

Anesthetic Management of A Parturient With a Mediastinal Tumor after Intrapartum Chemotherapy

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INTRODUCTION

- An anterior mediastinal mass poses unique anesthetic challenges dependent on the size of the mass and its impact on surrounding structures such as the heart, airway, and major blood vessels.
- Diagnosis and management are especially difficult in pregnant women as the physiologic changes of pregnancy can mimic or mask the clinical effects of the mass.
- Mediastinal masses can present with cough, dyspnea, orthopnea, chest pain, dysphagia, fevers, and weight loss.
- Due to the risk of airway and cardiovascular collapse, precautions to avoid general anesthesia should be taken when reasonably possible.

CASE DESCRIPTION

- A 31-year-old female G5P1 at 16 weeks gestation presented with fatigue and atypical prenatal screening results concerning for maternal malignancy.
- Past medical history included obesity, gestational diabetes, and prior tobacco use (8 pack-year-history).
- Workup revealed advanced stage Hodgkin's lymphoma with a 7.5 x 9.3 x 10.1 cm left upper anterior mediastinal mass and hepatosplenomegaly.
- Multidisciplinary care was initiated with maternal-fetal medicine and hematology/oncology.
- She underwent two cycles of chemotherapy (ABVD – adriamycin, bleomycin, vinblastine, dacarbazine) during her third trimester with marked reduction of mass size to 6.2 x 4.0 x 8.0 cm.

MANAGEMENT

- On pre-operative evaluation, the patient denied any symptoms of respiratory distress when supine or in any other position.
- Anesthetic plan for delivery included combined spinal epidural with general anesthesia backup. Difficult airway equipment, including fiberoptic bronchoscopy, was available and communication with cardiothoracic surgery was established in case for backup.
- At 36 weeks gestation, the patient received combined spinal epidural anesthesia with 1.6cc of 0.75% bupivacaine in 8.25% dextrose, morphine 0.15mg, and fentanyl 10mcg to a T4 level and had an uneventful cesarean delivery.

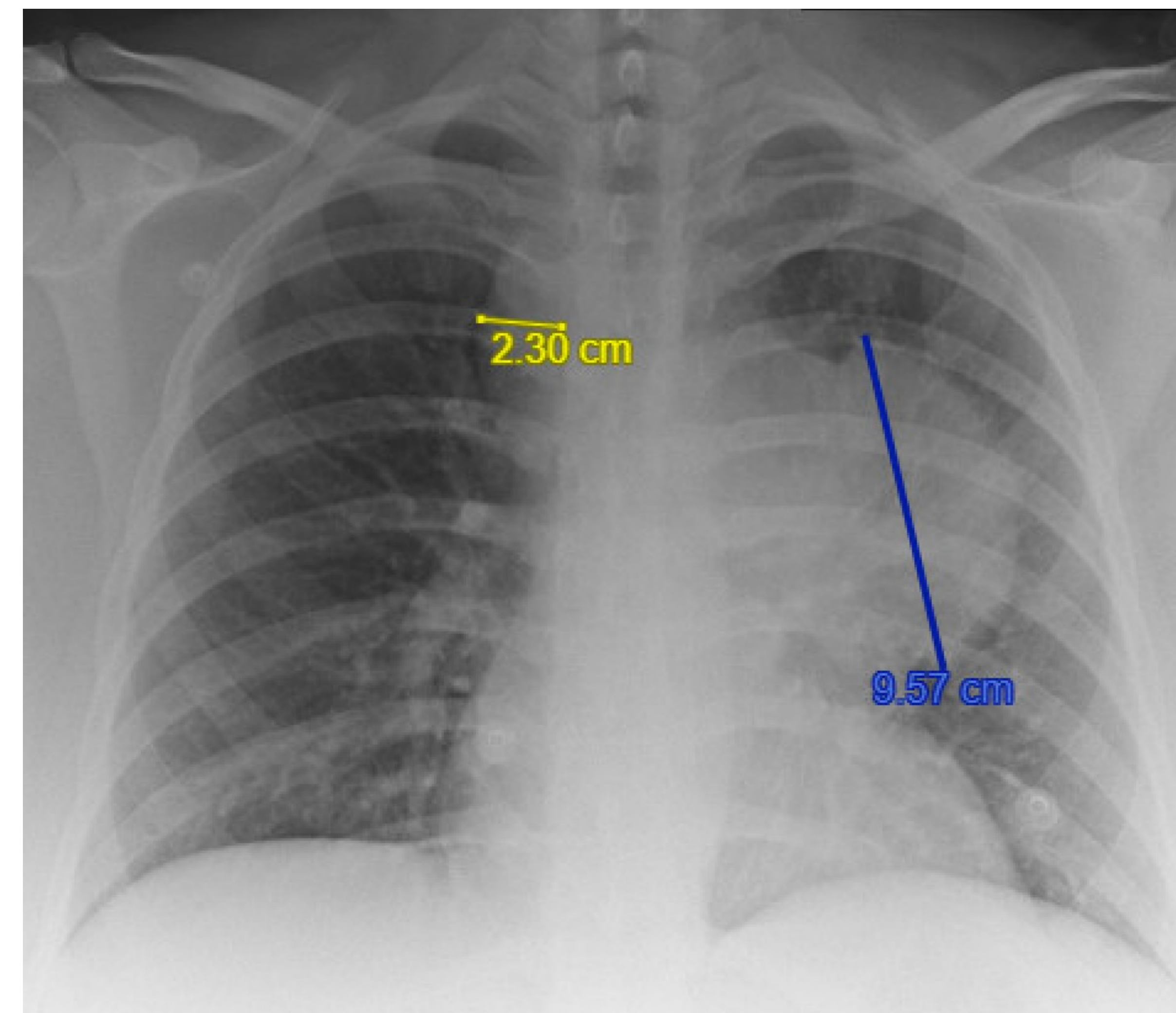


Figure 1. Patient's chest x-ray prior to initiation of chemotherapy, depicting an anterior mediastinal mass in the left upper chest.

DISCUSSION

- A comprehensive multidisciplinary plan including maternal-fetal medicine, hematology/oncology, cardiothoracic surgery, neonatology, and anesthesiology should be implemented to optimize pregnant patients with mediastinal lymphomas for delivery of the fetus.
- Chemotherapy, specifically the ABVD regimen, may be administered for the treatment of Hodgkin's lymphoma during the second and third trimesters of pregnancy with minimal complications to the mother and fetus.
- Patients with mediastinal masses should be examined for respiratory compromise with postural variation, as that may be an indicator of airway compression.
- General anesthesia for patients should be avoided due to the risk of airway and cardiovascular collapse.
- Combined spinal epidural anesthesia with maintenance of spontaneous ventilation can be a safe alternative to general anesthesia for cesarean delivery in patients with anterior mediastinal masses.

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