Giant Localized Solitary Fibrous Tumors of the Diaphragmatic Pleura: Report of Two Cases

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Abstract
We report two cases, of 48- and 53-year-old women, with huge intrathoracic extrapulmonary tumors which originated from the diaphragm. In these cases the totally resected tumors were examined histologically and immunohistochemically, and based on these studies benign localized solitary fibrous tumors originating from the diaphragmatic pleura were diagnosed. We observed no recurrence in the long-term follow-up, which was necessary for these cases due to the tumors' unpredictable clinical behavior even when they were thought to be benign histologically. Because of the huge sizes of these tumors, originating from the diaphragmatic pleura with pedicles, and benign clinical outcome correlating with the histological examination, these cases are thought to be worthy of interest.

Key words Benign mesothelioma · Localized solitary fibrous tumor

Case Reports

Case 1
A 48-year-old woman was admitted with the complaints of right lateral chest pain, dizziness, and leg edema. On a physical examination, the vibratio thoracica and breath sounds were diminished in the right hemithorax. The erythrocyte sedimentation rate was 46 mm/h. A chest X-ray showed an elevation of the right diaphragm and a closed right costophrenic sinus. A thorax computed tomographic (CT) scan showed a subdiaphragmatic, lobulated, heterogeneous, hypodense, contrastuptaken solitary mass measuring 15 cm in diameter (Fig. 1). The bronchoscopy, bronchial biopsy, and lavage findings were normal. At operation, via a right thoracotomy, a 20 cm, well-capsulated, lobulated solitary mass was found hanging with a little pedicle to the diaphragm and adhered to the parietal pleura from two different parts, and was pushing the lower lobe upwards; this was totally resected (Fig. 2a). A histopathological examination revealed that the tumor had both hypocellular and hypercellular areas. Tumoral cells had formed nodular bundles, which were seen as whirlpool structures. No atypical cytological differentiation or necrosis was present in the areas where mitosis was rarely seen. These findings confirmed the diagnosis of benign LSFT of pleura (Fig. 3). Tumoral cells stained positively with vimentin immunohistochemically. Cyto-keratin, epithelial membrane antigen (EMA), factor VIII, and S-100 protein were negative in these cell populations. The postoperative period was uneventful. At 40 months after surgery, the patient is still healthy.

Case 2
A 53-year-old woman was admitted with complaints of left chest pain, dizziness, and dyspnea. She was generally in good condition; however, clubbing and dimin-
ished breath sounds were found in the left lung. A chest X-ray revealed a closed left costophrenic sinus. A thorax CT demonstrated a 25-cm diameter, lobulated, nonhomogeneous, contrast uptaken mass with minimal calcifications. The bronchoscopy, bronchial biopsy, and lavage findings were normal. At operation, via a left thoracotomy, a 25 × 22 × 14-cm, lobulated, well-capsulated, solitary mass was totally resected (Fig. 2b). It was hanging from the diaphragm with a wide pedicle, and was pushing the left lower lobe and lingula. A microscopic examination revealed fibroblast-like structures within the collagen deposits. Although a myxoid appearance was dominant in some areas, dense areas with high cellularity, which appeared as more dense areas and small cystic spaces in some places, were observed. Tumoral cells immunohistochemically stained positively with vimentin; however, staining with cytokeratin, S-100 protein, factor VIII, and EMA was negative. A histopathological examination revealed a benign localized solitary fibrous tumor of pleura. The patient remains healthy at 14 months after surgery.

Discussion

Localized fibrous mesothelioma, benign mesothelioma, benign focal fibroma, localized solitary monophasic spindle cell tumors, and submesothelioma tumors are now considered to be LSFTs. There is still controversy