ABSTRACT

Liposarcomas are soft tissue tumours derived from fat cells and are often seen in the lower extremities and the retroperitoneum. Pleomorphic liposarcomas are seen at the age of 50 and above and make up 5-15% of all liposarcomas. Although liposarcomas involving superficial tissues are very rare, they are histopathologically high-stage tumours. We aimed to present our experience of superficial pleomorphic liposarcoma in an adult case. A single case is reported in our study. A 72-year-old female presented to the Kafkas University general surgery department with a painful mass that had suddenly started to grow on the left leg. Physical examination revealed an immobile painful mass 8 cm in size on palpation at the proximal mediolateral left femoral region. Superficial tissue USG revealed a hypoechogenic solid mass 52x81x42 mm in size and located 2.5 mm below the skin with irregular borders, significant oedema of the muscular tissue and significant bleeding with a heterogeneous pseudonodular structure. Total mass excision was performed, and the pathology result was pleomorphic liposarcoma. No complication occurred after the surgery. The patient was discharged on the postoperative 4th day. PET CT was conducted a year later, and no recurrence was found. Pleomorphic liposarcomas are soft tissue tumours that are seen rarely in advanced ages. It is essential to remove these rare tumours of soft tissue with wide excision in elderly patients and to monitor them regularly at frequent intervals.

KEYWORDS Liposarcoma, Superficial, pleomorphic

Introduction

Liposarcomas are soft tissue tumours derived from fat cells and are often seen in the lower extremity and retroperitoneum [1]. They make up about 10-30% of soft tissue tumours.[1,2] They are divided into five types as differentiated, myxoid/round, pleomorphic, dedifferentiated and mixed according to the World Health Organization committee’s classification.[3] Pleomorphic liposarcomas are seen at the age of 50 and above and makeup 5-15% of all liposarcomas. They appear as a painless mass, especially in the lower extremities, in advanced ages.[2] Although liposarcomas involving superficial tissues are very rare, they are histopathologically high-grade tumours. However, they have a good prognosis as they are located in a region where they can be excised surgically. Radiologic investigations in terms of diagnosis, differential diagnosis and staging are used for any suspicious superficial mass.[4] Plain radiographic X-rays, ultrasonography, magnetic resonance imaging (MRI) and computed tomography (CT) play an essential role.[4,5] The primary treatment is surgical resection. Local control with adjuvant radiotherapy is added to surgical resection in high-risk cases.[6] Systemic chemotherapy is used if pulmonary or extrapulmonary metastases are present.[7,8]

We aimed to present our experience of superficial liposarcoma found in an adult case.

Case presentation

A single case is reported. A 72-year-old female presented to the Kafkas University general surgery department with a painful mass that had suddenly started growing on the left leg. Physical examination revealed an immobile painful mass 8 cm in
Figure 1: During operation touch area and appearance of skin metastasis.

Figure 2: Excised tissue.

Figure 3: Lipoblasts with pleomorphic, multivacular cytoplasm, indentations, hyperchromatic nuclei.

Figure 4: Myxoid stromal pleomorphic cord, round or epithelial cells.

Figure 5: Tumor cells were strongly diffuse positive stained with S100.

Figure 6: Tumor cells were strongly diffuse positive stained with Vimentin.

Figure 7: Tumor cells were strongly diffuse positive stained with SMA.

Figure 8: Vascular structures were positively stained with CD34.
size on palpation at the left proximal mediolateral femoral region. Superficial tissue USG was conducted. USG revealed a hypoechoicogenic solid mass 52x81x42 mm in size with irregular borders, significant oedema at muscular tissue and significant bleeding with a heterogeneous pseudonodular structure 2.5 mm below the skin. Total mass excision was performed (Figure 1-2). Pathology material revealed pleomorphic liposarcoma (Figure 3-4-5-6-7-8). No complication occurred after the surgery. The patient was discharged on the postoperative 4th day. PET CT was conducted a year later, and no recurrence was found.

Discussion

Pleomorphic liposarcomas are the least common type among the liposarcomas with a rate of 5-15%. They are painless masses with rapid growth and are located at the extremities at a rate of 65% with most in the femoral region in elderly patients[9,10] Our elderly patient presented with a painless mass. These lesions are considered high-grade tumours as they contain high-grade pleomorphic cells and less frequently adipose tissue. They are large tumours, usually with a diameter over 10 cm, with the gross pathology material white and yellow in colour and containing multinodular and necrotic areas. They can be reasonably well-delineated and can infiltrate adjacent soft tissue on the radiological image.[9] Our case had a yellow-white lesion with a diameter of 8 cm that contained occasional necrotic areas, invaded surrounding tissue and infiltrated the skin and subcutaneous tissue. Gebhard et al.[9] reported 14 subcutaneous and 1 cutaneous and subcutaneous pleomorphic variants (15 in total - 25%) among 63 pleomorphic liposarcoma cases. Hornick et al.[10] reported 11 subcutaneous and 5 cutaneous (one 12 cm in size and the form of exophytic dermal polyps) (28%) types among 57 pleomorphic liposarcoma cases in their article. The mass in our case was located cutaneously and subcutaneously. The preferred approach in these cases is excision of the mass. Wide excision or amputation followed by radiotherapy in pleomorphic liposarcomas decreases the local recurrence rate. Wide surgical excision was conducted in our case.10 In general, the prognosis of pleomorphic liposarcomas located in extremities is better than those with a central location.[9,10] This difference is related to the possibility of ensuring an adequate surgical border in extremity tumours.[10] The prognosis is worse in deep subfascial tumours than those on the superficial aponeurosis.[9,10] Prognosis in tumours with a diameter of 10 cm or more is worse than in the smaller ones.10 Sufficient surgical borders could be ensured in our case as the lesion was located superficially. The 10-year local recurrence rate is 19.4% in pleomorphic liposarcomas and 52.2% in recurrent cases. The 10-year distant metastasis rate is 20.6% in primary tumours and 17.4% in recurrent cases. Disease-related survival rates of 10 years are 81% in a primary pleomorphic liposarcomas but decrease to 53% in recurrent pleomorphic liposarcomas. The mass in our case was under 10 cm in size, and no recurrence was found at the 2-year follow-up. In conclusion, the patients should be routinely followed-up for possible recurrence after the excision.

Competing Interests

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References