

CASE REPORT

# Intramuscular Myxoma of the Thoracic Paraspinal Muscle: Case Report

Ozan USLUER<sup>1</sup>, Özgür SAMANCILAR<sup>1</sup>, Kenan Can CEYLAN<sup>1</sup>, Şeyda ÖRS KAYA<sup>1</sup>, Zekiye AYDOĞDU DİNÇ<sup>2</sup>, Recep SAVAŞ<sup>3</sup>

<sup>1</sup> 2<sup>nd</sup> Thoracic Surgery Clinic, Dr. Suat Seren Chest Disease and Thoracic Surgery Teaching and Research Hospital, Izmir, Turkey

<sup>2</sup> Pathology Clinic, Dr. Suat Seren Chest Disease and Thoracic Surgery Teaching and Research Hospital, Izmir, Turkey

<sup>3</sup> Department of Radiology, Faculty of Medicine, Ege University, Izmir, Turkey

## ABSTRACT

*Myxomas are benign tumors originating from mesenchymal cells. These tumors have a high tendency to infiltration; localization in other than the large muscle groups is rare. A case of intramuscular myxoma arising from the thoracic paraspinal muscles, which is extremely rare, is presented.*

**Key words:** Intramuscular myxoma, Benign tumor, Thorax, Paraspinal muscle

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## ÖZET

### Torasik Paraspinal Kaslarda Yerleşen İntramusküler Miksoma: Olgu Sunumu

*Miksomalar, mezenkimal hücrelerden köken alan benign tümörlerdir. Bu tümörler infiltrasyona oldukça eğilimlidir ve büyük kas grupları dışında ender yerleşirler. Torasik paraspinal kaslarda gelişen intramusküler miksoma olgusunu çok ender görülmesinden dolayı sunmaktayız.*

**Anahtar kelimeler:** İntramusküler miksoma, Benign tümör, Toraks, Paraspinal kas

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## INTRODUCTION

Myxomas are soft gelatinous tumors originating from subendocardial mesenchyma. Those originating from skeletal muscles are called intramuscular myxomas. They generally form in large muscle groups. Localization between the paraspinal muscles is rarely reported<sup>[1,2]</sup>. Here, we present an extremely rare case of intramuscular myxomas of the thoracic paraspinal region.

## CASE REPORT

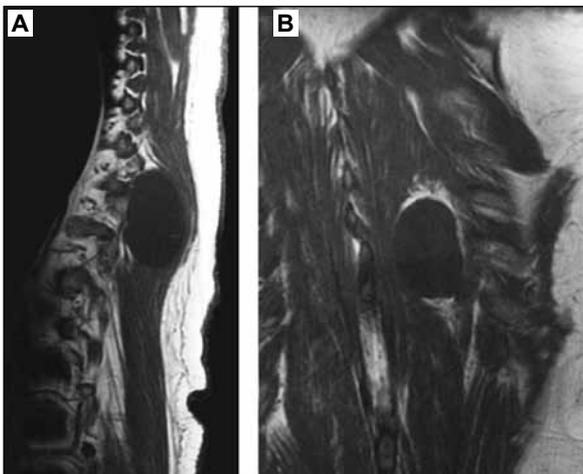
A 63-year-old woman presented with non-productive coughing and a painless mass at her left lower back for one year. The physical examination revealed a soft, ovoid-shaped, mobile, and well-circumscribed mass that could be palpated medially to the infrascapular angle, with no changes in the overlying skin.

Magnetic resonance imaging showed a well-defined, partially cystic tumor with a thin wall, 6 x 4 x 3.5 cm in diameter, located between the left lower thoracic paraspinal muscles, with no invasion of the adjacent tissues. On magnetic resonance imaging, the lesion had homogeneous, low-signal intensity on T1- and bright signal intensity echo on T2-weighted images (Figures 1A,B 2,3).

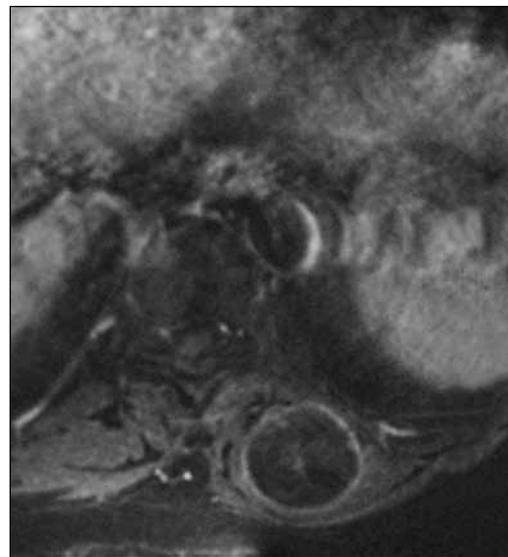
A transverse incision was made over the mass under general anesthesia. On exploration, a yellow-white in color, ovoid-shaped, semi-solid, and encapsulated tumoral mass was seen between the paravertebral muscles. It had a smooth surface with very mild adhesions to the surrounding tissues. There was no



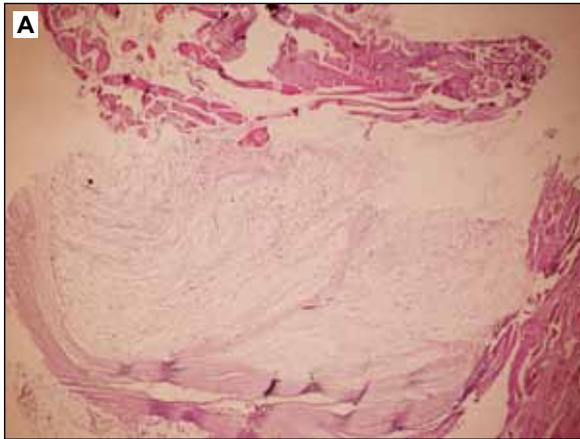
**Figure 2. Sagittal T2-weighted magnetic resonance imaging shows well-defined lesion with homogeneous hyperintense signal at the paraspinal muscles.**



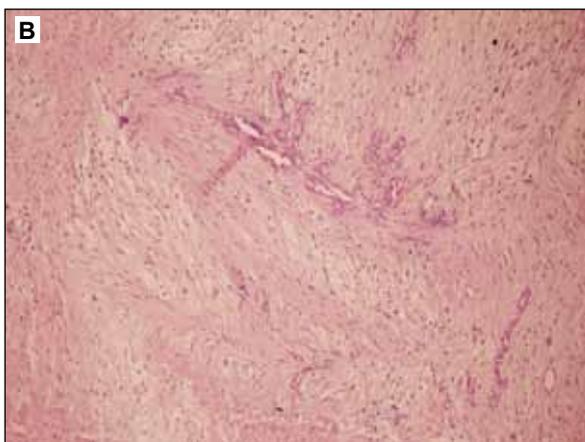
**Figure 1. Sagittal, (A) and coronal, (B) T1-weighted magnetic resonance imaging showing a well-defined, ovoid-shaped and homogeneous hypodense mass in the thoracic region.**



**Figure 3. On axial T1-weighted magnetic resonance image, intravenous admission of gadolinium demonstrates the presence of capsule formation in the thoracic paraspinal muscles.**



**Figure 4.** In high magnification appearance, the lesion is composed of cytologically spindled and stellate-shaped cells that are surrounded by myxoid stroma [hematoxylin-eosin (HE) x400].



**Figure 5.** Low magnification shows the tumor with a fibrous capsule and surrounded by normal skeletal muscle (HE x40).

protrusion into the thoracic cavity. A wide excision of the tumor with safe surgical margins was performed.

The histopathological examination demonstrated the diagnosis of intramuscular myxomas, showing an encapsulated tumor with a myxoid stroma between the skeletal muscles. The lesion contained spindle and stellate cells microscopically (Figures 4, 5).

The patient had an uneventful post-operative period. There has been no recurrence over the three-year follow-up.

#### DISCUSSION

The first literature published about intramuscular myxomas was from Enzinger, in which he described the benign and malignant intramyxoid lesions<sup>[3]</sup>.

Intramuscular myxomas are generally seen in women aged between 40 and 60, which is consistent with our case<sup>[4]</sup>. The symptoms are non-specific. The most common presentation is a painless palpable mass, slightly movable and often fluctuant. They are more commonly seen in the left atrium, with a lesser origination from the skeletal muscles, where they are generally found between the large muscles like thigh, shoulder, buttocks, and upper arm<sup>[5]</sup>. A thoracic localization is extremely rare<sup>[6]</sup>. In our case, the location of the intramuscular myxomas was in the thoracic paraspinal muscles. When seen in the paraspinal region, the patient may present with neurological symptoms such as paraparesis, but this was not seen in our case<sup>[7]</sup>.

Bancroft and colleagues defined the magnetic resonance imaging characteristics for this type of tumor<sup>[8]</sup>. They revealed that a perilesional fat rind, the signal intensity of fluid, and an increased signal in the adjacent muscle on T2-weighted or fluid-sensitive magnetic resonance sequences are strongly suggestive of intramuscular myxomas. It is also reported that these lesions have a signal intensity lower than that of the skeletal muscles on T1- and a brighter intensity than fat on T2-weighted images. The signals were homogeneous for both sequences<sup>[9]</sup>. Our magnetic resonance imaging findings were all similar to those reported in the literature.

The recommended surgical treatment is simple total excision. Kurai and colleagues reported a case of intramuscular myxomas protruding into the thoracic cavity<sup>[6]</sup>. The tumor in our case had only some mild adhesions to the parietal pleura, which could be separated by blunt dissection without penetrating into the ipsilateral hemithorax.

Histopathological features are well described by Weiss and Goldblum<sup>[5]</sup>. They revealed that the tumor is composed of relatively small numbers of inconspicuous cells, abundant mucoid material and a loose meshwork of reticulin fibers. They also reported that a uniform growth pattern and the absence of vascular structures are typical of this tumor, characteristics that were also present in our case in the histological examination.

In conclusion, the appropriate treatment of intramuscular myxomas is surgical excision. For those tumors located in the thoracic paraspinal muscles, careful dissection may prevent penetration into the thoracic cavity.

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## Address for Correspondence

Ozan USLUER, MD

2<sup>nd</sup> Thoracic Surgery Clinic

Dr. Suat Seren Chest Diseases and

Thoracic Surgery Training and Research Hospital

Izmir-Turkey

E-mail: ozanusluer@yahoo.com