Rare case cystic scrotal lymphangioma presented as a hydrocele

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CASE REPORT

Introduction and importance: Cystic scrotal lymphangiomas are very uncommon lesions caused by congenital lymphatic malformation. These tumors are usually located in the neck and axilla, occasionally in the mediastinum, retroperitoneum, and thigh. The scrotum and perineum are the least frequented sites. They present as painless scrotal swelling and are easily misdiagnosed as hydrocele. We present here a case of cystic scrotal lymphangioma in a school-aged child who presented to us with a massive scrotal swelling.

Case presentation: We present here a case of a 6-year-old child who presented with scrotal swelling, which was sonographically identified as chronic hydrocele. The right testis could be felt separately from the mass, and the left scrotum was normal. Scrotal ultrasound reveals multiple cystic lesions with septa in the right hemiscrotum extending to the proximal inguinal canal. Median raphe incision and excision of the lobulated mass Cyst testicular lymphangioma was confirmed histopathologically.

Clinical discussion: Cystic lymphangiomas are benign congenital tumors with no identifiable cause. The majority of lymphangiomas (90%) appear during the first two years of life, and half of them are present at birth. Lymphangiomas are categorized into three types: capillary, cavernous lymphangiomas, and cystic hygromas. A scrotal lymphangioma is frequently misdiagnosed as a hydrocele, inguinal hernia, hematocyte, varicococele, or even testis torsion. In our case, the diagnosis was made by ultrasonography with Doppler and confirmed by a biopsy of an excised mass lesion. The scrotum is a very uncommon site for cystic lymphangioma.

Conclusion: A cystic or septate cystic mass discovered intra-operatively should not be dismissed as a complex hydrocele, since cystic lymphangiomas predictably recur if incompletely resected. A proper diagnosis of the scrotal lymphangioma and its extent using the US is essential for planning an appropriate surgical approach.

1. Introduction

Lymphangiomas are non-encapsulated benign tumors formed of sequestered non-communicating lymphoid tissue and lymphatic endothelium [1]. Lymphangiomas are most typically located in the neck (75%) and axilla (20%). The mediastinum, retroperitoneum, bone, liver, kidney, and scrotum are some of the less common sites [2]. Although the precise incidence of lymphatic malformations (LM) is unknown, it is believed to be greater than the original estimate of 6.3% of all abnormalities [3]. Lymphangioma of the scrotum is one of the most uncommon forms of lymphangioma. The scrotal wall, tunics, testis, epididymis, spermatic cord, or Colle's fascia can all be involved [4]. Painless cystic scrotal enlargement is a common clinical symptom. On clinical examination, scrotal lymphangiomas are frequently misdiagnosed as hydrocele, varicococele, hematocyte, or inguinal hernia [2]. We present here the first case of cystic scrotal lymphangioma in a school-aged child who presented to us with a massive scrotal swelling and was operated on by a pediatric surgeon. This work has been reported in line with the surgical case report of scar 2020 guideline [5].

2. Case report

A 6-year-old boy was presented with a painless, progressive enlargement of the right scrotum. Examination revealed a non-tender and soft mass in the right hemiscrotum which was compressible and not transilluminated. The right testis could be felt separately from the mass. The left scrotum was normal (Fig. 1). Scrotal ultrasound reveals multiple cystic lesions with septa in the right hemiscrotum extending to the proximal inguinal canal. The tests appeared normal. These findings were consistent with either a cystic hygroma or a complex or infected...
spermatocele. No further imaging studies were performed and, through the median raphe incision, the area was explored. There were multiple cystic lesions of varying sizes, cysts between cord structures filled with clear fluid extending from the inguinal canal down to involve the tunica vaginalis (Fig. 2). The mass was excised in its entirety, including the tunica vaginalis (Fig. 3). Histopathologically, dysplasia rete testis and testicular cystic lymphangioma were considered in (Fig. 4). The post-surgery period was uneventful, and the child was discharged after 2 days with oral antibiotics (amoxiclav syrup) and pain medication (ibuprofen syrup). After one week, the wound healed without infection. An inguinoscrotal ultrasound was performed at the 6-month follow-up to ensure that there was no recurrence.

3. Discussion

Cystic lymphangiomas are benign congenital tumors with no identifiable cause. The majority of lymphangiomas (90%) appear during the first two years of life, and half of them are present at birth [6]. The occurrence of these lesions in adulthood is uncommon. The head/neck, axilla, mediastinal, and retroperitoneal locations are the most common sites for both children and adults [7]. Lymphangiomas are categorized into three types: capillary, cavernous lymphangiomas, and cystic hygromas. Their microscopic properties have been used to classify them [8]. A slowly expanding, painless mass is the most prevalent symptom of cystic lymphangioma. In some cases, it can sometimes present with an abrupt onset of pain and rapid growth in size due to hemorrhage within the cyst, which can be caused by a post-traumatic infection or excessive lymph production. In our case, there is no history of trauma [9]. However, based simply on physical characteristics, distinguishing between a hydrocele and a scrotal lymphangioma is challenging. Because of its rarity, a scrotal lymphangioma is frequently misdiagnosed as a hydrocele, inguinal hernia, hematocele, varicocele, or even testis torsion [8]. The scrotum can be affected by a wide range of malignant and nonmalignant soft tissue tumors. Lipomas and leiomyomas are the most numerous [10]. The diagnosis of this illness requires a high level of clinical suspicion as well as histological confirmation. Patients with suspected cystic lesions that extend to the abdomen or pelvis can benefit from ultrasonography and a CT scan of the abdomen or pelvis [11]. In contrast, in the present case, the abdomen and pelvis were not involved as abdominopelvic ultrasonography revealed. Ultrasonography in conjunction with Doppler evaluation can provide important information for differential diagnosis and surgical treatment of certain condition [4].

Fig. 1. Clinical photography showing right scrotal swelling.

Fig. 2. Intra operative photograph cyst testicular lymphangioma.

Fig. 3. Post excision gross photograph of cystic lymphangioma.

Fig. 4. The microscopic histopathologic appearance of cystic scrotal lymphangioma.
For scrotal lymphangiomas, biopsies confirm the diagnosis, ultrasonography determines the cystic nature and fluid component and guides the surgical strategy [12]. In our case, the diagnosis was made by ultrasonography with Doppler and confirmed by a biopsy of an excised mass lesion. Scrotum is a very uncommon location for cystic lymphangioma, and it should be considered in the differential diagnosis of multiloculated, benign-appearing extratesticular masses with insufficient vascular supply in a young boy. [13]. Lymphography is not advised because cystic lymphangiomas do not communicate with the lymphatic system. Surgical excision of the entire mass is used to treat the disease. Other treatment techniques, such as sclerosant injections, extensive fulguration, and cryotherapy, have failed miserably [4]. Because of the lack of availability in our hospital of other treatment techniques, such as sclerotherapy, we were chosen for surgical excision of the entire mass. The cyst lymphangioma must be removed completely to prevent a recurrence. After incomplete excision, recurrence is very common. This case was the first case of scrotal lymphangioma seen in our tertiary hospital and was operated on for pediatric surgery.

4. Conclusion

Cyst scrotal lymphangioma are congenital benign lymphatic malformations and should be considered in the differential diagnosis of painless scrotal swelling. A cystic or septate cystic mass discovered intraoperatively should not be dismissed as a complex hydrocele, since cystic lymphangiomas predictably recur if incompletely resected. A proper diagnosis of the scrotal lymphangioma and its extent using the US is essential for planning an appropriate surgical approach.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Consent

Written informed consent was obtained from the patient’s father for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Ethical approval

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Abdullahi Yusuf Ali wrote the manuscript and corrected the manuscript for its scientific basis.

Abdishakur Mohamed Abdi collected the data for the study.

Dilek Basar director of the Department of Pediatric Surgery and the consultant surgeon who provided the case.

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Declaration of competing interest

The authors have no conflicts of interest.

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