ABSTRACT

Objectives:
1. To learn the clinical presentation of pleomorphic lipomas
2. To review the gross and histologic findings of pleomorphic lipomas which distinguish them from liposarcomas

Methods:
Case report and review of literature (The PubMed database was searched from 1977 through 2012 using the keywords: pleomorphic lipoma, liposarcoma)

Case Report:
71-year-old man with a posterior neck pleomorphic lipoma

Conclusion:
Pleomorphic lipomas are a rare variant of lipomatous tumors. They typically occur in older males and show a tendency to develop over the posterior neck, shoulder, and back. Clinical presentation and histologic features are essential in diagnosis and in distinguishing them from liposarcomas. Complete surgical excision with clear margins is curative.

INTRODUCTION

Pleomorphic lipomas are a rare variant (less than 200 reported cases in the world literature) of lipomatous tumors. Current management involves complete surgical excision with clear margins.

Despite following a benign clinical course, these well-circumscribed tumors exhibit bizarre histological features. The importance of recognizing this distinct clinicopathological entity is of paramount importance in preventing the misdiagnosis of liposarcoma and, subsequently, subjecting the patient to incorrect treatment protocols.

In order to further clarify this issue, we present a case report of a patient with a posterior neck pleomorphic lipoma and discuss the gross and histological findings of this lesion which distinguish it from its malignant counterpart.

CASE PRESENTATION

A 71-year-old man presented with a long history of a nontender subcutaneous mass in the left posterior neck.

The lesion was slow growing, remaining stable in appearance and size for many years.

On physical examination, the mass was soft, freely mobile, and diagnosed as a lipoma.

INTRAOPERATIVE FINDINGS

The specimen measured 1.8 x 1.1 x 1.1 cm and was soft, spherical, and entirely encapsulated. It was freely mobile and excised completely. Its cut surface was tan in color.

PATHOLOGY

Microscopically, the tumor consisted of a bland spindle cell proliferation within a myxoid stroma containing brightly eosinophilic, coarse collagen bundles and mature adipocytes (Figure 1).

Bizarre, hyperchromatic, multinucleated giant cells were scattered throughout the tumor (Figure 2).

The tumor cells demonstrated diffuse positivity for CD34.

Overall, the histopathological and immunohistochemical findings were consistent with pleomorphic lipoma.

DISCUSSION

Pleomorphic lipomas, benign lipocytic tumors with atypical histological features, are rare lesions found in older males aged 40 to 70 years old. They are typically slow growing and are present for years prior to diagnosis. The overwhelming majority of patients are asymptomatic.

Microscopically, these lipomas consist of a myxoid stroma with fibrous tissue, mature adipose tissue, and dense collagen bundles mixed with pleomorphic and multinucleate giant cells. Frequently, the giant cell nuclei can be arranged concentrically around a central eosinophilic cytoplasm like the petals on a flower, leading to the name of "floret giant cells."

The bizarre histological features can raise the concern for the diagnosis of a liposarcoma. However, in lipomas, the giant cells are usually dotted around singly instead of forming sheet-like masses as seen in liposarcomas. Additionally, the lipomas lack the anaplasia, multivacuolated lipoblasts, necrosis, hemorrhage, and mitoses commonly seen in liposarcomas.

Clinically, pleomorphic lipomas are slow growing. The are found in the subcutis of the posterior neck, back, and shoulder, while liposarcomas tend to arise in the deep tissues of proximal extremities, the inguinal region, and the retroperitoneum.

Excisional biopsy and subsequent tissue analysis are key steps in formulating the appropriate diagnosis, as fine needle aspirate smears can be falsely positive for malignancy.

CONCLUSION

The pleomorphic lipoma, despite its benign clinical course, displays a bizarre histological appearance which can lead to its misdiagnosis as a malignant liposarcoma. Fine needle aspirations may be quick and simple in initially evaluating a palpable mass, but soft tissue diagnosis through histological examination is crucial for confirmation. When approaching lipomatous tumors, the clinician should be mindful of the clinical course, anatomic location, physical characteristics, and histologic features of these lesions.

REFERENCES


It is important to correctly identify a pleomorphic lipoma and distinguish it from a liposarcoma, as the latter will require a significantly different treatment protocol.