JBR–BTR, 2012, 95: 146-147.

HUGE THYMIC CYST IN AN ADULT

N. Karabulut, D. Herek, Ş. Çalışkan[1]

Key-word: Thymus, neoplasms

Background: A 28-year-old male smoker (6 pack-years) presented with complaints of dyspnea, cough and chest pain. Physical examination was unremarkable except for decreased respiratory sounds within anterior mid-lung zones bilaterally. Laboratory findings were within normal limits.

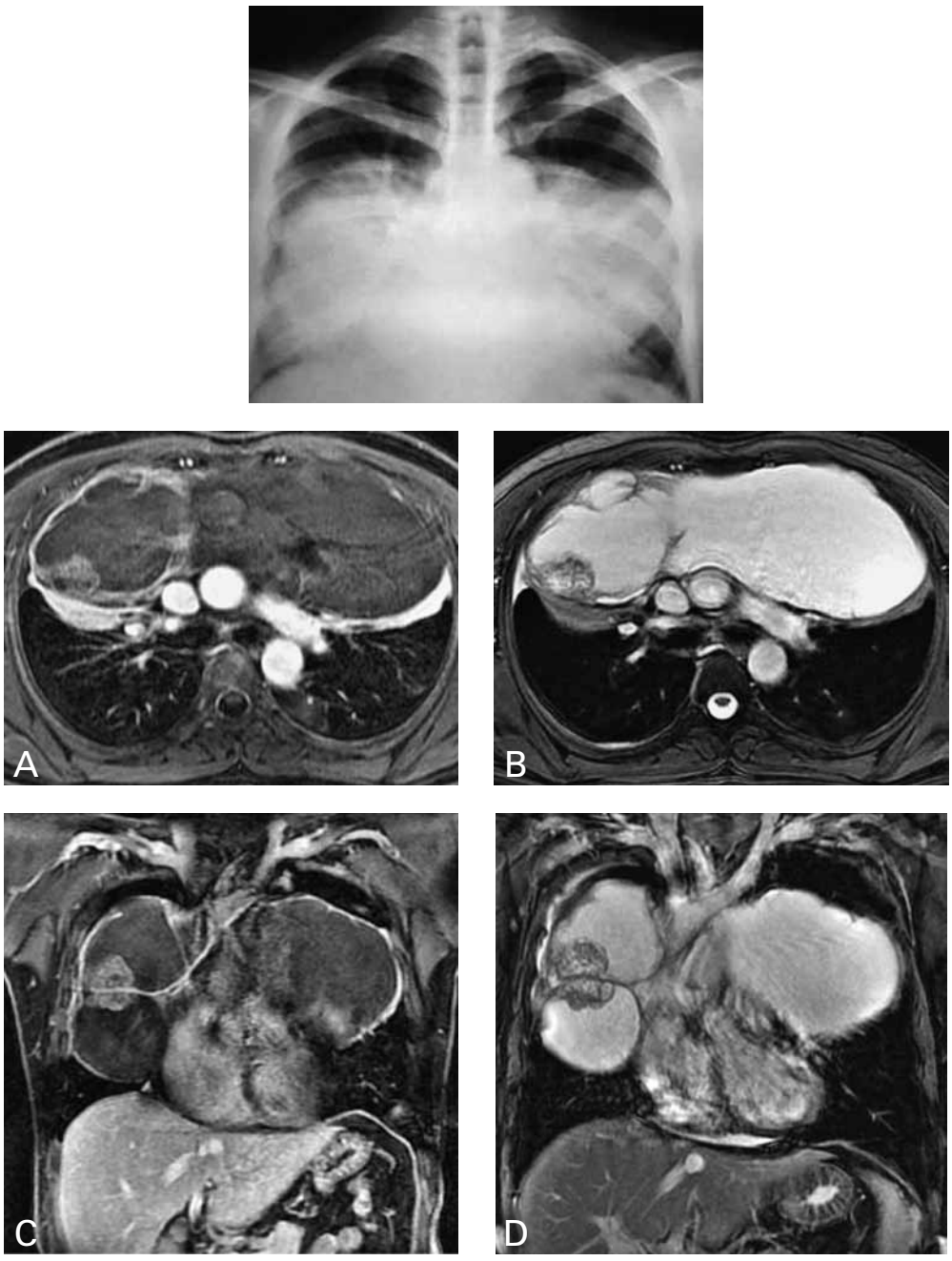

Fig. 1: 2A | 2B / 2C | 2D

1. Department of Radiology, Pamukkale University, School of Medicine, Denizli, Turkey

Work-up

Chest radiograph (PA view) (Fig. 1) shows a huge mediastinal mass extending into bilateral paracardiac regions. MRI examination of the thorax (Fig. 2) included a contrast-enhanced transverse T1-weighted gradient echo image with fat suppression (A), a transverse T2-weighted gradient echo image with fat suppression (B), a contrast-enhanced coronal T1-weighted gradient echo image with fat suppression (C), and a coronal T2-weighted gradient echo image with fat suppression (D) showing a multiloculated cystic anterior mediastinal mass extending outside the confines of the thymus. Furthermore a solid component arising in the right lateral wall is noticed. The septae and the solid nodule enhance after the administration of non-specific gadolinium chelate.

Radiological diagnosis

Based on the imaging features, the diagnosis of *huge thymic cyst* harboring septae and a solid component was favored. Median sternotomy showed a well-defined multiloculated cystic mass with a solid component arising from the thymus. Histopathologic examination revealed that the cyst was lined with squamous and cuboidal epithelium. The tumor on the cyst wall contained proliferating thymic epithelial cells and numerous lymphocytes consistent with thymoma arising in a thymic cyst.

Discussion

The differential diagnosis of multiloculated cystic mass within the anterior mediastinum includes thymic cysts, dermoid cyst, hydatid cyst, and lymphangioma. The absence of fat and calcifi cation excludes dermoid cyst. Hydatid cysts usually harbor daughter cysts, and lymphangioma may be associated with hemorrhage. Thymic cysts are rare, accounting for approximately 3% of all anterior mediastinal masses. Patients are usually asymptomatic, but thymic cysts may cause dyspnea, cough, chest pain or Horner syndrome. The cysts can be classified as congenital or acquired. Congenital cysts develop from the persistent thymopharyngeal canal and are usually unilocular. On the other hand, acquired cysts are multilocular and may extend outside the confines of the thymus. Thymoma arising in a thymic cyst is very rare, and may show intracystic dissemination. Thymomas undergoing an extensive cystic degeneration may present a similar appearance with intracystic thymoma. However, the absence of an epithelial lining in the cyst wall in thymoma can differentiate it from thymic cyst with thymoma. Radiologists should be aware of the fact that thymoma can develop within a thymic cyst. An enhancing mural nodule within a multiloculated cystic mass situated in the anterior mediastinum should favor the diagnosis of thymoma arising in a thymic cyst.

Bibliography

1. Davis R.D., Jr, Oldham H.N., Jr, Sabiston D.C., Jr.: Primary cysts and neoplasms of the mediastinum: recent changes in clinical presentation, methods of diagnosis, management and results. *Ann Thorac Surg*, 1987, 4: 229-237.
2. Sugio K., Ondo K., Yamaguchi M., et al.: Thymoma arising in a thymic cyst. *Ann Thorac Cardiovasc Surg*, 2000, 6: 329-331.
3. Liang S.B., Ohtsuki Y., Sonobe H., et al.: Multilocular thymic cysts associated with thymoma: a case report. *Path Res Pract*, 1996, 192: 1283-1287.
4. Kitami A., Kamio Y., Uematsu S., et al.: Thymoma with intracystic dissemination arising in a unilocular thymic cyst. *Gen Thorac Cardiovasc Surg*, 2007, 55: 281-283.