Primary malignant salivary gland tumor of the mediastinum

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The mediastinum can be the site of origin of various tumors of lymphoid, thymic, neural, endocrine, and vascular origin. However, malignant lesions of salivary gland origin have not been described in the area. This is the first report in the literature of a malignant salivary gland tumor presenting as a mediastinal mass.

Clinical Summary

A 31-year-old healthy woman presented with a 3-week history of left chest heaviness. Six months before the emergency department visit, the patient had a motor vehicle collision and underwent a full trauma workup, including a computed tomographic scan of the chest that demonstrated what was believed to be a left pericardial cyst (Figure 1).

Laboratory workup was unremarkable. A repeat computed tomographic scan of the chest demonstrated a large loculated left pleural fluid collection mistakenly diagnosed as left hemothorax from the previous trauma (Figure 2).

Video-assisted thoracoscopy, however, showed no fluid collection and no pericardial cyst but rather a huge mass 15 to 20 cm in diameter. A posterolateral thoracotomy was performed. The mass was adherent to the lingual and thymus superiorly. It was seemingly encapsulated and came off the pericardium and diaphragm. The tumor was removed with a wedge resection of the left lower lobe and thymus.

Pathologic examination showed that the 17-cm tumor was continuous with the mediastinum. This peculiar intrathoracic malignancy had a definite salivary gland–type appearance characterized by the presence of sharply outlined nests of tumor cells of basaloid appearance surrounded by an abundant hyaline material. There were solid hypercellular areas with a nondescript pattern of growth. Immunohistochemically, the tumor cells were diffusely positive for calponin and negative for thyroid transcription factor-1, alpha-smooth muscle actin, chromogranin, epithelial membrane antigen, keratin, alpha-fetoprotein, and human chorionic gonadotropin. There also seemed to be some focal positivity for the placental-specific isozyme of alkaline phosphatase.

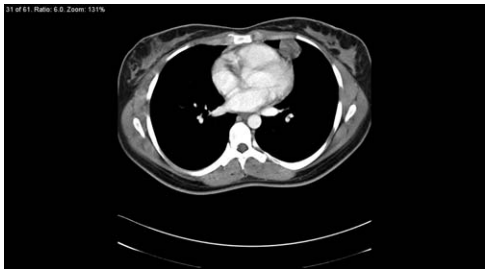

Figure 1. Computer tomographic scan indicating mass described as pericardial cyst.

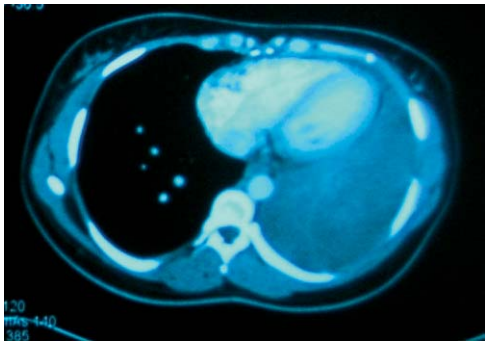

Figure 2. Computer tomographic scan thought to demonstrate left pleural effusion.

The tumor was diagnosed as a malignant tumor of salivary gland type with myoepithelial differentiation, having basaloid, adenoid cystic carcinoma–like, and anaplastic features.

Discussion

This patient presented as a trauma patient after a motor vehicle collision. On routine trauma workup, a computed tomographic study demonstrated a mediastinal mass adjacent to the pericardium that was read as a pericardial cyst. Six months later, the patient presented with left chest heaviness mistaken for a delayed hemothorax. The origin of the tumor in our patient is intriguing. It exhibits myoepithelial, basaloid, adenoid cystic, and anaplastic cells. The presence of diverse components makes it difficult to identify the specific type of salivary tumor. The presence of the solid anaplastic areas and the rapid growth of the tumor are indicative of an aggressive neoplasm. To our

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knowledge, this is the first reported case of a malignant salivary gland tumor in the mediastinum. A review of salivary gland tumors in the literature revealed only 2 reports of pleomorphic adenomas presenting as a mediastinal mass.[1,2] Therefore we considered it important to document this unique case.

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