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Congenital Peri Anal Lipoma, a Case Report and Review

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Abstract

Background: Congenital lipoma is a rare benign tumor in infants, commonly affecting areas such as the trunk, neck, abdomen, forearms, buttocks, and thighs. However, it is infrequently observed on the face, scalp, and calves. Perineal lipomas are exceedingly rare and are typically associated with genitourinary or anorectal anomalies, with isolated cases being extremely uncommon. **Case Summary:** A 2-year-old male child presented with a perianal mass for evaluation. The prenatal, perinatal, and postnatal histories were unremarkable, and there were no significant medical issues. At birth, a soft, round, 1.5 cm mass was noted to the left of the anal verge. Despite the mass, the child had normal urinary and bowel function and was discharged without intervention. MRI revealed a fat-signal intensity lesion measuring 7 × 5 cm in the left perianal space, causing lateral displacement of the anal canal. No associated anomalies, such as spina bifida or bladder dysfunction, were identified. The lesion was surgically excised along with surrounding subcutaneous tissue while preserving the external sphincter muscle. Post-surgical assessment using an electrical muscle stimulator confirmed intact sphincter function. The surgical site was closed with interrupted sutures. Gross examination demonstrated a well-circumscribed, yellowish, lobulated fatty mass measuring 7 × 5 cm. Histopathological analysis confirmed the diagnosis of benign lipoma, composed of mature adipose tissue and fibrovascular trabeculae, with no evidence of malignancy. The patient experienced an uneventful recovery with normal bowel function and satisfactory cosmetic results. A follow-up period of 1.5 years showed no recurrence or complications. **Conclusion:** Careful physical examination at birth, coupled with magnetic resonance imaging (MRI) and contrast enema studies, is critical for characterizing perineal lipomas and identifying associated anomalies. Surgical excision requires meticulous planning, especially when the lesion is deeply embedded near the sphincter muscles or

accompanies anorectal anomalies. The use of an electrical muscle stimulator during resection helps preserve sphincter integrity, ensuring optimal postoperative bowel function.

Subject Areas

Surgery & Surgical Specialties

Keywords

Perianal Lipoma, Congenital Lipoma, Lipoblastoma

1. Introduction

Congenital perineal lipomas are rare benign tumors that can occur in both male and female fetuses. In male infants, accessory scrotum serves as an important differential diagnosis and may also coexist with congenital lipomas [1]. A thorough clinical examination of the fetus and newborn is essential, as 74% of perineal lipoma cases are associated with additional anomalies. Despite their rarity, advancements in high-resolution sonography have improved prenatal detection of these lesions, providing detailed visualization of fetal genitalia. Additionally, 3D sonography has emerged as a valuable tool for identifying genital and perineal abnormalities [2].

Benign perineal soft tissue tumors, such as lipomas and lipoblastomas, are uncommon. These may present as isolated findings [3] or in association with conditions like anorectal malformations (ARM) [4] or external genital abnormalities [5]. The simultaneous presentation of a perineal mass, ARM, and external genital abnormalities is exceedingly rare.

To date, congenital perineal lipomas, including perianal variants, have been described in approximately 50 reported cases in English literature. These tumors demonstrate variability in size and location and may be accompanied by anorectal and/or urogenital anomalies. As such, surgical strategies for congenital perineal lipomas need to be individualized, taking into account the tumor's specific characteristics and associated conditions. The optimal management approach remains a subject of ongoing discussion [6].

2. Case Presentation

A 2-year-old male child was referred for the evaluation for a perianal mass. The patient had an uneventful pregnancy, perinatal and postnatal. A postnatal examination revealed an appropriate-for-age neonate with a soft round mass 1.5 cm in diameter just left of the anal verge. She passed urine and stool smoothly. And discharged home without any medication or intervention.

After initial history taking and examination, Complete blood counts, electrolytes, liver and renal function tests, and urinalysis findings were all within normal ranges.

Magnetic resonance imaging (MRI) showed that the lesion had a signal intensity consistent with fat located close to the anal sphincter, 7*5 cm in the left perianal space, displacing the anal canal laterally. No spinal and blader anomaly anomaly (e.g., spina bifida) was identified (Figure 1)

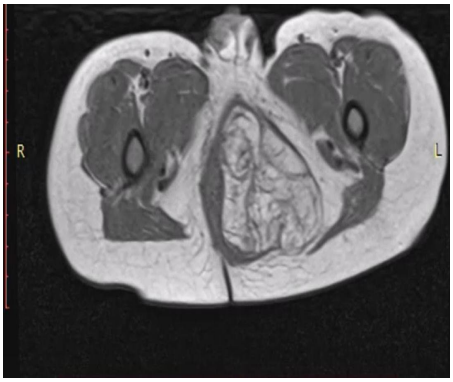

Figure 1. Pelvic MRI shows peri anal mass displacing the anal canal laterally.

The operative procedure at 2 years of age was: the skin incision was made around the bottom of the pedicle of the lesion. The margin between the tumor and the surrounding subcutaneous fat tissue was not clear, but the tumor did not invade the sphincter muscle. The lesion was resected with some of the subcutaneous tissue attached, and with preservation of external sphincter muscle. An electrical muscle stimulator was used to confirm that the muscle was left intact. The skin was closed with interrupted sutures.

The macroscopic gross examination revealed well defined mass measuring about 7 × 5 cm in diameter with yellowish fatty and lobulated cut section. Figure 2.

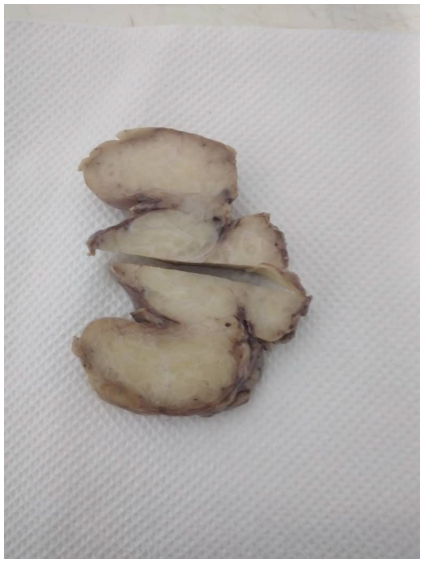

Figure 2. Gross examination of specimen shows yellowish fatty and lobulated cut section of the peri anal lipoma.

A histologic examination of the specimen showed mature adipose tissue interspersed with delicate fibrovascular trabeculate. With no evidence of malignancy. Leading to a diagnosis of lipoma **Figure 3**. She was discharged from the hospital without any complications and has been doing well with good bowel movement and satesfactory cosmetic results for a follow-up period of one and a half years.

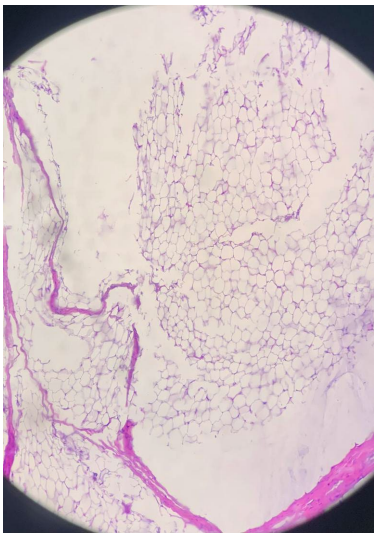

Figure 3. Shows mature adipose tissue interspersed with delicate fibrovascular trabeculate.

3. Discussion

The differential diagnoses for perineal lesions, aside from lipoma, include lipoblastoma, sacrococcygeal teratoma, infantile hemangioma, hamartoma, liposarcoma, and Ent erogenous cyst. Postnatally, a thorough physical examination is essential to accurately determine the lesion's precise location, size, and any associated anomalies [2]. These lesions are generally lobulated, round, or pedunculated subcutaneous masses that are smooth, soft, mobile, and nontender [7]. Careful monitoring of postnatal urinary and meconium passage is essential, as obstruction in these areas may require urgent surgical intervention. Ultrasonography and MRI are valuable tools for assessing the lesion's internal fatty content, its anatomical relationships with surrounding structures, and identifying any potential complications [1].

A contrast enema is valuable for ruling out anorectal anomalies or bowel obstruction, particularly when the lesion is located close to the anus. When the findings from ultrasonography or MRI are inconclusive, contrast-enhanced computed tomography (CT) may be required to further evaluate the lesion and detect any associated anomalies.

In neonates with isolated perineal lipomas and no other anomalies, the timing of surgery depends on two main factors, first one is, mass effect: If the lesion causes urinary or intestinal obstruction, surgery is needed soon after birth. The second one is technical feasibility: For lesions near the vagina, delaying surgery

for about 3 months or later is often preferred. This delay allows for easier and more precise dissection compared to operating in the early neonatal period.

The occurrence of a perineal mass combined with both anorectal malformations (ARM) and external genital abnormalities is extremely rare, with only two reported cases (one male and one female) to date [8].

Isolated congenital perineal lipomas are rare lesions that can often be misdiagnosed as an accessory scrotum in males, as these two conditions are associated in over 80% of cases [7]. A thorough evaluation of the urogenital and anorectal tracts is essential, considering related anomalies such as renal agenesis, anorectal malformations, and scrotal or penile abnormalities. These lesions are typically benign, and the standard treatment involves local excision [9].

4. Conclusions

Congenital perineal lipomas are rare, benign lesions that are often associated with external genital anomalies. The location of the perineal lipoma is closely linked to the accompanying anomalies, which may include an accessory scrotum, anorectal malformations, and various urogenital anomalies.

A comprehensive evaluation of the urogenital and anorectal tracts is essential due to the potential for associated abnormalities. Early surgical consultation and thorough perinatal investigations of the lesion and related anomalies are critical for proper surgical planning. During resection, the use of an electrical muscle stimulator can help preserve the anal sphincter, ensuring satisfactory bowel function postoperatively.

Footnotes

Author Contributions

Dr Abdihakim Elmi contributed to conception of the idea of the case report and first draft preparation, discussion and references,. **Dr Farah,** contributed for diagnosis, collection data and preparing the pathology images. co **Dr Mohamed** contributed to literature review, history taking investigation, and draft preparation.

Informed Consent Statement

The patient provided informed written consent to publish this case study and accompanying photographs.

Conflict-of-Interest Statement

All the authors report no relevant conflicts of interest.

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