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Images in Emergency Medicine : CSF Hydrothorax

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A 30-year-old African-American female presented to the Emergency Department with a complaint of a cough for two months. The patient had a history of developmental delay, seizure disorder and ventriculo-peritoneal (VP) shunt. Physical exam was significant for a blood pressure at 101/71 mm Hg, heart rate at 111 beats per minute, respiratory rate at 18 breaths per minute and temperature of 98° F. She was a well-developed female in no apparent distress with a shunt palpable on the left side of the skull and a normal lung exam, except for slightly decreased breath sounds in the left base. During her workup, a chest x-ray demonstrated a large left-sided pleural effusion (Figure 1). The patient received a thoracentesis and the fluid was initially thought to be a transudate.

Subsequent CT scan of the chest revealed the tip of the VP shunt in the left chest adjacent to the aorta resulting in a CSF hydrothorax (Figure 2). Thoracic migration of peritoneal catheters causing hydrothorax is a rare complication of VP shunts.¹ In some cases the migration of the catheter results in malfunction and neurologic findings, which was not the case in our patient.²

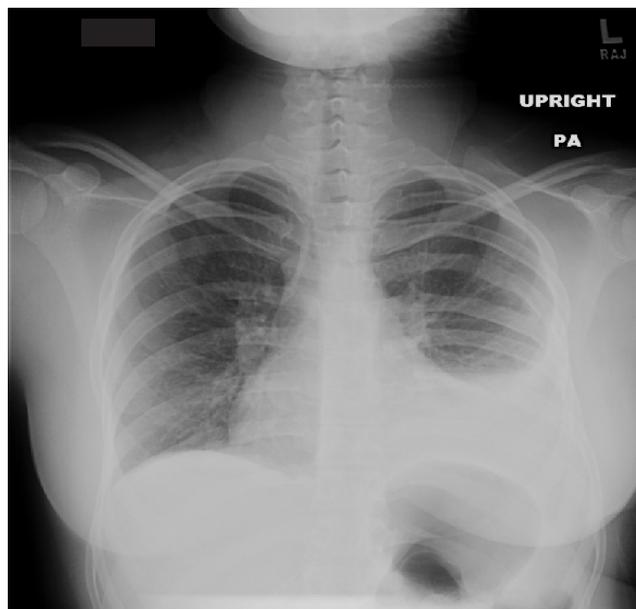


Figure 1. Chest x-ray demonstrating a left-sided pleural effusion.

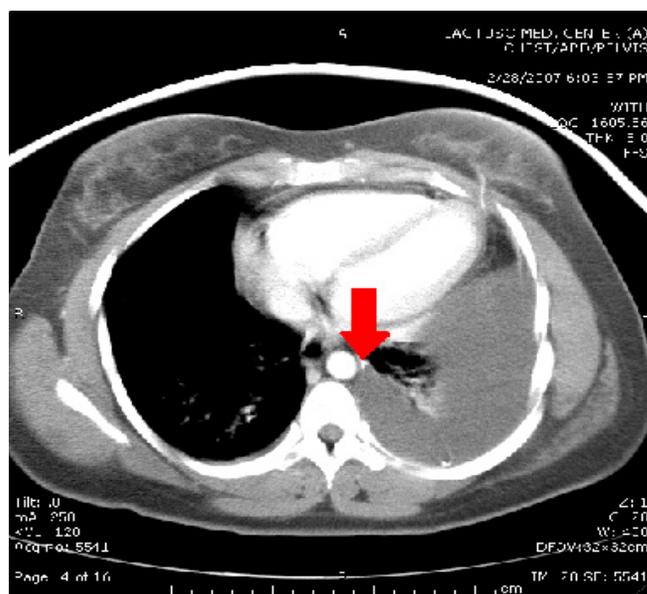


Figure 2. Computed tomography chest demonstrating the tip of the ventriculo-peritoneal shunt catheter adjacent to the aorta.

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