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CASE REPORT

Congenital multiple giant lipomas of the back: A case report with a 24-year follow-up

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Abstract

Lipomas are the most common benign tumors of connective tissue which can be found in different parts of the human body. In rare cases, their size may be so giant which could be an indication for surgery. Here, we present a case of congenital multiple asymmetrical giant lipomas of the back in a young female. She presented with a chief complaint of physical discomfort due to the giant size and weight of the lipomas. Apart from that, she was in total health. She was born with 5 small lipomas in the back and flank region which had become giant lipomas with estimated weigh around 16 kg in total by the age of 24. The patient underwent seven operations to remove or debulk the mass over a 24-year period since the recurrence of the growths was inevitable.

Considering the size of the mass and differential diagnosis, such as liposarcoma, and since no risk factor or underlying etiology was detected for the patient`s condition, surgical excision was the preferred technique for this case.

Key words: Back, Benign, Congenital, Lipoma, Surgery

Introduction

Lipomas are the most common benign growth of mesenchymal soft tissue which can be found in different parts of the human body. They are well capsulated and are mostly smaller than 2 cm rarely found in giant forms (1, 2). According to the literature, a lipoma with at least 10 cm diameter or 1000 gr weight is considered as a giant lipoma. Lipomas are generally asymptomatic and have a slow progression rate. Giant lipomas may become symptomatic due to compression on surrounding organs or inflammation of adipose tissue. Surgical treatment may be required if they reach significant proportions (1,3, 4).

There are various reports of giant cutaneous lipomas in different parts of the body, mostly solitary growths. Brandler reported a giant lipoma in the back of the scapula weighing 22.7 kg which had progressed gradually over 11 years which was the largest lipoma of the back. To the best of our knowledge, it was removed surgically (5). Multiple congenital cutaneous lipomas are often in the background of another disease and seldom become giant in size or weight.

Similarly, Frank E et al. (1930) reported a 27-year-old male with 160 lipomas distributed almost symmetrically over his body, and none of them were considered giant lipomas (diameter between 0.5- 6 cm). He was diagnosed with neurofibromatosis, and 43 lipomas were excised with local anesthesia at different intervals (6).

Hereby, we report a rare case of congenital multiple asymmetrical giant lipomas of the back.

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Cases

A 24-year-old female presented in this case report with a giant tumor of the trunk and back which resulted in her postural discomfort and made it difficult to fit in her dress (Figures 1-4). She was born with 5 small swellings each of them about 2-3 cm in the back, trunk, and flank region. She had no other signs and symptoms, except for a deformity in metatarsal bones in the right foot without making any problem regarding the standing and walking. Her siblings (a male and a female) were in total good health and had no similar problems. Her body mass index and all laboratory data were in normal ranges. Swellings were examined and multiple biopsies were obtained. Histopathological findings confirmed multiple lipomas. No para-clinic imaging was necessary since physical and histopathological examinations were diagnostic. She underwent surgery at 7 months of age. The surgeon tried to remove all of the lipomas using blunt dissection and longitudinal incision over each lipoma under general anesthesia.

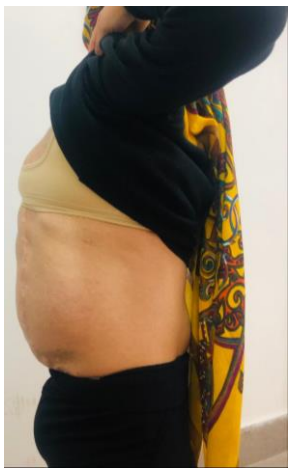
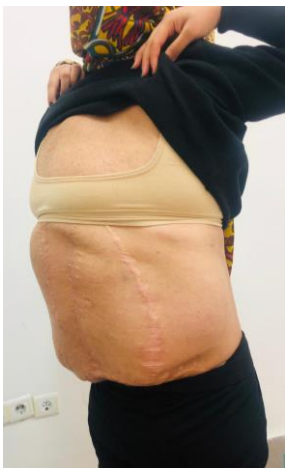
However, lipomas started to grow again after one year. They had very slow progression and did not make any symptoms for the patient. Their growth continued until they became giant tumors with a diameter ranging from 10 to 15 cm. This time, she noticed 2 small lipomas on her thigh with a diameter of about 3 cm.

She had another surgery at the age of 7 years; however, the lipomas started to grow again slowly. In about 2 years, they grow big enough to make her feel physically discomforted because of their enormous size and weight. Moreover, they bothered her cosmetically and she complained about her clothes not fitting anymore. This time, she consulted with different surgeons to try liposuction to extract the lipid tissue. After careful examinations, the surgeons found that it was impossible and ineffective to perform liposuction due to the intramuscular spreading of the lipid tissue.

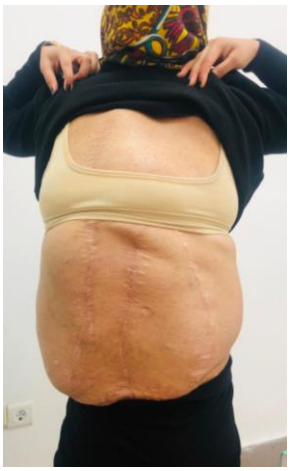
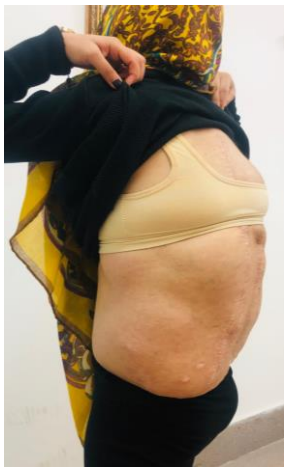
By this time, the total weight of tumors was estimated at about 16 kg and tumors diameters varied from 15 to 30 cm. They grew only in size, not in numbers, and they were invading the muscular tissues beneath them. She underwent 5 other surgeries at the ages of 11, 15, 18, 20, and 24 years. She had not experienced any postoperative complications and had an uneventful recovery every time. The aim was to just debulk the tumors and she was never tumor-free.

After every operation, it took about 2-3 years until the patient came looking for another debulking surgery. All of the surgeries were performed in a prone position under general anesthesia. Lipomas were approached by a longitudinal incision over the bulk (Figure 5), the tumor was excised (Figure 6), and the closure of the incision was achieved in layers after placing a drain. There was considerable bleeding during surgeries; therefore, hemostasis control was performed using electrocautery. Lipomas were not capsulated and it was difficult to dissect the tumors from surrounding tissues and underlying muscles (Figure 7). The postoperative healing process was efficient, and after 2 days, the patient was discharged from the hospital in good general condition. Furthermore, she was requested to refer back in 10 days to be disposed of the drain and stitches.

Histopathologic examination of the specimen

Figures 2-2: Preoperative inspection revealing multiple growths on the back and flank region, as well as the scars caused by previous surgeries

Figures 3-4: Preoperative lateral and posterior views of the patient

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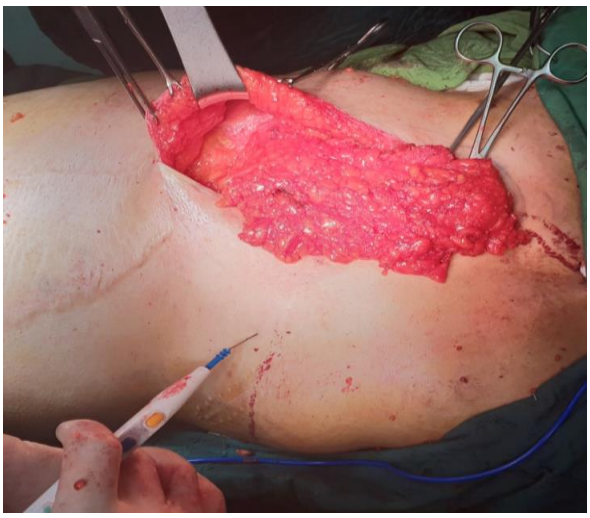

Figure 5: Exposing the subcutaneous tumor over interscapular space with one vertical incision

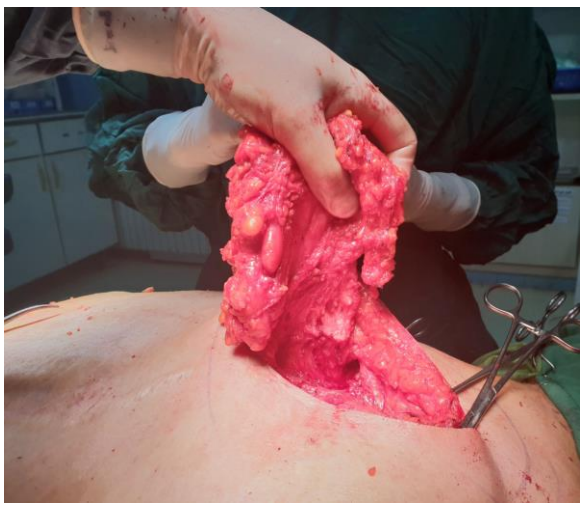

Figure 6: Ligating the pedicle of the mass and excising the tumor

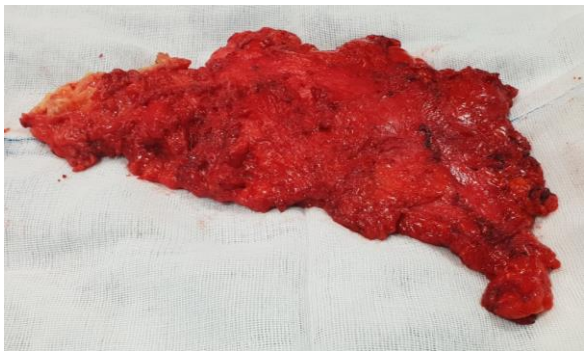

Figure 7: Excised tumor weighing 1340 gr and measuring 20*35*5 cm

confirmed lipoma, and there has been no concern about the presence of an underlying liposarcoma so far.

Discussion

Lipomas are the most frequent connective tissue tumors. They are almost always benign and slow-growing masses which can be found in any part of the body(2); however, most of the giant lipomas were reported in the back and posterior cervical area (5, 7-11) as in our presented case. Lipomas are mostly asymptomatic; nonetheless, some cases of giant lipomas may become symptomatic due to compression on vital organs surrounding the tumor. They can also make functional or cosmetic problems because of their huge size and weight (1, 3, 4).

Sanchez et al. defined giant lipoma as a tumor larger than 10 cm in diameter and 1000 gr in weight (12). In the same line, Brandler reported a giant lipoma weighing 22.7 kg in the back of the left scapula of a young male which had progressed gradually over 11 years and was the largest lipoma of back ever reported.

The present case weighing 1340gr and measuring 35*5*20 cm is the largest cutaneous lipoma that has been reported in the literature in Iran. There is no specific etiology or trigger recognized for lipoma. Trauma, obesity, and hypercholesterolemia have been reported as possible etiologies (13-18). Lipomas also may be found in association with hereditary syndromes, such as Gardner`s syndrome (19). Furthermore, they are generally encountered in middle age (i.e., 40 to 60 years of age), however, they can be seen in all age groups. Congenital lumbosacral and intraspinal lipomas have also been reported in children (20, 21). In our case, the patient had multiple congenital cutaneous lipomas with no background disease or history of trauma; in addition, we did not detect hypercholesterolemia.

Lipomas are found in solitary or multiple forms (i.e., lipomatosis) which are more common among females and males, respectively (22, 23). However, the case presented in this study is a female with multiple tumors on her body. The tumor diagnosis is based on clinical examination. They are usually round, soft, mobile, superficial, and painless masses. If the tumor is asymptomatic, it is better to be left alone without treatment since there is a very low possibility of malignancy (22, 24, 25). Histopathologic study reveals the lobules of mature adipocytes which are usually capsulated. If they are not capsulated, they have a tendency to infiltrate muscles (12). As in the present case, clinical features matched the typical lipoma and histopathologic findings confirmed its diagnosis; moreover, the tumors had infiltrated underlying muscle tissue.

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Nonsurgical treatments, such as liposuction or the injection of steroids may be considered in carefully selected cases; however, surgical enucleation or excision by blunt dissection is still the treatment of choice, especially if there is an intention to cure the tumor (8). In the present case, there was a considerable invasion of adipose tissue to underlying muscular tissues. Therefore, it was impossible to excise the tumor completely. Fortunately, the surgical debulking of the tumors was satisfactory enough for the patient since her chief complaint was cosmetic problems.

Conclusions

Predisposing factors triggering the development of lipoma is still unclear. In the present case, there was no risk factor or underlying etiology for the patient's condition. Therefore, considering the size of the mass invading the muscular tissues beneath them, and differential diagnosis, such as liposarcoma, the surgical excision is still the preferred technique for this case.

Conflict of Interest

There is no conflict of interest to be declared.

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