

GIANT LIPOMA – AN ATYPICAL PRESENTATION

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ABSTRACT

Lipomas are most common benign mesenchymal tumours in the body that are composed of mature adipocytes. They are usually small in size and are frequently found in thigh, shoulders and extremities. We report a case of 45 yr old male with a giant lipoma involving the ant abdominal wall that was clinically misdiagnosed as a malignant tumour due to its rapid growth since a month and the size of the mass.

KEYWORDS: Lipoma, Benign tumours, Giant.

INTRODUCTION

Lipomas are otherwise known as an ubiquitous tumor or universal tumor^[1] as it can be found virtually in almost all the organs^[2] of the body where fat normally exists. They are usually subcutaneous but may develop in other places, for example, intermuscular, subfascial, parosteal, subserous, submucous, intra-articular, subsynovial, subendocardium, subepicardiac, myocardial, subdural or extradural. Solitary lipomas are more common in women, and multiple tumours (referred to as lipomatosis) are more common in men. Clinically smaller lipomas presents as a painless subcutaneous swelling which can be surgically excised, however larger and deeper lipomas may present either with pain due to local pressure effects or cosmetic disfigurement. They pose therapeutic challenge for the surgeons when it involves deeper tissues or present around great vessels. We discuss here a case of 45 yr male presenting with a huge pendunculated mass on ant abdominal wall of 30 yrs duration that was suspected to be malignant due to rapid growth since one month, which to our surprise was diagnosed as giant lipoma on FNAC and was further confirmed on biopsy.

CASE REPORT

A 45-year-old male patient presented with complaints of a pendunculated huge swelling in the anterior abdominal wall with a dragging sensation and at times a dull aching pain in the groin area on and off for the past 2 months. The swelling was present since 30 long years and was small in size but gradually was progressive and reached upto the present size in past one month. An X-ray revealed a soft tissue swelling with no bony involvement.

A magnetic resonance imaging (MRI) scan was done which revealed a well-circumscribed soft tissue swelling with septations, raising the suspicion of malignancy. With such a huge swelling on the abdominal wall and in a short span of time, the clinicians had sent the patient for FNAC to rule out malignancy [?possibility of sarcoma]. On examination swelling was approximately 25x22 cms, pendunculated, nontender, soft in consistency, non compressible with well-defined margins (Figure 1). The swelling was not fixed to the skin or underlying structures. To our surprise, Fine needle aspiration cytology (FNAC) of the swelling revealed mature fat cells suggestive of a lipoma [Figure2(a)(b)]. After complete excision sample was send for histopathological study. Grossly it was a skin lined grayish white globular tissue measuring 27x25x20 cm, cut section was yellowish, soft, homogenous [Fig 3 (a)(b)(c)]. Five sections were given from huge mass and other firm areas which appeared suspicious. Biopsy from all the sections showed findings consistent with Giant lipoma [Fig 4(a)(b)]. No secondary changes or any evidence of malignant transformation seen in the sections studied.



Fig. 1: Clinical pic showing a pendunculated swelling on the anterior abdominal wall.



Fig. 3: (b)(c)- Showing excised abdominal lump in toto measuring 27x25x22.

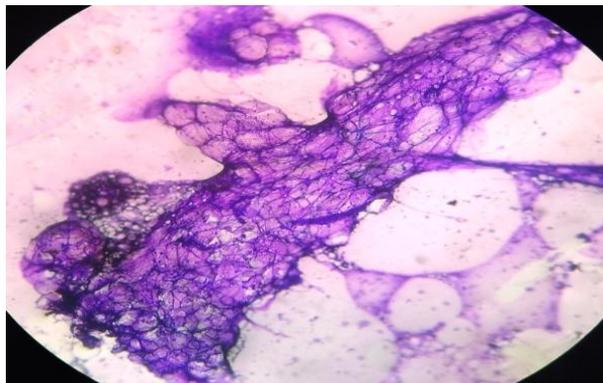
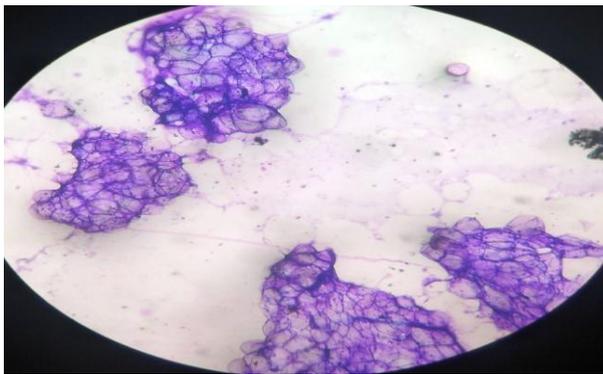


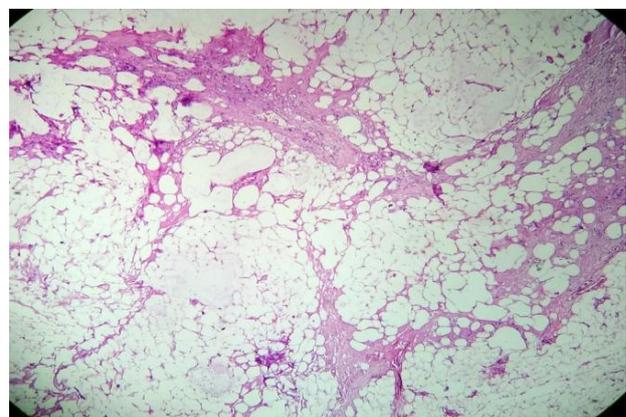
Fig. 2: (a) LowPower (b) HighPower [FNAC] Diff Quik Stain - Showing clusters of mature adipocytes over fatty background.



Fig. 3(d): c/s shows Lobulated yellowish areas, soft and homogenous.



Fig. 3(a): Huge abdominal mass weighing 1.9 kgs.



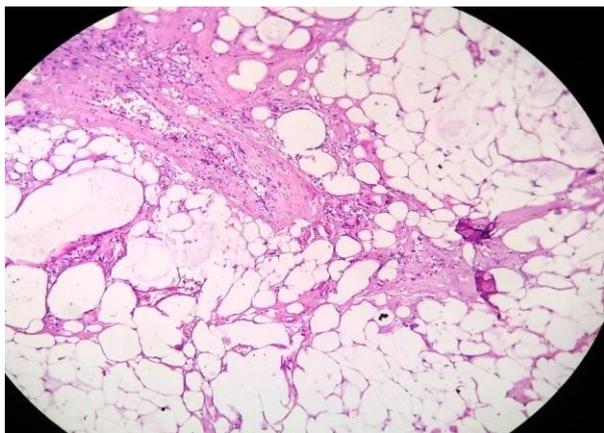


Fig. 4(a) [scanner] (b) [lowpower] –Histopathology – Shows sheets of mature adipocytes

DISCUSSION

Lipomas are mesenchymal tumours that constitutes 5% of all benign tumours of the body and can be found anywhere in the body. They are slow growing, painless, mobile, non-fluctuant, soft masses and are generally well encapsulated. The lipomas can be single or multiple and are typically asymptomatic (smaller mass). Symptomatic (larger mass) exert pressure on surrounding tissues and structures and may compress neurovascular structures.

Multiple lipomas if seen in women, are usually seen in a familial setting.^[3] Sometimes the lipomas are associated with syndromes such as multiple lipomatosis^[4], Gardner's syndrome, Dercum's disease (multiple painful subcutaneous lipomas), and Madelung's disease (lipomatosis of the neck, the head, the shoulders and the proximal extremities).

For a lipoma to be referred to as "giant," it should be at least 10 cm in diameter or weigh a minimum of 1000 grams^[3,5], as was the case in our patient. Its large volume is the cause of multiple health problems such as pain, difficulties in sleep, compression of nerves or vital structures^[3] and in some cases associated with social stigma (keeping lipoma discreet in clothing /difficulty in dressing.) The mechanism behind such gigantic growth is unclear and is still a matter of debate. A few studies have postulated the role of trauma suggesting that blunt trauma can cause rupture of the fibrous septa and anchorage connections between the skin and deep fascia allowing the adipose tissue to proliferate rapidly. One theory suggests that trauma-related fat herniation through tissue planes creates so-called pseudolipomas. It has also been suggested that trauma-induced cytokine release triggers preadipocyte differentiation and maturation.^[6]

Diagnosis is primarily clinical however such large size of the tumour may mimic malignancy, which needs to be ruled out. In addition to FNAC that is conclusive in diagnosing lipomas of small size, MRI^[7] also serves as the best diagnostic modality to confirm diagnosis and plan for effective surgery in cases of giant lipomas and differentiating lipomas from liposarcomas. On magnetic

resonance imaging (MRI), the lipomas have well-defined margins with a uniform signal intensity of fat on all sequences (best confirmed using fat-suppressed sequences). The margin of lipoma is clearly defined as 'black rim', distinguishing them from surrounding fat.^[8] Calcification if any is rare, forms centrally within an area of ischaemic necrosis but more commonly it is feature of liposarcoma.^[9] Other findings indicative of liposarcoma on MRI includes male sex, advanced age, thick septa, nodularity, reduced fat composition^[10] and invasion of underlying tissue. In our case MRI revealed well circumscribed soft tissue swelling with septations, raising the suspicion of malignancy. It however delineated the extent of the tumour in relation to its adjacent structures thus helping surgeons in planning the incision and surgery. Histo logically lipomas shows mature adipocytes in clusters and sheets where as liposarcoma shows immature adipocytes (lipoblast) and multivacuolation with indented and hyperchromatic nuclei.^[11]

A long-standing lipoma may undergo myxomatous degeneration, saponification, calcification, infection, ulceration due to repeated trauma and malignant change. A malignant transformation of lipoma into liposarcoma has rarely been described in literatures.^[12] In our case, the patient despite having the swelling for 30 yrs long showed no other secondary changes or any evidence of malignant transformation histopathologically.

CONCLUSION

lipomas can have unusual presentations. Giant lipomas in an elderly patient may mimic malignancy. While lipomas can be clinically diagnosed, a differential diagnosis of liposarcoma may be considered in a firm, painless, enlarging subcutaneous lesion. For managing a case of Giant lipoma coining both cytology with histopathology study and imaging study (CT/MRI) is very useful.

REFERENCES

1. Hafeez A, Darzi A, Zargar HR, et al: Giant lipoma. The Internet Journal of Plastic Surgery, 2007; 4(2).
2. Devis C Jr., Gruhn JG. Giant lipoma of the thigh. Arch Surg., 1967; 95: 151.
3. Mazzocchi M, Onesti MG, Pasquini P, et al. Giant fibrolipoma in the leg - a case report. Anticancer Res., 2006; 26: 3649-54.
4. Kenawi MM. 'Squeeze delivery' excision of subcutaneous lipoma related to anatomic site. Br J Surg, 1995; 82: 1649-50.
5. Verdin V, Preud'Homme L, Lemaire V, et al. [Giant lipoma on the back]. Rev Med Liege, 2009; 64: 414-7.
6. Signorini M, Campiglio GL. Posttraumatic lipomas: Where do they really come from? Plastic Reconstr Surg, 1998; 101: 699-705.
7. Sundaram M, Baran G, Merenda G, et al. Myxoid liposarcoma: magnetic resonance imaging appearances with clinical and histological correlation. Skeletal Radiol, 1990; 19: 359-62.

8. Austin R, Mack G. Infiltrating (intramuscular) lipoma and angioliipoma – A clinicopathologic study of six cases. *Arch Surg*, 1980; 115: 281-4.
9. Chikui T, Yonetsu K, Yoshiura K, Miwa K, Kanda S, Ozeki S *et al.* Imaging findings of lipomas in the orofacial region with CT, US, and MRI. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, 1997; 84: 88-95.
10. Kransdorf MJ, Bancroft LW, Peterson JJ, et al. Imaging of fatty tumors: distinction of lipoma and well-differentiated liposarcoma. *Radiology*, 2002; 224: 99-10.
11. Weiss SW. Lipomatous tumours. *Monogr Pathol*, 1996; 38: 207-39.
12. Mentzel T. Cutaneous lipomatous neoplasms. *Semin Diagn Pathol*, 2001; 18: 250-7.