



E-ISSN: 2708-1508
P-ISSN: 2708-1494
IJCRS 2025; 7(1): 01-04
www.casereportsofsurgery.com
Received: 01-10-2024
Accepted: 06-11-2024

Mohammed Benlili
Department of Plastic and
Reconstructive Surgery,
Mohamed VI Hospital
University, Oujda, Morocco

Oujidane Mansouri
Department of Plastic and
Reconstructive Surgery,
Mohamed VI Hospital
University, Oujda, Morocco

Ghita Belmaati Cherkaoui
Department of Plastic and
Reconstructive surgery,
Mohamed VI Hospital
University, Oujda, Morocco

Ayat Allah Oufkir
Department of Plastic and
Reconstructive Surgery,
Mohamed VI Hospital
University, Oujda, Morocco

Corresponding Author:
Mohammed Benlili
Department of Plastic and
Reconstructive Surgery,
Mohamed VI Hospital
University, Oujda, Morocco

Atypical large congenital lipoma of the scalp: Case report of a 7-month-old infant

Mohammed Benlili, Oujidane Mansouri, Ghita Belmaati Cherkaoui and Ayat Allah Oufkir

DOI: <https://doi.org/10.22271/27081494.2025.v7.i1a.128>

Abstract

Introduction: Lipomas are the most common benign mesenchymal tumors, with congenital cases being rare. In children, lipomatous tumors account for 6% of soft tissue tumors, and the head and neck are involved in 13% of cases. This report presents an atypical case of a large congenital lipoma on the scalp of a 7-month-old infant.

Case Report: A 7-month-old infant was referred with a firm, painless occipital mass, first noticed at birth and gradually increasing in size. The mass measured 70 mm × 28 mm on examination. Imaging, including ultrasound and CT, revealed a heterogeneous formation with fatty density. Surgical excision was performed, and the postoperative course was uncomplicated.

Discussion: Lipomas in children are uncommon, and imaging modalities like ultrasound, CT, and MRI are key in diagnosis. This case emphasizes the challenges in diagnosing atypical congenital lipomas, where histological examination is crucial for confirmation.

Conclusion: A rare, large congenital lipoma in an infant presented atypically. Surgical excision and histological examination confirmed the diagnosis, highlighting the importance of considering this diagnosis in similar cases.

Keywords: Lipoma, congenital lipoma, scalp mass, head and neck tumor

Introduction

Lipoma is the most commonly encountered benign mesenchymal tumor and can form in any location containing adipose tissue (1). In children, lipomatous tumors account for approximately 6% of all soft tissue tumors (2). The head and neck region is involved in 13% of lipoma cases (3). However, congenital lipomas are extremely rare (4).

This report presents an atypical case of a large congenital lipoma located on the scalp of a 7-month-old infant.

Case Report

This case involves a 7-month-old infant who presented with an occipital mass, first noticed at birth by the mother. The mass, approximately 1 cm in size, gradually increased over time and was firm and painless. The pregnancy was well-monitored, carried to term, and the delivery was a medically supervised vaginal birth without the use of a vacuum. There were no similar cases in the family.

On general clinical examination, the infant appeared normal. Head and neck inspection revealed an occipital mass without signs of microcephaly or macrocephaly, with a head circumference of 44 cm. Palpation showed the mass to be firm, mobile relative to deeper tissues, and the skin over the mass could be pinched; it was painless and measured 70 mm × 28 mm, with normal skin and no inflammatory signs. Neurological examination showed normal muscle tone, with no signs of stiffness or hypotonia, and unremarkable ocular reflexes, oculomotor coordination, and light reactivity. The infant responded appropriately to auditory stimuli. Paraclinical examinations, including an ultrasound, revealed a heterogeneous, poorly defined fluid formation in the occipital soft tissues, with no intracranial communication. A complementary CT scan showed a homogeneous echogenic formation with fatty density septations (-93 HU), measuring 72 × 25 mm, surrounded by a 6 mm thickened wall. Surgical excision was performed under general anesthesia in the prone position. A skin incision along the orientation of the hair follicles allowed access to the well-defined fatty mass, which was dissected, delivered, and extracted. Hemostasis was achieved, and closure was performed over a drain.

The postoperative course was uncomplicated, and the infant was discharged the next day.

Discussion

Lipomas are benign mesenchymal tumors composed of mature adipocytes. They are particularly common in adults aged 40 to 60 years and are rare in individuals under 20 years of age (5). The exact etiology of lipomas remains unclear, though research suggests that genetic, endocrine, and traumatic factors may contribute. Additionally, lipomas can be associated with various syndromes, such as Gardner's syndrome, Madelung's disease, and Dercum's disease [2].

While classic lipomas are uncommon in children, lipoblastoma and lipoblastomatosis are more frequently diagnosed in pediatric patients [3]. These lesions often present clinically as mobile, painless, and palpable masses. However, due to their slow growth, lipomas may also be detected incidentally without symptoms. Larger lipomas can cause various symptoms by compressing surrounding tissues [6]. In our infant case, the mass was asymptomatic; however, its size prompted the family to seek medical consultation.

Lipomas can be either encapsulated or unencapsulated and may contain areas of non-adipose tissue, such as fibrous tissue, cartilage, bone, or myxoid tissue, which can resemble other tumors on imaging [5]. Ultrasound (US) is the first-line investigative method, especially in children, as lipomas typically appear as masses with variable echogenicity. If encapsulated, the capsule may be challenging to detect (5). Biopsy-proven lipomas exhibit a broad range of appearances, with significant variability between readers [7]. Superficial lipomas are typically isoechogenic and homogeneous [8], and may also show additional ultrasound characteristics, such as the absence of acoustic shadowing and minimal or no color Doppler flow.

In computed tomography (CT), the classic appearance of a lipoma is a superficial, well-circumscribed, low-attenuation mass (typically around -65 to -120 HU) with minimal internal soft tissue components [5]. However, MRI is the preferred imaging modality for lipomas, not only to confirm the diagnosis (often strongly suggested by ultrasound and CT) but also to better evaluate any atypical features [9]. Lipomas generally exhibit a signal pattern similar to subcutaneous fat across all MRI sequences: T₁: High signal, saturates on fat-saturated sequences, with no or minimal enhancement. T₂: High signal on fast spin-echo (FSE) T₂, saturates on fat-saturated sequences.

When no suspicious features are observed, MRI can confirm a lipoma diagnosis with 100% specificity [10].

Our lipoma case was intriguing due to its atypical presentation. An ultrasound was requested, revealing a heterogeneous, poorly defined fluid formation within the occipital soft tissues, with no intracranial communication observed. A complementary CT scan was then performed, which showed a homogeneous echogenic mass with fatty density septations (-93 HU), measuring 72 × 25 mm and surrounded by a thickened 6 mm wall. Based on these findings, a diagnosis of a fatty mass could not be confirmed, and other differential diagnoses for a scalp mass in an infant, such as cephalocele, dermoid and epidermoid cysts, vascular malformation, or teratoma, were considered.

We decided to explore the mass surgically. In the operating room, we found a well-defined, dissectible, non-

encapsulated, whitish subcutaneous mass. Excision was performed, followed by closure with drainage. The accepted treatment protocols for head and neck lipomas generally include surgical excision and liposuction-assisted removal. Potential complications may include skin irregularities, paresthesias, and edema [3].

Microscopically, lipomas appear as well-defined masses composed of mature adipocyte lobules and a central vacuole [11]. The histologic differential diagnosis includes other adipose tumors, such as lipoblastoma, a rare neoplasm primarily affecting infants and young children under the age of 3 [10]. Lipoblastoma is more frequently diagnosed in pediatric patients (1) and appears as immature fat cells in varying stages of maturity, with septa separating them into lobules [10].



Fig 1A: The image shows a 7-month-old infant with a well-defined, rounded mass located in the occipital region of the head.



Fig 2B: This sagittal CT scan shows a well-defined, homogeneous occipital mass. The lesion is extracranial, with no intracranial communication or significant compression of adjacent tissues.



Fig 3C: Intraoperative image of a 7-month-old infant showing the excised occipital mass with a cerebriform, lobulated appearance following dissection and mobilization.

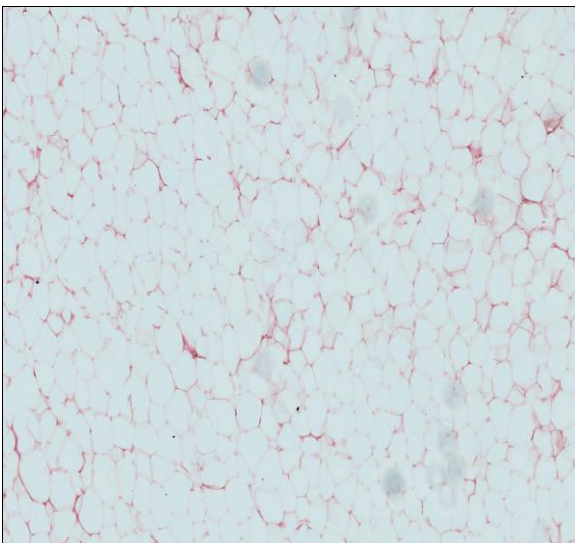


Fig 4D: Photomicrograph of the lesion reveals a mature adipocytic proliferation without spindle or stellate cells or lipoblasts (H&E, x200).



Fig 5E: This image, taken one year post-surgery, showing no signs of recurrence and a normal appearance of the occipital region.

Conclusion

This case highlights a rare benign mass in an infant, which can be challenging to diagnose without histologic examination. The patient's presentation was atypical for a lipoma, as the tumor was located axially, rather than in the more common peripheral areas. We hope to raise awareness of this diagnosis, particularly as more cases are being identified.

Conflict of Interest

Not available

Financial Support

Not available

References

1. Furlong MA, Fanburg-Smith JC, Childers EL. Lipoma of the oral and maxillofacial region: site and subclassification of 125 cases. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics*. 2004;98:441-450.
2. Özşen M, Yalçinkaya U, Yazici Z, Sarisözen MB. Lipomatous tumors in pediatric patients: a retrospective analysis of 50 cases. *Turkish Journal of Pathology*. 2020;36(1):1-10. doi:10.5146/tjpath.2019.01464.
3. de Jong AL, Park A, Taylor G, Forte V. Lipomas of the head and neck in children. *International Journal of Pediatric Otorhinolaryngology*. 1998;43(1):53-60. doi:10.1016/s0165-5876(97)00156-0.
4. Dimitrakopoulos I, Zouloumis L, Trigonidis G. Congenital lipoma of the tongue. Report of a case. *International Journal of Oral and Maxillofacial Surgery*. 1990;19(4):208. doi:10.1016/s0901-5027(05)80392-3.
5. Murphey MD, Carroll JF, Flemming DJ, Pope TL, Gannon FH, Kransdorf MJ. Benign musculoskeletal lipomatous lesions. *Radiographics*. 2004;24(5):1433-1466.
6. Sharma BK, Khanna SK, Bharati M, Gupta A. Anterior neck lipoma with anterior mediastinal extension—A rare case report. *Kathmandu University Medical Journal*. 2013;11:88-90.
7. Inampudi P, Jacobson J, Fessell D, *et al*. Soft-tissue lipomas: accuracy of sonography in diagnosis with pathologic correlation. *Radiology*. 2004;233(3):763-767.
8. Shin Y, Kim Y, Park I, *et al*. Sonographic differentiation between angiolipomas and superficial lipomas. *Journal of Ultrasound in Medicine*. 2016;35(11):2421-2429.
9. Gupta P, Potti TA, Wuertzer SD, Lenchik L, Pacholke DA. Spectrum of fat-containing soft-tissue masses at MR imaging: the common, the uncommon, the characteristic, and the sometimes confusing. *Radiographics*. 2016;36:753-766.
10. Gaskin C, Helms C. Lipomas, lipoma variants, and well-differentiated liposarcomas (atypical lipomas): results of MRI evaluations of 126 consecutive fatty masses. *American Journal of Roentgenology*. 2004;182(3):733-739.
11. Weiss SW. Lipomatous tumors. *Monographs in Pathology*. 1996;38:207-239.

How to Cite This Article

Benlili M, Mansouri O, Cherkaoui GB, Oufkir AA. Atypical large congenital lipoma of the scalp: Case report of a 7-month-old infant. International Journal of Case Reports in Surgery. 2025;7(1):01-04.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.