Images in cardio-thoracic surgery

Spontaneous rupture of ductus arteriosus

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A chest radiography in a 63-year-old woman with sudden-onset back pain showed widened mediastinum (Fig. 1). Multidetector-row computed tomographic (MDCT) images demonstrated extravasation and leakage of the contrast media (Fig. 2). The patient underwent successful total arch replacement through median sternotomy. Neither ductal aneurysm nor evidence of inflammation and/or infection was seen.

Fig. 1. A posteroanterior chest roentgenogram showed abnormally widened left upper mediastinum with infiltrating shadow in the left lung as well as left pleural effusion.

Fig. 2. (A) Multi-slice computed tomography images showed extravasation of the contrast media into the mediastinum with surrounding hematoma, not only in the mediastinum but also into the left lung tissue. (B) Three dimensional volume-rendering images from the computed tomography scan clearly demonstrated leakage of the contrast media at the bifurcation of the ductus arteriosus and lesser curvature of the aortic arch. At operation, rupture of ductus arteriosus at the bifurcated point from aorta without any ductal aneurysm was seen. Biopsy specimens did not show any evidence of inflammation and/or infection.

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