

Pediatrics

Giant scrotal lipoma in pediatric patient: A case report

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ABSTRACT

Lipoma is a rare, benign mesenchymal tumor seen in the scrotum. There were few reports of scrotal lipoma cases originating from the scrotal wall in the literature. We describe a case of a huge primary intrascrotal lipoma in a 2-year-old boy, presenting as progressive scrotal swelling. Findings from scrotal Magnetic Resonance Imaging (MRI) were highly suggestive of lipoma. The mass was completely excised and diagnosis of lipoma was confirmed by histological examination.

1. Introduction

Lipomas were known as the most common benign mesenchymal tumors.¹ Estimated incidence of lipomas are 10% worldwide, with prevalence of 2.1 per 1000.² Lipomas affecting testicular tissue can be found at any age.³ Lipomas arising from adipose tissue of spermatic cord and extending into the scrotum are named scrotal lipomas. Lipomas arising from the adipose cells of the scrotal subcutaneous tissue are named primary scrotal lipoma.^{1,4} Most lipomas occurring in the scrotum originate and develop in the spermatic cord.⁵

It is not easy to diagnose scrotal lipoma. The origin regions of these tumors are not always detectable. They can mimic other diseases such as inguinoscrotal hernia, varicocele, hydrocele or testicular tumor.⁴ Management such as surgical excision provides histopathologic diagnosis and resolution of symptoms.¹ We present a case of scrotal lipoma undergoing tumor debulking and scrotoplasty at private hospital in suburb of Jakarta.

2. Case presentation

A 2-year-old male patient was presented to our urology polyclinic with a history of lump in the scrotum that progressively increase in size since one year ago. The lump in the scrotum was painless and remained the same in size during episodes of exertion and rest. He did not have any other associated symptoms.

Physical examination revealed a mass lying from lower scrotal to perineal area. Some part of the mass was firm and some was elastic in consistency. It had well defined margins and easily distinguished from

testicle. Both testicles were found to be localized in the scrotum and were normal in consistency and size (Fig. 1A). Laboratory tests were within normal limits.

Magnetic resonance imaging (MRI) was required and revealed a 6,3 × 5,2 × 5,7 cm, well-defined mass with hyperintensity in T1 and T2 weighted images (Fig. 1B). Frequency-selective fat-saturated images showed hypointense mass similar to fat density. These findings suggest the diagnosis of scrotal lipoma.

After a thorough examination, tumor debulking and scrotoplasty was planned. A midraphe incision was performed and benign soft tissue tumor along with its pseudocapsule was identified. The tumor was found to be separated from the testicles and the structures of spermatic cord. A part of the scrotal skin and perineum was unable to be separated from the plane of the tumor and thus was also excised along with the tumor. The completely excised tumor and skin was sent to the laboratory for histopathologic examination (Fig. 2).

The wound was primarily closed and scrotoplasty was performed simultaneously. Postoperative evaluation was favorable. Histopathologic examination revealed a benign tumor proliferation consisting of wide fat tissues suggesting primary scrotal lipoma (Fig. 3).

3. Discussion

Lipomas are benign mesenchymal tumors that are rarely seen in the scrotum.^{1,2} Although there is no concrete classifications available for intrascrotal lipoma yet, recent studies had commonly divided into three types of origin: (a) from the subcutaneous tissue posterior to the spermatic cord, which spread into the scrotum and are called scrotal

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Fig. 1. Pre-operative images. A): Clinical aspect of the scrotal tumor. B): Scrotal MRI.

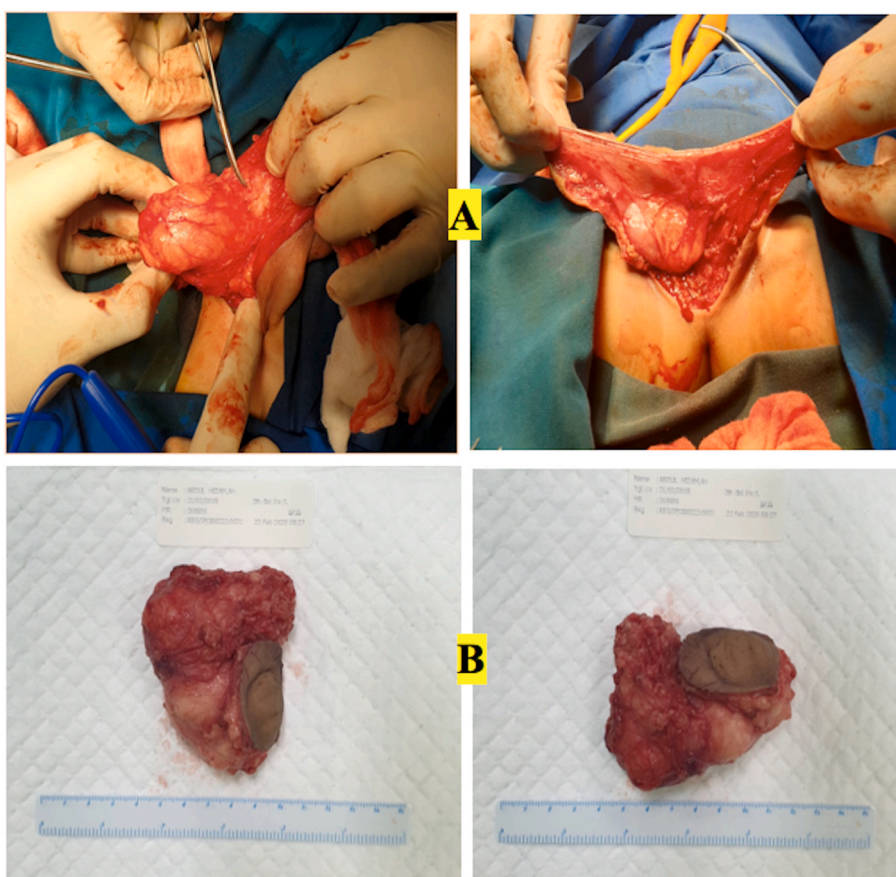


Fig. 2. Intra-operative images. A): lipoma excision from the scrotal wall, B): macroscopic aspect of the scrotal lipoma.

lipomas, (b) from the fat tissue within or outside the spermatic cord, which develop in the spermatic cord and thus are called spermatic cord and tunica vaginalis tumors and (c) from fat lobules of the dartos fascia of the scrotum which are rarely seen and called primary scrotal lipomas. Primary scrotal lipomas are usually found in boys and young men, whereas other types of scrotal lipomas are generally found in men between 40 and 60 years of age.^{4,5}

Patients with lipoma usually present a sensation of scrotal fullness that progressively increase in size without history of previous trauma or signs of inflammation.³ The tumor usually manifests as a painless soft tissue mass, with the exception of larger size tumors that can be painful when the mass begins to compress peripheral nerve.² Our patient had a

painless lump in the scrotum that grew larger in size within a year. We did not suspect malignancy in this patient since the characteristics did not match with malignant mass. Clinically, the malignant mass presented with a painless, slow-growing mass with heterogenous and indeterminate tumor border on imaging. However, some cases may not exhibit distinct radiographic symptoms or patterns, a definitive diagnosis is determined after histopathologic investigation.

Scrotal lipoma can mimic other diseases such as inguinoscrotal hernia, varicocele, hydrocele, or testicular tumor. Usually, an intact external inguinal ring without an exacerbated tumor on exertion, excludes an inguinoscrotal hernia. A palpable painless scrotal swelling associated with vasodilation, and infertility complaints, suggests



Fig. 3. Post scrotoplasty images.

varicocele. The presence of transillumination differentiates a hydrocele. A palpable testicle with distinguishable demarcation from the scrotal mass rather sustains a para testicular or extra testicular tumor than a testicle one.⁴

Magnetic resonance imaging is useful to establish the diagnosis of a lipoma. Most often, lipomas have high signal intensity on T1- and T2-weighted images and also present loss of signal intensity on frequency-selective fat-saturated images.^{1,4} Histopathological examination is the only way to provide the definitive diagnosis to distinguish it from a lipoma-like well differentiated liposarcoma.³

Surgical excision is the treatment of choice for lipoma.⁴ Surgical excision through scrotal or combined scrotal and inguinal incision remains the treatment of choice. Simple enucleation is preferred in benign lesion, while radical inguinal excisions should be performed in case of malignancy.⁵ No malignancy was observed in the case presented. The inguinal incision is indicated in scrotal lipomas when the mass was found mainly in the inguinal and did not invade the testicles.^{2,5}

4. Conclusion

Primary intrascrotal lipomas are rare tumors of the scrotum which can grow exceptionally large and pose significant diagnostic challenge. Scrotal lipomas can raise different diagnosis issues. Radiological imaging such as MRI can help the diagnosis of a scrotal tumor with uncertain nature of the lesion. Surgery remains the treatment of choice. Surgical excision needs to be done with subsequent histological examination of

the scrotal tumor mass.

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Declaration of competing interest

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