ISSN: 2977-6139

Case Report

Open Access Journal of Pediatrics Research

Lipoblastoma in Pediatrics: A Case Report of a Huge Axillary One

Mohamed Ahmed Elghazeery[1*], Samah Saud Al Juaid[2] and Rachid Abdellatif Ali Khemakhem[2]

[1]*Pediatric surgery unit, Faculty of Medicine, Tanta University Tanta, Egypt*
[2]*King Faisal Medical complex Taif, KSA*

[*]**Corresponding author**
Mohamed Ahmed Elghazeery, Lecturer of Pediatric surgery, Faculty of Medicine, Tanta University Tanta, Egypt.

Received: November 11, 2024; **Accepted:** November 28, 2024; **Published:** December 04, 2024

ABSTRACT

Lipoblastoma is a rare tumor which is common in children less than 3 years. Lipoblastoma usually presents as a rapidly growing mass in the trunk and extremities but rare in the groin. No malignant degeneration has been documented whereas its high recurrence has been described especially with the diffuse-type lesions (lipoblastomatosis) and after incomplete excision.

Herein, we report a case of an axillary giant lipoblastoma of 6-year-old girl for whom surgical excision was done.

Keywords: Lipoblastoma, Tumor, Pediatrics

List of Abbreviations

CD34	:	Cluster of differentiation 34
RH	:	Right Humerus

Background

Lipoblastoma is a rare tumor of the fatty tissue and common in pediatrics less than 3 years especially in males [1,2]. It may be detected as a localized well-defined tumor (lipoblastoma) or as a multicentric one (lipoblastomatosis) [2]. It can be superficial in the extremities, head and neck, axilla, trunk, mediastinum and retroperitoneum regions showing a rapid pattern of growth. Since the first description in 1926, less than 200 cases were reported [3].

Case Presentation

A 6-year-old girl attended with a two-year history of a lump in right axilla overlying right scapula. It looked like as a small orange but rapidly increased in size over 9 months till reaching the size of a small watermelon without similar lesions all over the body. There was no history of local affection of the overlying skin.

Generally, she was normal without any apparent abnormal signs or generalized lymphadenopathy. Locally, the right axillary mass was well-circumscribed reaching to the right side of thoracic cage from the 2nd to 8th rib and right scapula with intact healthy skin. It was firm, not tender, not freely mobile reaching 15cm × 10 cm in size and the thorax, abdomen and extremities were clinically clear.

Ultrasonography revealed a huge right axillary well capsulated mass without cystic changes or calcification (figure 1a). Magnetic resonant imaging revealed a huge well capsulated lump with fat signal contents seen in the right axilla measuring about 15 × 14×10 cm in anterior posterior, transverse, craniocaudal dimensions respectively. Mass effect was observed on adjacent muscles of anterior chest without obvious enhancement or evidence of invasion of the chest muscles or calcification (figure 1 b, c).

Intraoperatively, excisional biopsy showed an encapsulated, spherical right axillary lump adjacent to the axillary vessels, extending from the roof to the 8th rib in the mid-clavicular line in the long axis and from anterior axillary line to posterior axillary line in the transverse one (Figure 2 a, b). The pectoralis muscles and latissimus dorsi with its neurovascular bundle were stretched due to its large size with the prolonged encasement by the lump, its weight was about 1.5 kg. Complete excision with insertion of a suction drain was done. (Figure 2 c, d, e)

Citation: Mohamed Ahmed Elghazeery, Samah Saud Al juaid, Rachid Abdellatif Ali Khemakhem. Lipoblastoma in Pediatrics: A Case Report of a Huge Axillary One. Open Access J Ped Res. 2024. 1(1): 1-4. DOI: doi.org/10.61440/OAJPR.2024.v1.05

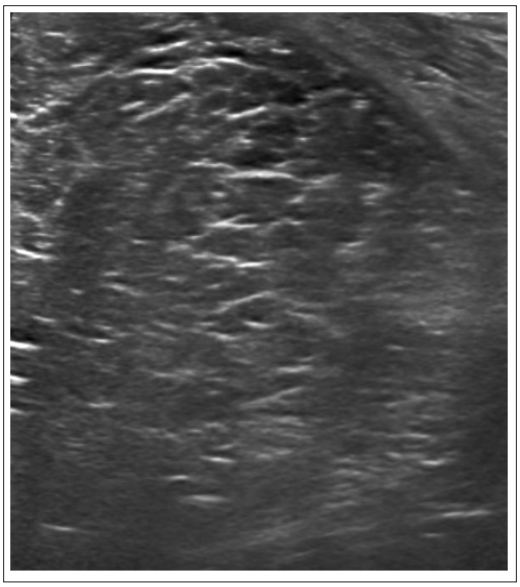

Figure 1a: Ultrasound finding of the mass

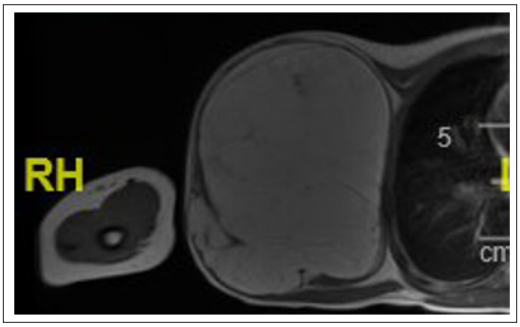

Figure 1b: MRI finding of the mass axial section

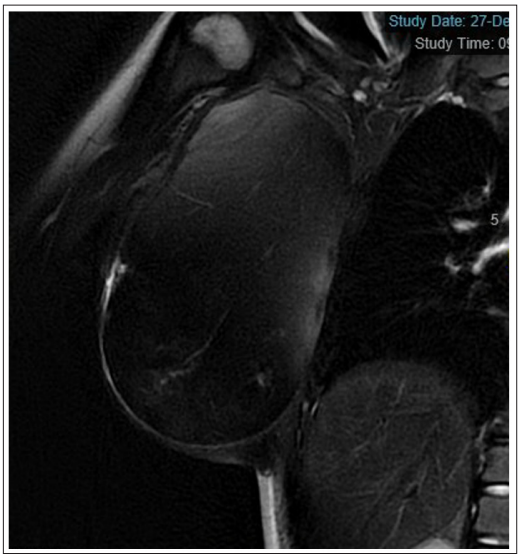

Figure 1c: MRI finding of the mass coronal section

Figure 1: (Radiological findings)

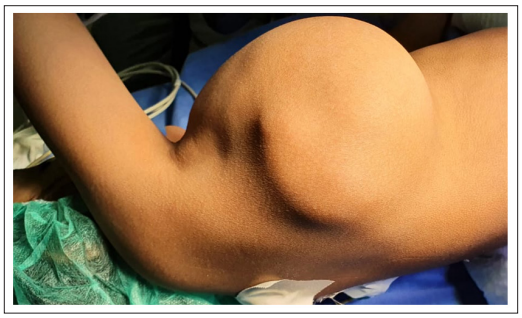

Figure 2a: Huge axillary mass from posterior view lateral position

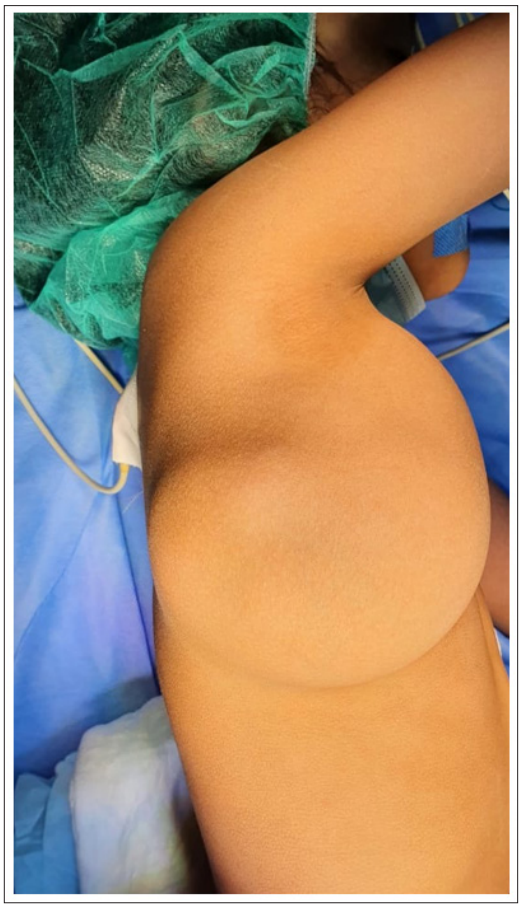

Figure 2b: Huge axillary mass from top view lateral position

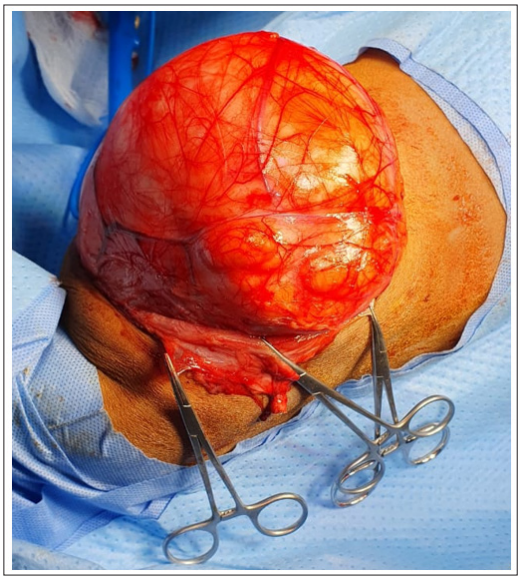

Figure 2c: Dissection of mass

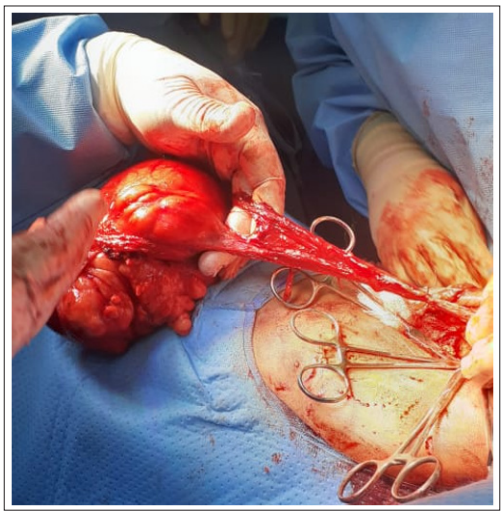

Figure 2d: Complete excision of the mass

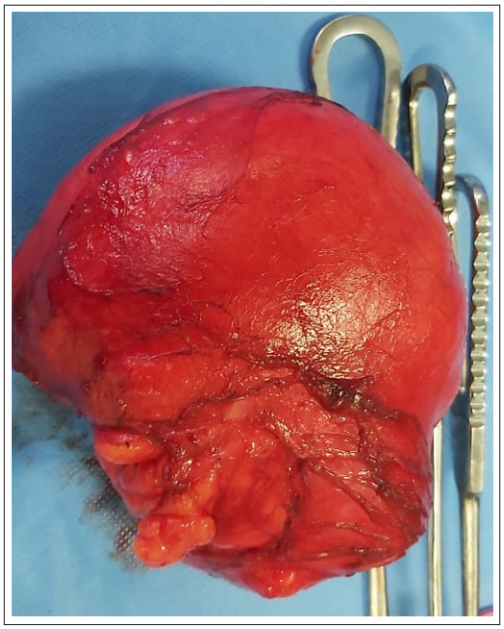

Figure 2e: Specimen

Figure 2: (Operative Findings)

Histopathology revealed a well capsulated lump in form of lobules of mature adipocytes delineated by fibrovascular septa with foci showing plexiform blood vessels, consistent with lipoblastoma with peripheral myxoid stroma entangling spindle cells (Figure 3 a, b, c). Postoperatively, she was discharged 3rd day postoperatively and the follow up was uneventful without any signs of recurrence over one year.

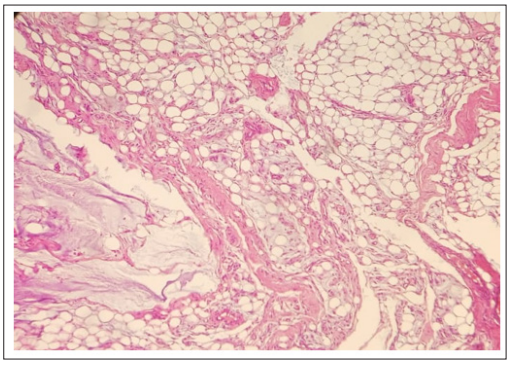

Figure 3a: Hematoxylin &Eosin stain

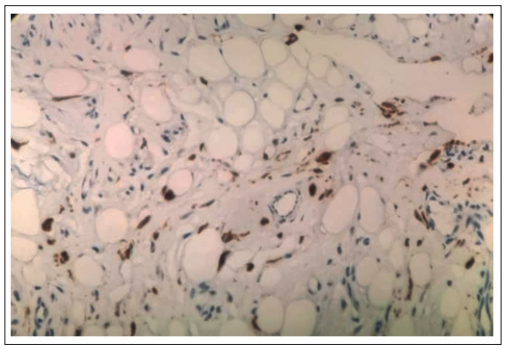

Figure 3b: Desmin stain

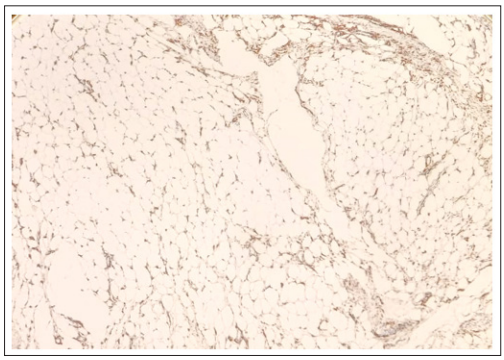

Figure 3c: CD34 stain

Discussion

Lipoblastoma is one of the rare tumors which originate from primitive white fat but it is the second common after lipoma in pediatrics. Usually, it is clinically encountered as a painless lump in the extremities in 46-76% of patients whereas it is rare to be observed in the head and neck, trunk, thoracic wall, abdomen in addition to retroperitoneum [3,4]. Both inguino-labial region and scrotum are described as rare sites [5,4].

Regarding to the extension and plan of surgery, Magnetic resonance imaging is the ideal choice [6]. As regard the size, majority of cases are equal or less than 5 cm; however, huge tumors have been reported in literature.

These tumors are characterized by the rapid growth as in our case, so surgeons need to be oriented of this feature beside its recurrence rate [3]. Lipoblastomas have been identified in two forms: lipoblastoma, the most common well circumscribed, localized lesion that originates superficially and looks like a lipoma, and lipoblastomatosis, the infiltrative diffuse form that grows deeply having a significant recurrence [7]. Lipoblastomas and lipoblastomatosis must be distinguished from the myxoid form of liposarcoma. Liposarcoma is not common below 10 years and shows absence of lobulation with abnormal growth, and high nuclear atypia [8]. Regarding the histopathology, it must be differentiated from lipoma, hibernoma and well differentiated liposarcoma. Lipoblasts or primitive mesenchymal cells are not seen in lipomas while hibernomas are composed of brown fat cells with a central nucleus and abundant finely granular cytoplasm [9].

The complete excision of lipoblastoma is established to avoid the recurrence at the best chance. Despite of the complete excision, the rate of recurrence is 14-25%. Hence, strict patient follow-up is mandatory and is advocated for minimum 5 years later.

No recurrence was documented after complete excision during follow up from 2 months-10 years [10-14].

Conclusion

Lipoblastoma is a rare pathology which grows rapidly. It should be differentiated from any soft tissue tumor in a healthy child with a rapid-growth pattern. Complete excision is the ideal choice to prevent its potential relapse in addition to its mandatory long-term regular follow-up.

Consent to Participate: an informed consent approved from ethical committee was taken from parents

Consent for publication: an informed consent approved from ethical committee was taken from parents for publication

Availability of data and materials: Not applicable

Competing interests: no competing interest

Funding: no funding support

Acknowledgement: On behalf of all contributors, we are delighted to acknowledge all our authors who have contributed with each other to finalize this manuscript to emphasize this important issue in this age group.

Human consent declaration: not applicable

References

1. Jaffe RH. Recurrent lipomatous tumor of the groin: liposarcoma and lipoma pseudomixomatodes. Arch Pathol. 1926. 1: 381-387.
2. Kok KY, Telisinghe PU. Lipoblastoma: clinical features, treatment, and outcome. World J Surg. 2010. 34: 1517-1522.
3. Stringel G, Barry S, Mancer K, Ein SH. Lipoblastoma in infants and children. J Pediatr Surg. 1982. 17: 277-280.
4. Nakib G. Intrascrotal lipoblastoma in ten years old: case report and review of literature. Rare Tumors. 2013. 5: 11.
5. Armenise T, Gentile O, Orofino A, Leggio S, Lanzillotto MP, et al. Lipoblastoma in infant: our experience. J Ped Surg Case Rep. 2015. 3: 63-64.
6. Childress KJ, Hicks J, Wu H, Brandt ML, Adeyemi-Fowode OA. Lipoblastoma of the Labia: A Case Report. J Pediatr Adolesc Gynecol. 2016. 29: 97-99.
7. Fallon SC, Brandt ML, Rodriguez JR, Vasudevan SA, Lopez ME, et al. Cytogenetic analysis in the diagnosis and management of lipoblastomas: result from a single institution. J Surg Res. 2013. 184: 341-346.
8. Mentzel T, Calonje E, Fletcher CD. Lipoblastoma and lipoblastomatosis: a clinico-pathological study of14 cases. Histopathology. 1993. 23: 527-533.
9. Cappellesso R, d'Amore ES, Dall'Igna P, Guzzardo V, Vassarotto E, et al. Immunohistochemical expression of p16 in lipoblastomas. Hum Pathol. 2016. 47: 64-69.
10. Dilley AV, Patdl DL, Hicks MJ, Brandt ML. Lipoblastoma: pathophysiology and surgical management. J Pediatr Surg. 2001. 36: 229-231.
11. Mognato G, Ceccheto G, Carli M, Talenti E, D'Amore ESG, et al. Is surgical treatment of lipoblastoma always necessary? J Pediatr Surg. 2000. 35: 1511-1513.
12. Weiss SW, Goldblum JR. Lipoblastoma. In: Enzinger and Weiss's soft tissue tumors. St. Louis: Mosby; 1995. 384-405.
13. Besouw MT, Verlinde PF, Uyttebroeck AM, Renard MM. Lipoblastoma and lipoblastomatosis: especially in children. Ned Tijdschr Geneeskd. 2011. 155: 3467.
14. Valderrama SJ, Schnettler RD, Zamorano HM, Lahsen HJP. Retroperitoneal lipoblastoma in an infant. A case reports. Rev Chil Pediatr. 2016. 87: 199-203.

???