Liposarcoma of the Forearm Causing Ulnar Nerve Entrapment: A Rare Entity

Ulnar Sinirde Tuzaklanmaya Sebep Olan Ön Kolun Liposarkomu: Nadir Bir Olgu

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ABSTRACT Liposarcoma is a rare sarcoma subtype with an incidence of one case per 2.5 million population. This tumor typically presents as an asymptomatic soft tissue mass, commonly arise in the extremities and in the retroperitoneum. 48 year old female patient admitted to our outpatient clinic with a palpable mass on her right forearm. The mass was diagnosed as lipoma on the magnetic resonance imaging (MRI) scan. During surgery, it was seen that ulnar nerve was surrounded by the mass. Meticulous resection was performed. The histopathological evaluation confirmed the mass as liposarcoma. Since it is hard to distinguish lipoma from liposarcoma only by physical examination, MRI scan is commonly applied in clinical use. In our case MRI scan revealed the mass as lipoma where as the histopathological diagnosis was liposarcoma. The reason for our surgery was ulnar nerve entrapment symptoms.

Key Words: Lipoma; liposarcoma; ulnar nerve; ulnar nerve compression syndromes

ÖZET Liposarkom 2.5 milyonda 1 görülme insidansı ile nadir görülen bir sarkoma alt tipidir. Bu tümör tipik olarak ekstremitelerde ya da retroperitoniumda asemptomatik bir kitle şekilde kendini gösterir. 48 yaşında kadın hasta sağ ön kolda ele gelen kitle ile kliniğimize başvurdu. Manyetik rezonans (MR) incelemesi sonucu kitle lipom olarak değerlendirildi. Ameliyat sırasında, ulnar sinirin bu kitle tarafından çevrelendiği gözlendi. Titiz bir şekilde rezeksiyon yapıldı. Histopatolojik inceleme sonucu kitle liposarkom olarak değerlendirildi. Lipom ve liposarkom`un birbirinden ayrımı fizik muayene ile zor olduğu için MR ile inceleme sıkça kullanılmaktadır. Vakamızda MR incelemesi lipom olarak sonuçlanmasına rağmen histopatolojik inceleme liposarkom olarak neticelendi. Bizim cerrahi sebebimiz ise ulnar sinir tuzaklanması semptomları idi.

Anahtar Kelimeler: Lipom; liposarkom; ulnar sinir; ulnar sinir kompresyon sendromu

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Liposarcoma is a rare sarcoma subtype with an incidence of one case per 2.5 million population. This tumor typically presents as anasymptomatic soft tissue mass, commonly arise in the extremities and in the retroperitoneum.[1]

Due to its asymptomatic nature, it is hard to distinguish liposarcoma from lipoma clinically. Even though the radiographic evaluation is useful, the definitive diagnosis is only established by histopathological evaluation.

The recommended treatment for liposarcoma is radical local excision by preserving neurovascular structures of the limb. The treatment should continue by radiotherapy to ensure local control. Concerning the treatment

of soft tissue sarcoma, local control rates of 85% to 90% have been achieved with a combination therapy of surgery and radiation.[2]

CASE REPORT

48 year old female patient admitted to our outpatient clinic with a palpable mass on her right forearm. There was a soft, movable, painless swelling in the ventral aspect of the right forearm. Magnetic resonance imaging (MRI) scan was performed to investigate the mass. The scan confirmed a 8.5x5.5x5 cm size lipoma. The patient's history revealed no preceding trauma or inflammation. Her family history revealed no similar conditions, normal health, and without any other systemic diseases. Surgical removal was offered, but the patient refused the surgery. One year later, the patient admitted to the outpatient clinic again with a larger mass and a slight numbness in her fifth finger.

A lazy S incision was made, it was seen that ulnar nerve was surrounded by the mass which was diagnosed as lipoma on the MRI scan (Figure 1). The mass was well defined from surrounding muscles and ulnar artery due to its capsule. The mass was resected meticulously without damaging the ulnar nerve (Figure 2). The mass was larger compared to its MRI scan result. The size of the mass was 11x6x6 cm (Figure 3). The removal material was sent for histopathological evaluation, which confirmed the mass as well-differentiated liposarcoma (Figure 4). The patient received radiotherapy post operatively. There was no signs of recurrence one year after the surgery. Our patient described no paresthesia on her fingers during follow-ups.

DISCUSSION

Liposarcoma typically presents as a painless soft tissue mass, commonly arise in the extremities and in the retroperitoneum.[1] Liposarcoma is a common soft tissue sarcoma. According to the latest WHO classification (2013), liposarcoma is divided into four subtypes: atypical lipomatous liposarcoma/well differentiated liposarcoma (including lipoma-like, sclerosing, inflammatory and spindled), myxoid liposarcoma/round cell liposarcoma,

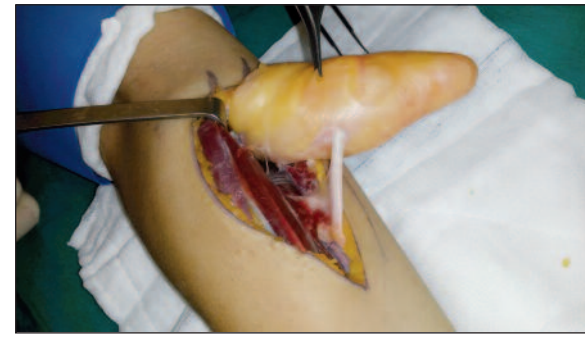

FIGURE 1: Per-operative view of liposarcoma. Ulnar nerve was surrounded by the liposarcoma.

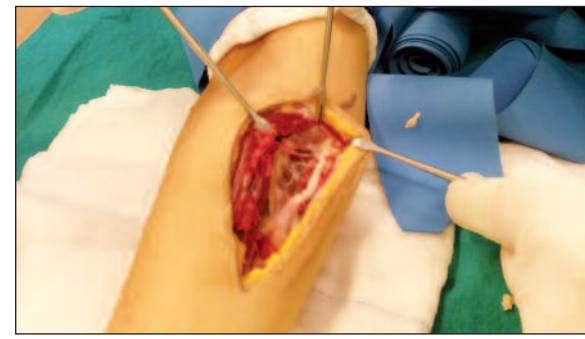

FIGURE 2: Liposarcoma resected meticulously without damaging any nearby anatomical structure.

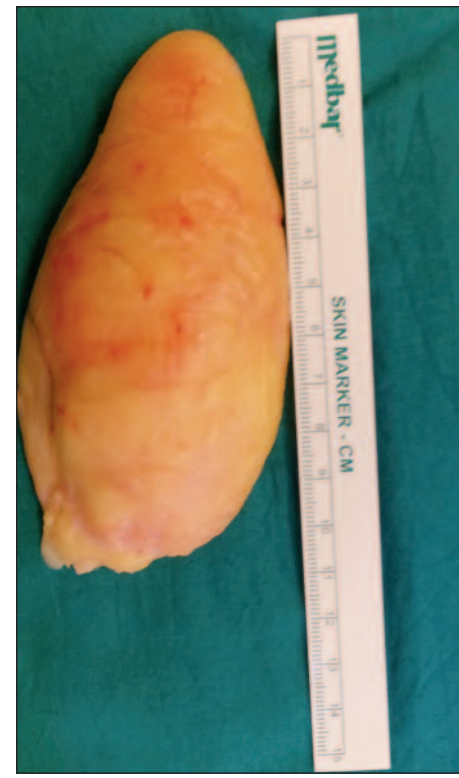

FIGURE 3: Liposarcoma.

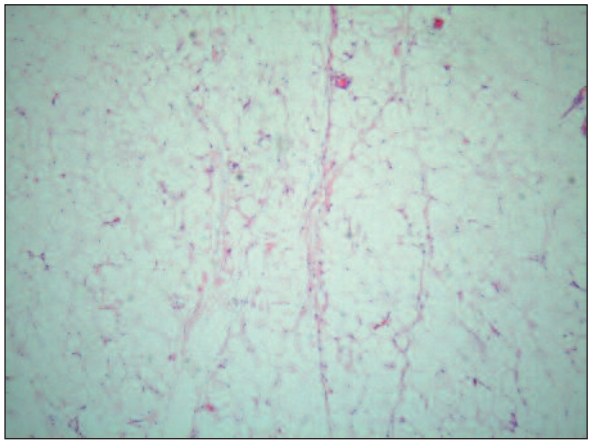

FIGURE 4: The microscopic findings of the the well-differentiated liposarcoma. The section showed a proliferation of lobules of various-sized adipocytes with irregular nuclei.

pleomorphic liposarcoma and dedifferentiated liposarcoma.[3]

It is hard to distinguish lipoma from liposarcoma clinically. MRI scan is considered the gold-standard investigation for differentiating lipoma from liposarcoma.[4]

In our case, MRI scan confirmed the mass as lipoma whereas it was later diagnosed as well-differentiated liposarcoma after histopathological evaluation. It should be kept in mind that the diagnosis with MRI scan is not 100% conclusive.

Lesion size is a hugely helpful feature, and in the context of lipoma versus liposarcoma, size is really important. Lesions greater than 10 cm are 14 times and 20 cm in size are 5 times more likely to be malignant.[4] Four key features must be considered in assessing the risk of malignancy in a soft tissue tumour; increasing size, size greater than 5 cm, deep seating to the deep fascia and pain.[5]

It is crucial to be cautious for the possibility of malignant transformation for suspicious subcutaneous tumors. Lipomas are commonly resected as long as it is symptomatic or large in size. In cases such as ours, it is important to keep the malignant potential in mind and be insistent for surgical removal.

In our case, hereby, we intended to demonstrate a well-differentiated liposarcoma of the forearm, causing ulnar nerve entrapment symptoms by surrounding ulnar nerve. The mass was considered as lipoma and after the development of such symptoms, surgical intervention was performed. This case stresses a rare feature of upper extremity seated liposarcoma.

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