CHEST

A Middle-Aged Man With Hypoxia After Cranial Metastasectomy

Kristen B. Dixon, PAC, MSHS, MPH; Laura S. Johnson, MD, FCCP; and Nimesh S. Shah, MD

VIDEO

CHEST 2015; 147(2):e34-e37

A middle-aged man with 36 h of vertigo, nausea, and vomiting arrived at an outside hospital for evaluation. His medical history was notable for squamous cell carcinoma of the tongue and esophagus treated with chemotherapy, radiation, and surgical resection 7 years prior. His workup revealed a right-sided cerebellar mass with surrounding edema and mass effect. The patient was transferred to our institution for neurosurgical intervention. Preoperatively, his nausea and vomiting were recalcitrant to therapy with corticosteroids and hyperosmolar therapy. The remainder of his preoperative evaluation was unexceptional, including normal chest imaging and hemodynamic and respiratory parameters on ambient air.

Suboccipital craniectomy with metastatic mass resection was performed without complication, but the patient continued to have intermittent nausea and vomiting. Two days later, gradual hypoxia developed, necessitating a 50% Venturi mask to maintain oxygen saturation $>$ 95%. He was without fever, and his WBC count was $15.3 \times 10^3/\mu L$. Chest radiography revealed a new radioopaque density in the right-side hemithorax (Fig 1).

On the same evening, the intensivists evaluated the patient for increasing tachypnea and hypoxia. The patient exhibited moderately labored breathing but was conversant and had an oxygen saturation of 94% on nonrebreather mask. The emesis basin was filled with clear, nonbloody vomit. His respiration was 25/min with decreased breath sounds on auscultation of the right-side lung base. The patient's heart rate was 118/min with strong pulses in the extremities, and he was warm to the touch. A bedside ultrasound was performed to investigate the etiology of the patient's hypoxia (Videos 1, 2).

Manuscript received April 1, 2014; revision accepted July 16, 2014.

AFFILIATIONS: From Surgical Critical Care Services (Ms Dixon and Drs Johnson and Shah) and Burn and Trauma Services (Dr Johnson), MedStar Washington Hospital Center, Washington, DC.

CORRESPONDENCE TO: Nimesh S. Shah, MD, Surgical Critical Care Services, MedStar Washington Hospital Center, 110 Irving St, NW, Washington, DC 20010; e-mail: Nimesh.Shah@medstar.net

DOI: 10.1378/chest.14-0799

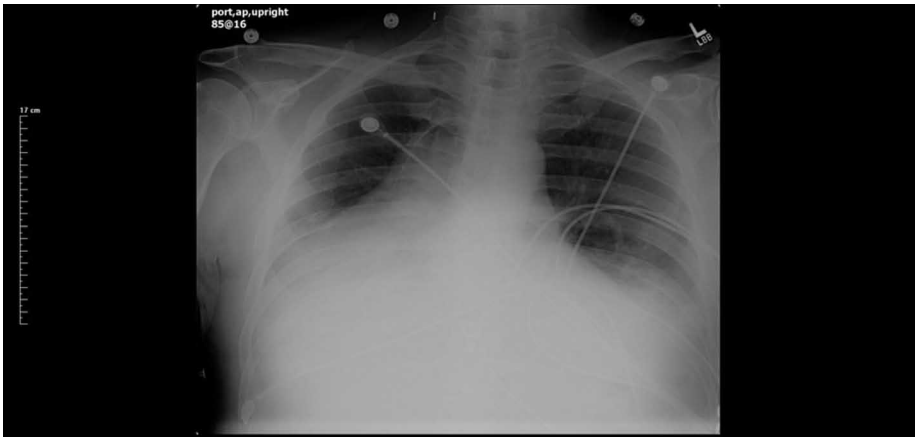

Figure 1 – *Chest radiograph showing opacity in the right-side hemithorax.*

Based on the clinical scenario and ultrasound images, what would be the next step in evaluating this patient's hypoxia?