

# Solitary Fibrous Tumor of the Pleura



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## ABSTRACT

*Solitary fibrous tumor is a rare mesenchymal malignancy that may be found in many locations other than the pleura. The majority of these tumors have benign features, but some have malignant potential. We report a histologically proven case of a solitary fibrous tumor in a 52-year-old woman that was incidentally detected by chest radiography during a routine health check. Left posterolateral thoracotomy was performed and then the mass was completely removed. His postoperative recovery was uneventful.*

**Key words:** Pleura, solitary fibrous tumor, dyspnea

## Plevranın Soliter Fibröz Tümörü

### ÖZET

*Soliter fibröz tümör, nadir bir mezankimal tümördür ve plevradan başka birçok lokalizasyonda bulunabilir. Bu tümörlerin büyük kısmı benign özelliklere sahiptir fakat bazılarında malign potansiyel olabilir. Biz, 52 yaşında bayan hastada, rutin sağlık kontrolleri sırasında akciğer grafisi ile tesbit edilen ve histolojik olarak ispatlanan soliter fibröz tümör olgusunu sunuyoruz. Sol lateral torakotomi yapıldıktan sonra kitle total olarak çıkarıldı. Postoperatif dönem sorunsuzdu.*

**Anahtar kelimeler:** Plevra, soliter fibröz tümör, dispne

## INTRODUCTION

Solitary fibrous tumor is a rare mesenchymal malignancy that may be found in many locations other than the pleura (1). The majority of these tumors have benign features, but some have malignant potential (2). Solitary fibrous tumors of the pleura (SFTP) are usually seen in adults (2). About 80% of these tumors originate from the visceral pleura, and the remaining, from the parietal pleura and they are generally pedunculated (3). Pathologically, tumor cells express specific markers such as vimentin and CD34 (4,5). Hypoglycemia may occur in 3 to 5% of patients with SFTP (6-8). We aimed to present this case because of rarity.

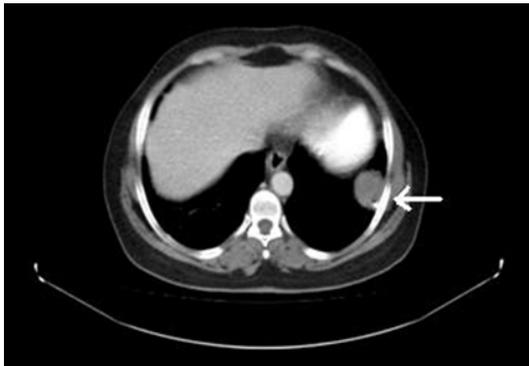
## CASE

Our patient was a 52-year-old woman. During a health check, a chest X-ray revealed a mass in the left lower lobe. The patient was then referred to our clinic for surgical consultation, with a presumptive diagnosis of ruptured hydatid cyst. On physical examination, the patient's chest was clear on percussion and auscultation. A computerized tomography (CT) of the chest revealed a mass measuring 60 mm in diameter in the left lower lobe that was enhanced after injection of contrast medium (Figure 1). Blood tests were normal. The patient was prepared for surgery. Left lateral thoracotomy was performed. The mass was connected to lower lobe with a thin peduncle (Figure 2). After the peduncle was clamped and then sutured, the mass was completely removed. Pathologic examination of the lesion confirmed

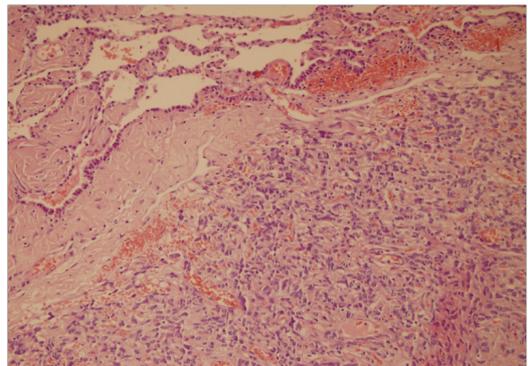
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**Figure 1.** Axial computed tomography section shows a mass measuring 60 mm in diameter in the left lower lobe.



**Figure 3.** Photomicrographs of the SFTP, showing spindle cells with oval nuclei arranged in collagenous bundles and fascicles.

the diagnosis of SFTP. Sectioning revealed a lobulated, gray parenchyma with areas of hemorrhage and necrosis. Microscopically, spindle cells with oval nuclei arranged in collagenous bundles and fascicles (figure 3). They were immunoreactive for CD34, bcl-2 and the Ki-67 proliferation index was 2-3% (figure 4). There was no tumoral cell in the surgical margin. His postoperative recovery was uneventful.

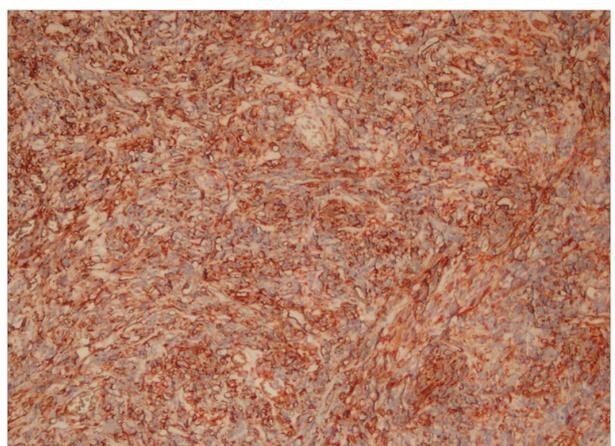
## DISCUSSION

SFT was first described by Klemperer and Rabin in 1931 (9). SFT of the pleura occur predominantly in adults. These tumors appear as well-defined and round masses that are incidentally detected on plain chest roentgeno-

grams (10). The symptoms are chest pain, cough, and dyspnea (11). The larger the tumor, the more likely that symptoms will be present. On the physical examination, wheezing, dullness, or decreased breath sounds may be present in the affected hemithorax (12). Our patient was asymptomatic because of the tumour is small size. The usual initial diagnostic study is a chest plain. It isn't a specific test but detects presence of a mass in the chest. The chest computed tomography (CT) scan is the main examination. CT scan more obviously shows the extent and site of the tumor. The chest CT demonstrates masses that are well-defined, noninvasive, often lobulated masses and highly enhanced (2). MRI images can help to detect the tumor's relationship to the diaphragm. The tumor typically shows het-



**Figure 2.** The mass was connected to lower lobe with a thin peduncle



**Figure 4.** Immunohistochemistry shows positive CD 34.

erogeneous signal intensity on T1-weighted images, and contrast enhancement following gadolinium administration(12). Immunohistochemical characteristics of both the benign and malignant varieties of SFTP are CD34-, CD99-, and bcl-2- positive, Ki-67 proliferation index is low. SFTPs are also generally S-100-, carcinoembryonic antigen-, and smooth muscle actin-negative (12). In our patient, the CD34 and bcl-2 were positive, and Ki-67 proliferation index was low (2-3%)

Differential diagnosis of the lesion included any mass lesion in the chest, ranging from carcinoma of the lung to various intrapleural sarcomas. While a posterior paraspinal mass may be neurogenic tumor or round atelectasis, a more anterior and medial mass may be a thymic neoplasm, germ cell tumor, or teratoma. Complete resection of the tumor is the mainstay of treatment for these tumors and it could be achieved by means of video-assisted thoracoscopic surgery (10,13). We removed the mass via thoracotomy, and we didn't performed transthoracic biopsy because our initial diagnosis was ruptured hydatid cyst. Adjuvant therapy, including chemotherapy and radiotherapy, is generally considered ineffective for SFTP (2).

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