

Elderly rural female with giant neglected subcutaneous lipoma of forearm: A case report

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ABSTRACT

Lipomas of the upper limb more than 5 cm are defined as “giant lipomas.” Patients with huge mass on the forearms and hands rarely neglect the problem and seek medical attention because of difficulty in performing day-to-day activities and cosmetic reasons. Here, we present a case of “giant lipoma” of the forearm measuring 10 cm, which was neglected for over 15 years in an 82-year-old female from a rural background. Although extremely rare, “subcutaneous giant lipomas” of the forearm should be considered in the differential diagnosis of painless, slowly growing, neglected swellings. Optimal management requires histopathology to rule out “well-differentiated liposarcomas”. The case highlights the fact that even though lipomas of the upper limb are limited to 2 cm in size, however, if neglected, they may grow enormously and become “giant lipomas” over many years. The case also highlights the uncared chronic medical ailments of elderly rural females in developing countries.

Key words: Forearm lipoma, Giant lipoma, Neglected lipoma

Lipomas, accounting for almost 16% of all soft-tissue mesenchymal tumors, are among the most common benign tumors. They are caused by the proliferation of adipocytes, usually limited to 2 cm in size, and are known to occur almost throughout the body, attached to the neighboring tissue [1]. Subfacial, deep lipomas account for approximately 1% of lipomas, whereas, the total incidence of lipomas in the general population is around 2.1%. Lipomas slowly grow as painless masses over many years and produce cosmetic symptoms; very rarely, they may cause neurovascular compression also [1]. Giant lipomas comprise about 1% of lipomas and a “giant lipoma” of the forearm and hand is defined as a lesion that is more than 5 cm in size [2]. Even though lipomas of the upper limb are common, it is extremely rare to find “giant lipomas” of the forearm and hand [3].

Herein, we describe a very rare case of giant lipoma of the forearm reaching a size of almost 10 cm that was neglected for 15 years in an elderly female of 82 years from a village in Haryana.

CASE REPORT


An 82-year-old female from a village in Haryana, India, was brought to the surgical outpatient department of our hospital by

her grandson. The patient had a huge painless mass over her left forearm on the ventral aspect (Fig. 1). As per the history, the mass had appeared 15 years ago and had increased slowly. However, during the last 2 years, the mass had increased rapidly in size, causing significant difficulties in performing daily activities. Over a period of time, the mass reached its present size.

On general examination, the patient was a decrepit elderly female, with vitals, physical examination, and systemic examination within the acceptable range for doing surgery. On doing the local examination, the mass was about 2–3 cm distal to the cubital fossa, measuring about 10 × 10 cm, was freely mobile, subcutaneous, solid, soft, looking well-circumscribed, and the overlying skin was normal. No neurovascular compromise was noticed. The patient was admitted, and imaging was advised.

Ultrasonography (USG) revealed a well-defined heteroechoic lesion measuring approximately 9.5 × 9 × 6.5 cm in the subcutaneous plane without any internal vascularity. A provisional diagnosis of lipomatous lesion was made, and fine-needle aspiration cytology (FNAC) was advised. On FNAC, the smears showed clusters of mature adipocytes with spindle-to-oval-shaped nuclei in a background of red blood cells (Fig. 2). Features were consistent with a benign lipomatous lesion, and surgical excision followed by histopathology was advised.

The patient was prepared for surgery, and the laboratory investigations were within normal limits. Under all aseptic

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precautions, an axillary block was done, and management of the case was carried out by completely excising the lipoma. After an elliptical incision was made, the tumor was shelled out completely. The tumor, after being released from the fascia, was separated from underlying tissues by sharp dissection. The feeding vessel in the pedicle was tied carefully and cauterized. The tumor was then removed in one piece. The specimen was sent for histopathological evaluation.

Histopathological evaluation was done and grossly the mass was well-circumscribed, non-encapsulated round lesion that on the cut surface had color and consistency similar to normal adipose tissue (Fig. 3a). Microscopically, the lesion had a pushy margin, and was homogeneous, composed of mature adipose tissue with adipocytes of roughly the same size. No significant mitotic activity or atypia was recognized (Fig. 3b). Thus, histopathology confirmed the diagnosis of a “giant lipoma.” The postoperative course was uneventful, and there was no evidence of recurrence.

DISCUSSION

Lipomas, also named “innocent tumors,” are slow-growing tumors that are unencapsulated and remain circumscribed

without infiltrating surrounding structures. They are most commonly seen between 40 and 60 years of age [4]. Giant Lipomas of the forearm and hand grow as painless masses enlarging slowly in size over many years. Although subcutaneous lipomas <5 cm in size of proximal extremities, upper back, and abdomen are common, “giant subcutaneous lipoma” of the forearm is an uncommon finding [5]. This may be due to the reason that medical attention is sought early by the patient due to cosmetic symptoms and interference with day-to-day chores.

Although the etiology of lipomas is unclear presently, many factors have been associated with the occurrence of lipomas. These include factors such as genetic, metabolic, traumatic factors, obesity, and hypercholesterolemia, stimulation of adipocytes by hematomas and fatty tissue necrosis [1,6,7]. In one of the studies done by Aust *et al.*, 34 lipomas were “post-traumatic” out of 170 lipomas [8]. However, in the present case, there was no such history of any trauma.

Symptoms of lipomas include soft, painless, well-defined swelling growing slowly over many years. In the region of the forearm and hand, it may lead to difficulties in performing day-to-day tasks and cosmetic problems. “Giant Lipomas” could lead to surrounding tissue compression, causing neurovascular symptoms [9].

Imaging studies are diagnostic in 71% of lipomas with various modalities like plain radiography, USG, computed tomography (CT), and magnetic resonance imaging (MRI) providing valuable information. Radiographs show lipomas as characteristic radiolucent areas with “water-clear density.” Thus, lipomas are the only soft-tissue tumor that can be diagnosed reliably by radiographs [2,10].

USG has the advantage that the patient is not exposed to radiation and the procedure is low cost and the result is obtained quickly. On USG, the lesion is mostly isoechoic, without any shadowing and no flow with color Doppler. CT shows mass to be well-circumscribed, with low attenuation and areas of calcification in some cases. MRI shows the same signal as subcutaneous fat in all sequences. MRI allows visualization of the tumor and its relationship to the surrounding neurovascular structures. In case of any infiltration into the neighboring structures, liposarcomas are suspected [2,5,6].



Figure 1: Preoperative picture of patient with giant forearm mass

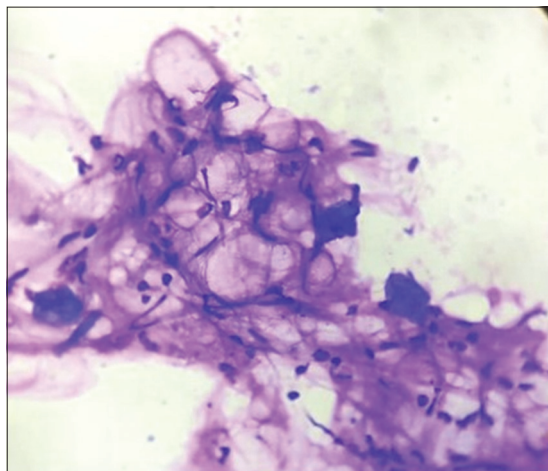


Figure 2: Fine needle aspiration cytology slide using may grunwald giemsa staining method at ×40 magnification. Micrograph shows clusters of mature adipocytes with single lipid large droplet

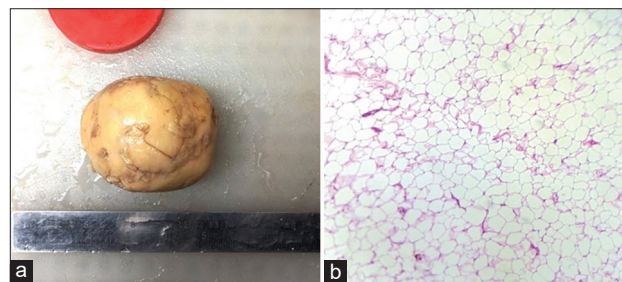


Figure 3: (a) Grossly the mass was un encapsulated, well circumscribed, round lesion that on cut surface had color and consistency similar to normal adipose tissue; (b) histopathological slide using hematoxylin and eosin staining method at ×10 magnification examination micrograph showing the lesion to be homogenous composed of mature adipose tissue with adipocytes of roughly the same size. No significant mitotic activity or any atypia was recognized

Table 1: Table of some recent and interesting “giant lipomas” of forearm and hand

| Author | Year | Age/sex | Site and size | Management | Histopathology |
|-----------------------------|------|----------------|-----------------------|-------------------------------|---------------------------------|
| Singh <i>et al.</i> [12] | 2024 | Elderly/female | Right wrist (9.2 cm) | Excision with primary closure | Giant lipoma |
| Georgiev <i>et al.</i> [13] | 2022 | 60/male | Left hand (8 cm) | Excision with primary closure | Giant lipoma |
| Barreira <i>et al.</i> [14] | 2020 | 63/female | Right hand (5.1 cm) | Excision with primary closure | Giant lipoma |
| Allen <i>et al.</i> [15] | 2007 | 53/female | Right forearm (12 cm) | Excision with primary closure | Well-differentiated liposarcoma |
| Present case | 2025 | 82/female | Left forearm (10 cm) | Excision with primary closure | Giant lipoma |

FNAC Correlation is advised in some cases of lipoma provisionally diagnosed on imaging. FNAC shows clusters of mature adipocytes with a single large lipid droplet. Inconspicuous nuclei are seen [5]. A biopsy is necessary in case of “giant lipomas,” especially if the tumor size is > 10 cm, deep-seated, with atypical cells on FNAC or MDM 2 gene “murine double minute 2 gene” amplification, or if there is infiltration into the surrounding tissue, or the mass is non-homogeneous. In such cases, “well-differentiated liposarcomas” should be excluded. Other lesions that are included in the differential diagnosis are angiolipoma and spindle cell lipomas [1,5].

Treatment of lipomas involves surgically removing the tumor. It is considered the gold standard treatment because it relieves the patient of the functional and cosmetic symptoms produced by the tumor [2]. Surgical excision followed by HPE should be performed especially in cases of “giant lipomas” and where malignancy is suspected. Surgical resection requires complete dissection and removal of the whole of the lipomatous tumor to prevent any future recurrences [1,5].

In general, lipomas are usually smaller than 5 cm in 80% of cases, with only 1% of lipomas reaching the size of 10 cm and more. Giant lipomas of the forearm and hand are rare as compared to other body parts and are defined as having a size of 5 cm or more. Giant lipomas of the forearm and hand, with a size reaching 10 cm or more like in the present case, are even more unusual, with only a handful of cases [11]. Some of the interesting and recent giant lipomas of the forearm and hand are tabulated in Table 1 [12-15].

CONCLUSION

Finally, it should be accepted that not all lipomas are treated early, and some of them, as in the present case, are neglected to reach enormous size and become “giant lipomas.” Although extremely rare, “subcutaneous giant lipomas” of the forearm and hand should be considered in the differential diagnosis of painless, slowly growing, neglected swellings. Optimal management includes proper clinical examination, imaging, FNAC, surgical excision, and histopathology to rule out “well-differentiated liposarcoma.” The case also highlights uncared chronic medical ailments in elderly rural females of developing countries.

CONTRIBUTORS DETAILS

Shujaat Khan (designing, drafting, writing, interpretation, final approval, and corresponding author); Shweta Chaturvedi (conception, revising and final approval); Shahnaz Parveen (Interpretation, revising

and final approval); Diksha Sharma (acquisition of data, revising and final approval); Dr. Sunil Arora (Supervision, Interpretation, revising and final approval); Dr. Brig Vinod Raghava (Overall Supervision, Interpretation, revising and final approval);

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