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## Pleomorphic lipoma- A rare pseudosarcomatous lesion

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### **Abstract**

Pleomorphic lipoma is a rare benign tumor that can resemble a variety of malignant tumors, most commonly liposarcoma. This pseudosarcomatous lesion is an uncommon variant of lipoma, which has benign behaviour. Two cases of this lesion arising on thigh and posterior aspect of neck respectively along with summarising the principal clinical and morphological characteristics of this rare tumor are presented here. For diagnosis FNAC is the initial investigation followed by confirmation by histology.

**Keywords:** Pleomorphic lipoma, benign tumor, liposarcoma.

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### **1. Introduction**

Lipomas are considered the most common benign soft tissue neoplasm of head and neck [1,2]. There are many variants of lipomas, which are differentiated based on the amount and type of mesenchymal element present. One such variant is pleomorphic lipoma. This is a rare, benign pseudosarcomatous soft tissue neoplasm which typically occurring more commonly in males (4:1) in the age group of 50 and 70 years [3,4]. It is located in the subcutis of the neck and shoulder. Currently, there are fewer than 150 cases of this lesion reported in the world literature [5].

### **2. Case Reports**

#### **2.1 Case 1**

A 45 year old woman presented in OPD with painful and progressively increasing swelling in left thigh since last three years. Initially swelling was not painful, but it so since three month. On physical examination 3x2 cm soft swelling was present on the lateral aspect of left thigh. Other laboratory investigations were within normal limits. FNAC was performed. Smears prepared showed scanty cellularity with presence of mature adipocytes, along with mature fibroadipose tissue fragments. Occasional multinucleate giant cells were present against a background lipoproteinaceous material. On cytological examination, a diagnosis of pleomorphic lipoma was given. Surgical excision was done.

Grossly it was an encapsulated soft tissue piece measuring 3x3 cm. Cut surface was fibrofatty. Histoathopathological examination revealed mature adipocytes with multinucleated giant cells. The giant cells are floret type having wreathlike arrangement of nuclei. There was absence of lipoblasts and no prominent vascularity, which rule out liposarcoma.

#### **2.2 Case 2**

A 50 years old man presented with a swelling progressively increasing in size on the posterior aspect of neck since eight months, measuring 1.5 x 1.5cm. FNAC was performed. Smears prepared showed fibroadipose tissue fragments along with multinucleate giant cells. Surgical excision was done. Grossly an encapsulated fibrofatty soft tissue piece m 1.5 x 1.5 cm was received. Light microscopic examination revealed mature adipocytes, collagen fibres and floret like multinucleated giant cells and absence of lipoblasts. Finally, on the basis of histiology, a diagnosis of pleomorphic lipoma was confirmed.

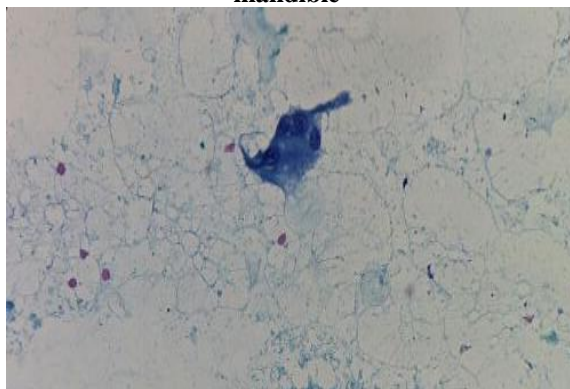
Both the patients were kept on follow up and their recovery is uneventful.



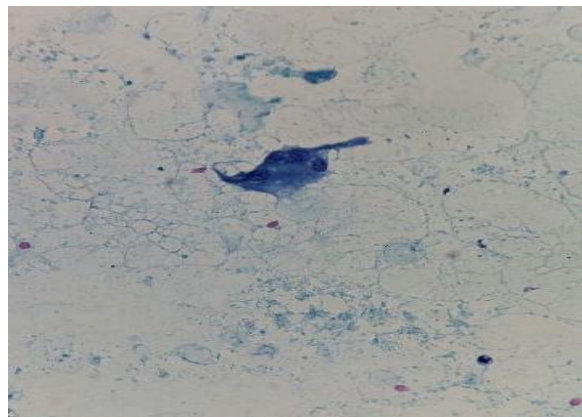
**Figure 1: Case 1, Thigh swelling in right lateral compartment**



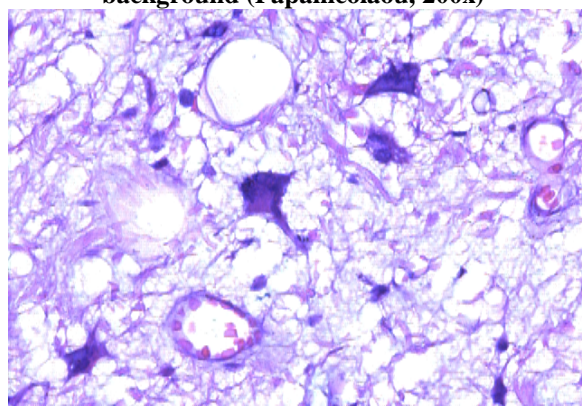
**Figure 2: Case 2, swelling below the angle of mandible**



**Figure 3: FNAC photograph of case 1 showing multinucleate giant cells in fibroadipose background (Papanicolaou, 200x)**



**Figure 4: FNAC photograph of case 2 showing multinucleate giant cells in fibroadipose background (Papanicolaou, 200x)**



**Figure 5: HPE photograph showing mature adipocytes with multinucleated giant cells (H&E 400x)**

### 3. Discussion

Pleomorphic lipoma is a rare benign tumor in adults [1]. The diagnosis of this rare lesion is difficult and should be considered in every growing mass of head and neck region [2]. Fine needle aspiration has been reported as being effective in evaluating subcutaneous lesions especially in the head and neck region [5]. On cytology as well as histology, presence of mature adipocytes suggests benign nature of the lesion and presence of atypical lipoplasts suggests malignant behaviour of lipomatous lesions [6,7]. On cytology large hyperchromatic cells in pleomorphic lipoma can be mistaken for sarcoma like cells though it is actually a benign lesion. Presence of foamy macrophages can further increase the dilemma because they can mimic lipoplasts.[6] On histology absence of lipoblasts and prominent vascularity is suggestive of pleomorphic lipoma and rules out liposaroma[7]. However, pleomorphic lipoma can masquerade as a malignancy on FNAC, therefore histological confirmation should be obtained prior to definite therapy

#### 4. Conclusion

To conclude, it is reiterated that correct diagnosis of pleomorphic lipoma on cytology is imperative. An erroneous diagnosis of liposarcoma on cytology will entail undue patient morbidity due to extensive and wide local excision

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