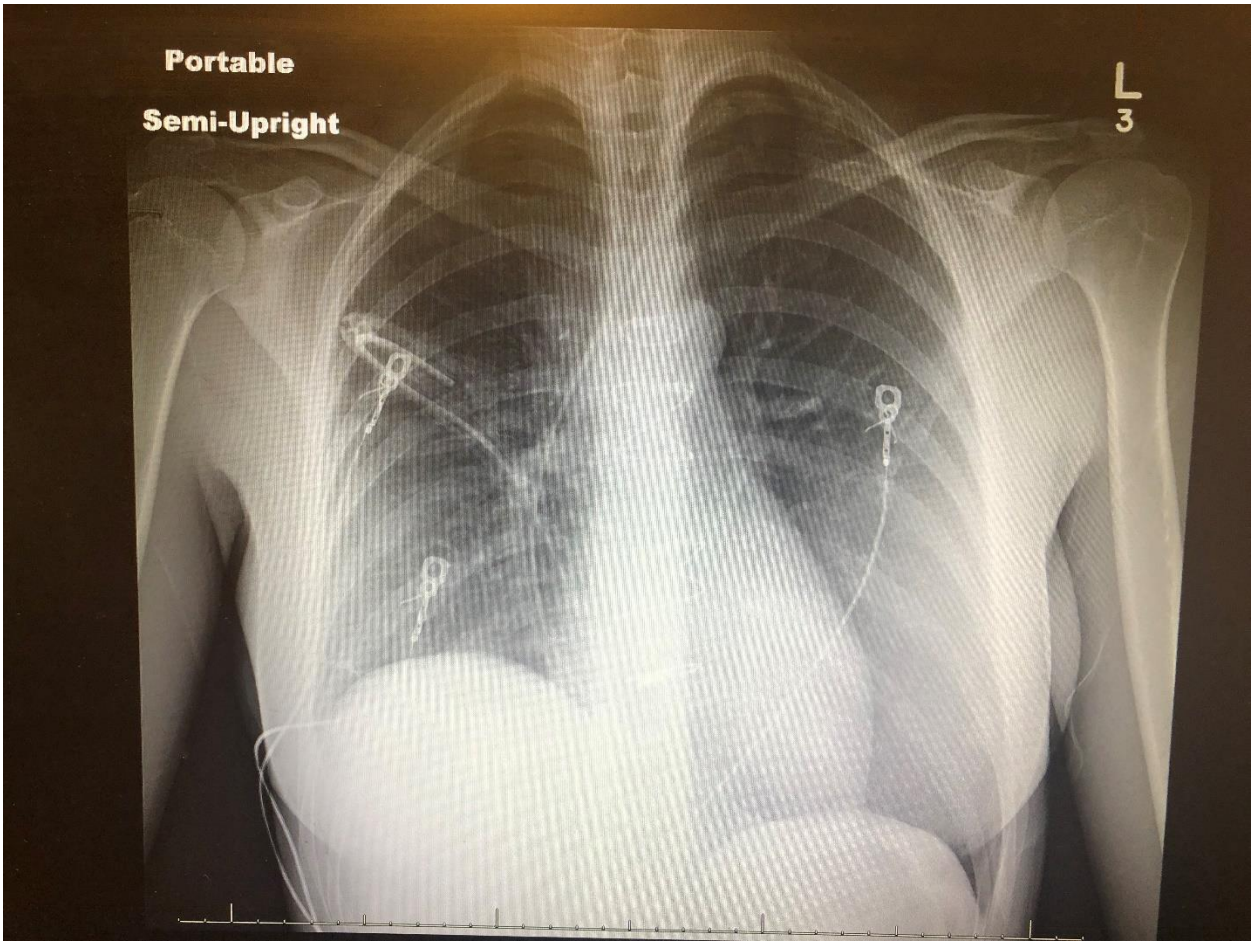

Figure 2. AP Chest Radiograph demonstrating a successful excision of the mediastinal mass with surgical wires placed

RESULTS

Patient had follow-up visits with a complete return to all activities and no adverse residual effects.

DISCUSSION

A simple chest radiograph was the key in making the diagnosis with this patient. Although her pain may have persisted leading to further workup in the future, there was no delay once she became symptomatic. Pericardial cysts are the third most common type of mediastinal mass and often are found incidentally by chest radiograph which then initiates further workup of the mass.[3] Pericardial cysts are benign mesothelial cysts and often found to be fused to the pericardial sac.[1] This case demonstrates the importance of considering all differential diagnoses with a healthy patient and flank pain following trauma.

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