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Para testicular lipoblastoma in children (About an exceptional case)

Driss Hanine[1*], Zakaria Aboulam[2], Jaouad Bouljrouf[3], Mounir Kisra[4]
[1-4] Visceral Pediatric Surgery Department « A » - Children Hospital of Rabat, Faculty of Medicine of Rabat, Morocco

Abstract
Paratesticular tumors are rare and complex tumors that have insidious and poor symptomatology. Benign forms represent 70%. The para-testicular lipoma is the most common type. The clinical examination is not very specific. Ultrasound examination is the cornerstone for the diagnosis. Surgical treatment is required in cases of symptomatic tumors; histology usually being typical allows diagnostic confirmation. The prognosis is good despite possible recurrences.

Keywords: lipoma, paratesticulor tumor, tumorectomy, child

Introduction
Introduction of the tumors affecting the scrotum and its contents, testicular neoplasia is the most common. The paratesticular localization represents only 7% of the intra-scrotal neoplastic sites, 70% of them are benign. Lipoma is the most common type. We report a new case of paratesticular lipoma in a 2-year-old child who was confirmed by the pathological study of a lumpectomy. Our work includes a literature review with a focus on diagnostic and therapeutic aspects.

Materials & Methods
The general aim of this work is to study the clinical, biological, radiological, histological, prognostic and therapeutic characteristics of this exceptional case and localization of lipoma at the department of Pediatric Visceral Surgery "A" at the Children's Hospital of Ibn Sina Hospital of Rabat, in Morocco.
The specific goal is to analyze the surgical treatment used, and not to go directy with an orchidectomy when the diagnosis is not clear. An update is made on the interest of conservative surgical treatment in the case of this rare pathology.

Results
We report a rare case of paratesticular lipoblastoma in a 2-year-old child, followed and operated in our pediatric visceral surgery department "A".
This is a 2 year old child with a paratesticular mass discovered by parents since 6 months before admission. This mass gradually increasing in volume, without other associated signs. The clinical examination finds a scrotal mass, of firm consistency, with a mobile testicle of normal size.
An ultrasound was performed, which returned to a paratesticular, hypervascular mass, with a testicle of normal size and echogenicity; probably in favor of a rhabdomyosarcoma. A biological assessment made of tumor markers (alphafoetoprotein and beta HCG) returned negative.
The patient was operated on by inguinal incision. The exploration found a scrotal mass of 5 cm with a testicle of normal size without intimacy with the mass (Figure 1). After careful dissection of the mass, an accidental opening is made at the level of the scrotal skin as the mass is intimately adhered to it (Figure 2).
Dissection is continued with complete resection of the mass (Figure 3).
The anatomopathological study concludes in lipoblastoma, benign. The long-term postoperative evolution is good. There is no recurrence on long-term follow-up.

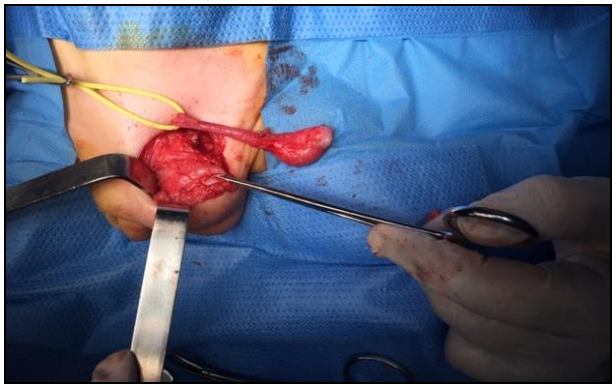

Fig 1: Intraoperative image showing a paratesticular lipomatous mass.

Fig 2: Intraoperative image showing the mass after scrotal dissection.

Fig 3: Image showing the entire mass resected.

Discussion

The para-testicular region is a complex anatomical area that includes spermatic cord, testicular tunics, epididymis and the embryonic vestiges. Histologically, this region contains a variety of tissues (epithelial, mesothelial and mesenchymal) which explains the heterogeneity of tumors can develop there. Para-testicular localization represent only 7% of intra-scrotal neoplastic locations.

The spermatic cord is reached in 90% of cases [1, 2]. About 70% of para testicular tumors are benign. Lipoma is the benign tumor the most common of the testicular tissues to across all ages [3].

It is a tumor of mesenchymal origin, derived from structures spermatic cord, formed by the proliferation of adipose tissue [4]. Found at any age, their development is the most often unilateral, rarely bilateral, of variable size [5].

In the first two decades of life, adipose tumors are relatively rare, comprising about 6 % of soft tissue neoplasms. About 60 % of these are simple lipomas or variants, and up to 30 % are lipoblastomas [6]. It is found most commonly in the trunk or upper and lower extremities as a painless nodule or mass [6]. Less common sites of involvement include the head and neck area [7], mediastinum [8], mesentery [9], omentum [10], retroperitoneum [11], and scrotum [12–21]. The accurate preoperative diagnosis is difficult because of its rarelity and the similarity with the other soft tissue tumors [22]. Previously, 11 cases of intrascrotal lipoblastoma have been reported [12–21]. Among them, accurate preoperative diagnosis had been made in only one case [19], and another case had been underwent orchidectomy due to the preoperative suspicion of paratesticular rhabdomyosarcoma [18].

Clinically, the lipoma is not very symptomatic, manifesting itself by a sensation of scrotal fullness, with a rapidly progressive increase in scrotal volume, without any notion of previous trauma or inflammatory signs. The clinical examination reveals a scrotal or inguinal mass of soft, fluctuating and sometimes multilobed consistency. However a case of hard tumor, of stony consistency has been described [23]. But the data of the clinical examination cannot prejudge the benignity or the malignancy of the lesions and no sign is pathognomonic. In the doubt of a testicular tumor, the determination of tumor markers (alpha-FP, beta-HCG) is always required. Ultrasound examination is the cornerstone of any scrotal mass syndrome. The ultrasound appearance of para-testicular lipomas is similar to that observed in the rest of the body, of variable echogenicity, usually hyperechoic or showing hyperechoic streaks, if the mass is bulky or showing signs of necrosis, it is difficult to differentiate it liposarcoma [24, 25].

In this case, it seems useful to use other imaging means, the fat nature of the mass is always recognizable: in CT, the spontaneous density of it is less than -30 Hounsfield Units. The MRI shows a hyperintense signal in T1 weighting, whereas in T2, it presents an intermediate signal in classical spin echo and a hyper signal in fast spin echo. In case of diagnostic doubt, a sequence with fat erasure can most often solve the problem by showing a decrease in the signal of the lesion [26]. Surgical treatment is required in case of symptomatic tumor, it consists of a lumpectomy after release of the testicle and spermatic cord. Histology is usually typical of lipomas found in other areas of the body, with a yellow-orange, lobular, irregular-cut surface appearance. The lesion is well defined and separated from the other structures by a thin capsule. Under the microscope, the cells are mature adipocytes, with a clear and bulky cytoplasm, separated by thin fibrous septa [27]. These tumors are of good prognosis and no case of malignant degeneration has been reported. On the other hand, cases of recurrence have been described [28].

Our case is one of the rarest cases in a child in which simple tumorectomy was performed via inguinal exploration and a minimal scrotal skin incisions. We consider that if the adequate preoperative suspicion of lipoblastoma could be made, we can avoid the invasive procedure (orchidectomy).

Conclusion

Lipoblastoma is the most common benign tumor of the paratesticular tissues. Clinically, these tumors are not really symptomatic and lead to late diagnosis. Tumorectomy is needed instead of being aggressive and doing an abusive orchidectomy. Pathological examination affirms the diagnosis. The prognosis is good.

Conflict of Interest

All the authors declare that they do not have any conflict of interest.

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