Thoracic splenosis

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ABSTRACT

Intrathoracic splenosis is a rare condition that results after rupture of the spleen or diaphragmatic injury. We present herein a case of intrathoracic splenosis of a 48-years-old woman whom splenectomy had been performed 5 years ago after a traffic accident. The patient was operated on with suspicion of malignancy and total resection of the lesion was performed with video-assisted thoracic surgery (VATS). Histopathologic examination confirmed the splenosis diagnosis. Thoracic splenosis should be suspected for the patients with thoracic lesions whom had medical history of thoracoabdominal injury including splenectomy or diaphragmatic injury.

Key Words: Trauma, Chest, Video-assisted thoracic surgery.

ÖZET

Torasik splenozis

İntratorasik splenozis, dalak rüptürü veya diyafragma hasarı sonrasında meydana gelebilen nadir bir durumdur. Bu olgu sunumunda, beş yıl önce trafik kazası nedeniyle splenektomi uygulanmış olan 48 yaşındaki kadın hastada gelişen intratorasik splenozis vakasını sunuyoruz. Hastaya sol hemitoraksta kitle tanısıyla, malignite şüphesiyle video yardımlı toraks cerrahisi (VATS) uygulandı ve sol hemitorakstaki lezyon eksize edildi. Histopatolojik inceleme dalak dokusuyla uyumlu bulundu. Sonuç olarak, özgeçmişinde torakoabdominal travmaya bağlı ortaya çıkan diyafragma hasarı veya splenektomi hikayesi bulunan olgularda intratorasik splenozis akılda tutulması gereken bir tanıdır.

Anahtar Kelimeler: Travma, Toraks, Video yardımlı toraks cerrahisi.

INTRODUCTION

Thoracic splenosis is a rare condition that results after rupture of the spleen and/or diaphragmatic injury[1-8]. Splenosis occurs usually in the peritoneal cavity. However, damaged spleen cells can also cross the injured diaphragm and it can also be seen in the pleural cavity. Splenic cells implant to the parietal pleura, grow up and transform to the visible splenic tissue[3,4,7]. Routine chest X-ray, computed tomography (CT) scans, radionuclide studies can be used for diagnosis but his-

topathological diagnosis is usually provided by intraoperative frozen section or by follow-up histopathologic examination[1-8].

A CASE REPORT

A 48-year-old woman was admitted to our instutition with chest pain on the left hemithorax leading for 3 years. Medical history showed a blunt thoracic trauma (traffic accident) and splenectomy suggesting splenic rupture 5 years ago. No details about the surgical procedure of the diaphragm were available. Routine laboratory tests were normal. Chest X-ray showed a homogenous radioopacity in the left hemithorax at the level of the sixth rib (Figure 1).

Computed tomography confirmed the presence of a lobulated, pleural based mass in the posterobasal segment of the lower lobe, without disruption of the bony structures (Figure 2).

The clinical impression was a neurogenic tumor preoperatively. The patient underwent a video-assisted thoracoscopic surgical procedure (VATS). There was a laterally localized, multilobar, reddish mass on the sixth rib. The surface of the diaphragm was intact. The mass was excised totally from the chest wall. Frozen section was reported as a splenic tissue. No bleeding was observed during the operation. Post-operative course was uncomplicated. Histopathologic examination confirmed the diagnosis of splenosis. The patient was discharged on day 4 and was well and asymptomatic at the 5 month follow-up.

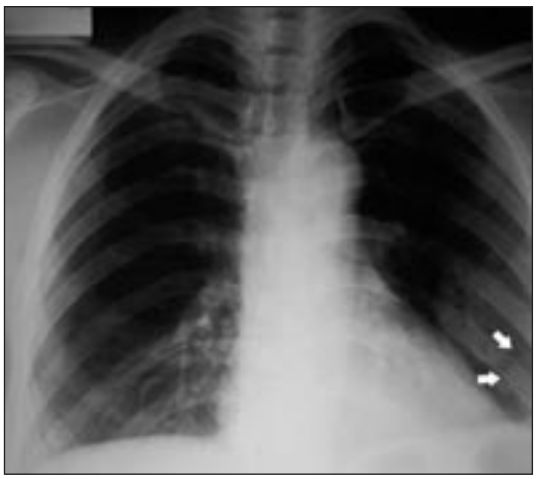

Figure 1. Chest X-ray showing a homogenous radioopacity on the left hemithorax.

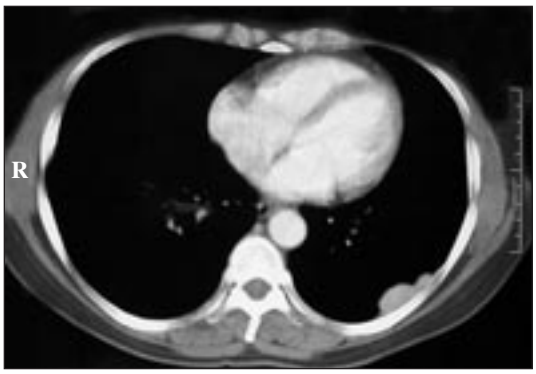

Figure 2. CT scan showing a lobulated pleural based mass in the posterobasal segment of the lower lobe.

DISCUSSION

In 1937, Shaw and Shafi first described a case of intrathoracic splenosis[1-8]. It is still an unusual entity with the spontaneous auto transplantation of splenic tissue after splenectomy for traumatic injury to the spleen. The splenic nodules may be few or up to hundreds in the peritoneal cavity and can be localized in the splenic bed, omentum, mesentery, serosal surfaces of the bowels, liver, diaphragm or pelvic organs. The occurring mechanism includes the rupture with coexisting tear of the diaphragm or the congenital defects allowing the small fragments of splenic tissue with peritoneal other contents. However, the thoracic splenosis nodules can settle in the visceral or parietal pleura, pericardium and the interlobar fissures[4]. In thoracic surgery all the patients reported in the English-language literature had thoracoabdominal traumas including splenic injury or splenectomy[1-4].

Patients are usually presented asymptomatic. Diagnosis is made by chest X-rays, CT scans, radionuclide studies, but frequently during the operation.

Radionuclide studies made with Tc99m sulfur colloid and indium 111 platelets can confirm the diagnosis and provide an alternative for surgery[1,6-8].

Surgical treatment must be avoided when the diagnosed preoperatively as this residual splenic tissue may prevent from postsplenectomy sepsis and pneumococcal infections[1,5]. On the other hand, this residual splenic tissue may be a recurrence of the hematological disorder which was treated by splenectomy[3].

Pre-operative diagnosis of intrathoracic splenosis involves complex studies. Diagnosis of thoracic splenosis depends on a high index of suspicion. In conclusion, thoracic splenosis should be thought for the patients with a mass or masses of the left hemithorax whom had a history of thoracoabdominal trauma with splenectomy[1-5]. Besides, these patients should undergo scintigraphic investigation. If the diagnosis can be confirmed surgical intervention must be avoided. If surgery is indicated eventually, a minimally invasive surgical procedure such as VATS should be preferred.

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