

A Case of Angiosarcoma in a Complex Parturient

Wang A, Martin E, and Weinstein L



Introduction

- Angiosarcoma is a rare and aggressive endothelial cell tumor:
 - It has the propensity for local invasion, recurrence, and metastases
 - 40-50% will have metastatic disease at the time of diagnosis
 - Risk factors:
 - Elderly
 - Chronic lymphedema, radiation exposure, environmental carcinogens, and certain genetic disorders
- Locations:
 - Common locations:
 - Head and neck (60% of all angiosarcomas)
 - Breast usually after post-radiation therapy
 - Atypical locations
 - Primary brain angiosarcoma
 - Cardiac and pulmonary artery angiosarcoma
 - Most common malignant neoplasm of the heart accounting for 10-15% of cardiac malignancies
 - Hepatic angiosarcoma
- Nonspecific symptomatically:
 - Cutaneous lesions
 - Red-bluish nodules, ulcerations, and bleeding
- Diagnosis/ prognosis
 - General poor outcomes with survival ranging from 6-16 months after diagnosis

Issue:

- The current understanding of angiosarcoma affecting a parturient is limited and there has only been a few case reports.
- All reports lead to a peripartum maternal demise

Aim:

- To contribute another case of angiosarcoma in a complex parturient
- To enhance our understanding and to recognize features of angiosarcoma

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Case:

- 38 yrs. old G1P0 parturient at 23 weeks presented for worsening dyspnea, orthopnea, and chest pain
- PMH: Recent Covid 19 infection, pacemaker dependent 3rd degree AV block, supraventricular tachycardia and chronic thromboembolic pulmonary disease (CTEPD) with two balloon pulmonary angioplasty.
- Initial TTE demonstrated a large circumferential pericardial effusion and an emergent pericardiocentesis with pericardial drain was placed with a transient improvement of her symptoms
- Her clinical course worsened with new productive cough and increased oxygen requirement.
 - A CTPA demonstrated new increase in clot burden to the right pulmonary artery, complete thrombosis of the left brachiocephalic vein, and SVC in the setting of therapeutic anticoagulation
 - Worsening multi-focal nodular opacities which have significantly progressed from a prior CT a week prior.
- A repeated transthoracic echocardiogram demonstrated worsening myocardial function suggestive of peripartum cardiomyopathy
 - Cardiac catheterization was performed:
 - No significant coronary disease
 - Unchanged mild elevated PA pressures (24/16 mmHg), RV (29/8 mmHg), and RA (8 mmHg)
- Interdisciplinary meeting occurred to discuss the management of this complex parturient
 - Major concern included:
 - Increase in thrombotic disease in the setting of therapeutic anticoagulation
 - New onset of peripartum cardiomyopathy
 - Deteriorating maternal status with increase oxygen requirement
 - Scheduled to undergo a cesarean delivery (CD) at 32 weeks and 0 days.
 - However, due to worsening maternal cardiac function and new onset of cardiogenic shock requiring vasopressors. An emergent CD occurred at 31 weeks and 6 days



Fig 1: CT chest in earlier hospital course

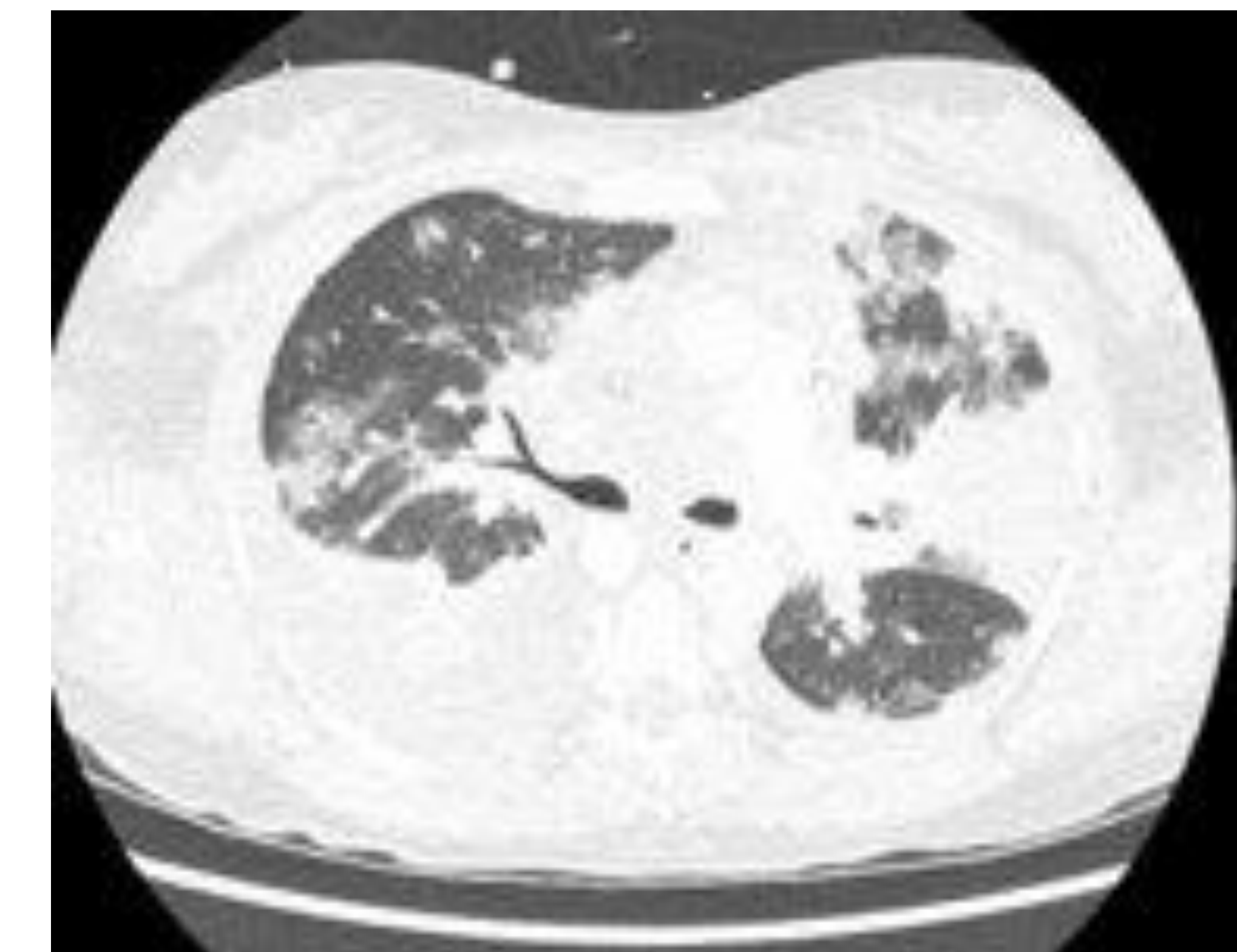


Fig 2: CTPA 5 days after the CT from above

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Intraoperative course:

- ECMO cannulation occurred prior to induction of anesthesia in anticipation of cardiac decompensation
- A preinduction arterial line was placed, general anesthesia with an endotracheal tube was placed.
 - Neuraxial anesthesia was deferred due to severe maternal orthopnea and anticoagulation status
- A CD occurred with the delivery of the newborn with APGAR 1 (1 minute) and 4 (5 minutes)
- However, maternal vasopressor requirement increased
 - Intraoperative TEE confirmed for worsening cardiomyopathy
- The parturient was transported from the operating room to the ICU intubated and sedated

Postoperative course

- Extubated on post-op day 1
- Increasing lactate levels, worsening cardiac function, and increasing pressor requirement
 - Initiation of VA ECMO occurred several days afterwards
- A repeated TTE was concerning for constrictive pericarditis
- She was taken back to the OR with cardiothoracic surgery for an exploratory thoracotomy and pericardiectomy.
 - An extensive intracardiac and extracardiac tumor burden was discovered
 - Multiple biopsies were taken
 - The surgery was complicated with significant hemorrhage requiring massive transfusion protocol. The patient was brought back to the ICU and transitioned to comfort care. She passed shortly after with family at the bedside.
- Her biopsies returned for poorly differentiated angiosarcoma

Highlights:

- Highlight the importance of an interdisciplinary approach of the management of a complex parturient
- Angiosarcoma is a rare and aggressive tumor that requires a high index of suspicion

References:

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