CT signs of solitary fibrous tumors of the pleura

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Solitary fibrous tumor of the pleura is a rare clinical entity. It was first described by Klemperer and Rabin in 1931 (1). It is a mesenchymal tumor arising from the pleura of the thoracic cavity; however, it has been reported from extrathoracic sites also (2). It may be broad based or pedunculated. I have had personal experience with seven such cases and they were all pedunculated and varied in size from 1 x 1.5 cm to 9.5 x 9.5 x 5 cm. SFTP is a well delineated, often lobulated soft tissue mass in close relationship to a pleural surface (9). The final diagnosis is established by histological examination of the tissue. The authors of this paper have presented a series of ten cases with various radiographic findings with a special emphasis on CT scan (10). CT findings are highly suggestive but not diagnostic. CT scan cannot be a substitute for a tissue diagnosis. CT findings are dependent on the size of the tumor. When the tumor is small, it develops an obtuse angle with the pleural surface. This angle changes to an acute angle when the tumor becomes large. Dedrick et al, described CT finding of "Smoothly tapering margin" as highly characteristic of this tumor (4). The tumor mass inside the fissure could be confused with a parenchymal mass. Finding of intralesional calcification is often seen in large lesions (3). The primary author of this paper has reported on several occasions about his experience of this tumor in multiple other journals (5,6,7). He continues to add information to make our readers aware of this unique tumor and CT findings. The location of this tumor in the paraspinal area could be confused with a neurogenic tumor. This is an interesting paper that describes several unique CT findings that could make the reader aware of this rare tumor in multiple different locations of the chest. I agree with the conclusion made by the authors (8), "The Chest Computed Tomography (CT) Scan is the key examination, which shows the size and location of the tumor and aids in surgical planning." There is no substitute for a tissue diagnosis. In my opinion, FNA or a CT guided needle biopsy is an unnecessary procedure in the management of this disease in most cases. Surgical resection offered the best chance for long-term cure and establishes the final pathologic diagnosis of this rare tumor.

References

1. Klemperer P, Rabin CB. Primary neoplasm of the pleura: a report of five cases. Arch Pathol 1931; 11:385-412.
2. De Perrot M, Fischer S, Brundler MA, Sekine Y, Keshavjee S. Solitary Fibrous Tumors of the Pleura. Ann Thorac Surg 2002; 74:285-93.
3. Ferretti GR, Chiles C, Choplin RH, Coulomb M. Localized benign fibrous tumors of the pleura. AJR 1997; 169:683-6.
4. Dedrick CG, McLoud TC, Shepard JAO, Shipley RT. Computed tomography of localized pleural mesothelioma. AJR 1985; 144:275-80.
5. Cardinale L, Allasia M, Ardissone F, Borasio P, Familiari U, Lausi P, et al. CT features of solitary fibrous tumor of the pleura: experience in 26 patients. Radiol Med 2006; 111:640-50.
6. Cardinale L, Cortese G, Familiari U, Perna M, Solitro F, Fava C. Fibrous tumor of the pleura (SFTP): a proteiform disease. Clinical, histological and atypical radiological patterns selected among our cases. Radiol Med 2009; 114:204-15.

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7. Cardinale L, Ardissone F, Garetto I, Marco V, Solitro F, Garetto I, et al. Imaging of benign solitary fibrous tumor of the pleura (SFTP): a pictorial essay. Rare Tumors 2010; 2: el.
8. Cardinale L, Ardissone F, Volpicelli G, Solitro F, Fava C. CT signs, patterns and differential diagnosis of solitary fibrous tumors of the pleura. J Thorac Dis 2010.
9. Saha, SP. Solitary Fibrous Tumor of the pleura. Int Surg 2007, 92: 351-4.
10. Luciano C, Francesco A, Giovanni V, Federica S, Fava Cesare F. CT signs, patterns and differential diagnosis of solitary fibrous tumors of the pleura. J Thorac Dis 2010; 2: 21-25.