A 6-MONTH-OLD BOY presented with a history of raspy breathing that disappeared when held upright. He had no feeding problems. On physical examination, a mild expiratory wheeze and a grade 3/4 systolic heart murmur were heard at his back. A chest radiograph was obtained (Figure 1).

The infant was born at 31 weeks' gestational age weighing 1213 g. He required a short course of respiratory assistance, and an umbilical artery catheter was used for the first 5 days. The hospital course was complicated on day 5 by *Staphylococcus aureus* sepsis and osteomyelitis of the left femur, ischium, and tibia. Purulent fluid was present at the umbilical stump. An echocardiogram showed no abnormalities. Further imaging evaluation included a contrast-enhanced computed tomographic scan (Figure 2) and a magnetic resonance image of the thorax (Figure 3).

From the Departments of Diagnostic Radiology (Dr D. Long) and Neonatology (Dr Seguin), The Ohio State University Medical Center, and the Department of Diagnostic Radiology (Dr F. Long), Columbus Childrens Hospital, Columbus, Ohio.
Thoracic Aortic Aneurysm as a Late Complication of an Umbilical Arterial Catheter

Thoracic aortic aneurysm is an unusual complication of umbilical artery catheterization. Although umbilical artery catheters have been used since 1961, the first case report of an associated aneurysm was in 1976. From subsequent case reports, a common identified cause is sepsis, usually S. aureus, as in this case. The association of sepsis with aneurysm formation suggests seeding of the aortic wall secondary to localized trauma at the tip of the umbilical artery catheter.

The differential diagnosis of the mediastinal mass found on chest radiograph in this child includes neurogenic tumor, esophageal or bronchogenic duplication cyst, or round pneumonia. A murmur, best heard at the back, should raise suspicion of an aortic aneurysm. This lesion displaced the left main bronchus, producing the patient’s history of raspy breathing when supine. An esophageal duplication cyst was considered, and computed tomography was performed. Magnetic resonance imaging would have been a better initial study to evaluate for intraspinal extent of a neurogenic tumor.

Findings from computed tomographic scan included an aneurysm with contrast enhancement of the lesion contiguous with the lumen of the thoracic aorta. The magnetic resonance study was completed while the child was sedated to better depict the extent and neck of the aneurysm. This patient underwent successful aortic graft repair. Findings from histopathologic examination revealed that the lesion was not a true pseudoaneurysm, but the thinned aortic wall was fibrotic without acute inflammation.

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Corresponding author: Daniel E. Long, MD, The Ohio State University Medical Center, Department of Diagnostic Radiology, 450 W 10th Ave, No. 255, Columbus, OH 43210.

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