

# Superinfected Epididymal Cyst Diagnosed and Treated as a Solid Scrotal Tumor

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## ABSTRACT

CYSTS OF THE EPIDIDYMIS ARE BENIGN TUMORS OF UNKNOWN ORIGIN. THEY APPEAR IN THE FORM OF REGULAR AND PAINLESS SWELLING (SINGLE OR MULTIPLE), LOCALIZED AT THE HEAD OF THE EPIDIDYMIS. IN THE EVENT OF CHRONIC INFECTION, INFLAMMATION THEN FIBROSIS SETS IN GIVING THE APPEARANCE OF AN EPIDIDYMAL OR TESTICULAR TUMOR. WE REPORT A CASE OF A 65-YEAR-OLD PATIENT WHO PRESENTED WITH A SUPERCHARGED EPIDIDYMAL CYST TREATED AS A SCROTAL TUMOR

**KEYWORDS:** Epididymal cysts, tumor, scrotal, diagnostic, urology.

## INTRODUCTION

The characterization of intrascrotal conditions is initially based on physical examination and ultrasound information. The purpose of ultrasound is to specify the nature of the lesion as well as its site, and to detect lesions not accessible to palpation. Its sensitivity is high to differentiate between testicular lesions and paratesticular lesions. Despite this, the scrotal ultrasound cannot accurately determine the benign or malignant nature of a lesion.

## CASE REPORT

A 65-year-old man, treated for diabetes for 5 years, never had surgery intervention, who presents a large right scrotum that progresses gradually over 1 year, initially painless, who recently presented functional discomfort, with minimal scrotal pain. The patient initially consulted a physician who diagnosed hydrocele, and proceeded to direct puncture treatment without injection of sclerosing agent. The persistence of the large scrotum, which became more painful, prompted the patient to consult the urological emergency department of our hospital (Casablanca-Morocco). The most probable diagnosis retained is an epididymal tumor, taking into account clinical data (hard mass at the expense of the epididymal head, not transilluminable) and ultrasound (heterogeneous hypoechoic process) (figure 1). The patient underwent inguinal surgery (which is used when a tumor is suspected)(figure 2). Macroscopic analysis finds a very firm, polylobed mass facing the head of the epididymis, with the presence of a hydrocele, and a pachyvaginitis reaction of the vaginal tunica. Pathological examination showed it to be a suppurative epididymal cyst with no sign of malignancy.

## DISCUSSION

Epididymal cysts are common, benign, most often asymptomatic, and accidentally discovered during clinical or ultrasound examination. Among intrascrotal masses, tumors of the epididymis represent 5% [1]. Most of these tumors are benign: clear cell papillary cystadenoma, adenomatoid tumor, leiomyoma. Malignant tumors of the epididymis are rare: papillary cystadenoma, leiomyosarcoma [2], mesothelioma, carcinoid tumor, angiosarcoma [3], adenocarcinoma [4], lymphoma. The metastasis localized at the epididymal level of the kidney, testis, prostate, stomach or pancreas cancer is even rarer [4,5,6].

The origin of epididymal cyst development has not been determined with certainty. Among the hypotheses there is: obstruction of efferent ducts (spermatocele) [7], eating habits (phytoestrogens) [8], or even a hormonal disorder during fetal life [9].

The exploration of any scrotal mass begins with a physical examination, which specifies the consistency, size, number, tenderness of the testis and epididymis furthermore any additional lesions.

The discovery of scrotal lesion on ultrasound occurs following the presence of clinical signs (perceptible by the patient or discovered on clinical examination) or in a traumatic or subfertility context. It specifies its specifications such as size, solid or cystic nature and thus evoke a benign or malignant affection [10].



ultrasound appearance showing a heterogeneous hypoechoic process



inguinal approach and ligation of the spermatic cord

We can divide epididymal cysts into three groups:

- retentional cysts also called spermatocele filled white spermatic fluid, containing germ cells
- serous cysts that develop from Wolffian or Müllerian embryonic residues [11], filled with yellow, clear fluid, with little or no spermatozoa
- polycystic disease of the epididymis, most often bilaterally located.

Spermatoceles and serous cysts have the same ultrasound characteristics; they are anechoic with well-defined contours. Following trauma, surgery, or infection, extravasation of sperm fluid can cause sperm granuloma, which is a giant cells reaction. This granuloma is most often asymptomatic, but can be expressed by a painful nodule. It manifests itself as a solid mass, with regular contours, hypoechoic on ultrasound. Its size can reach 4cm, but it does not exceed 1cm most often. It can be single or bilateral, and the occurrence of calcification is 10% [12]. Histologically, it is formed by debris of seminal cells, surrounded by epithelial cells, and sometimes lymphoid cells [13].

Tumors occurring in the region of the epididymis may be clinically indistinguishable from testicular tumors, resulting in an incorrect initial diagnosis. Most tumors in this area are present as a scrotal mass or swelling, or be asymptomatic. The preoperative distinction between benign and malignant epididymal tumor is difficult, as there are no specific tumor markers. [14]

In the case of an asymptomatic epididymal cyst, management is based on monitoring.

When an epididymal cyst is symptomatic, treatment may be:

- Surgical treatment: the incision is either scrotal or inguinal if there are suspicious elements on ultrasound. We start by dissecting the cyst, avoiding breaking it, but if it is very adhering, we proceed with a resection of the protruding dome of the cyst, leaving the part adhering to the epididymal tube. Sometimes a partial epididymectomy can be performed. The patient must be informed before the surgical procedure that the pain may persist even after surgery.
- Puncture and aspiration: its infectious risks and the high frequency of recurrences after the puncture make it prohibited
- Sclerotherapy after aspiration of cystic contents [15], using a sclerosing agent such as polidocanol, ethanolamine oleate, tetracycline, or sodium tetradsulfate. Results are variable, and this technique has not been tried in children.

If the diagnosis of a solid tumor is suspected, surgical exploration is done, as for a testicular tumor, by inguinal incision, with initial clamping of the spermatic cord. An extemporaneous examination is carried out: if it is a benign tumor, a partial epididymectomy or a lumpectomy is performed, if the diagnosis of malignancy is suspected, a large orchiectomy is carried out, removing the testis, epididymis and cord up to the deep inguinal ring. If the tumor is attached to the scrotum, it will be resected. Adjuvant treatment may be indicated depending on the results of the pathology. There is no consensus on performing lymph node dissection, radiotherapy or chemotherapy due to the rarity of epididymal tumors. [16]

## CONCLUSION

Epididymal tumors are a rare entity whose diagnosis can be made by scrotal symptoms, or discovered incidentally on an imaging examination. Although the majority of these tumors are of a benign nature, surgical exploration through the inguinal accessing remains the standard treatment. Cancer management may require chemotherapy or radiotherapy.

## References

1. Walsh P. Campbell's urology 8th ed. Saunders 2002.
2. Demetriou D, Carpentier F, Hattab B, Gouillet E, Mauroy B. Epididymalleiomyosarcoma. A case report with review of the literature. *Prog Urol* 1994;4:1031—5.
3. Hayn MH, Bastacky S, Franks ME. Epididymal angiosarcoma. *Urology* 2007;69:576,e5-e7.
4. Ganem JP, Jhaveri FM, Marroum MC. Primary adenocarcinoma of the epididymis: case report and review of the literature. *Urology* 1998;52:904—8.
5. Markovic B. Métastase de l'épididyme révélant un cancer de prostate. À propos d'un cas. *Ann Urol (Paris)* 1988;22:440—1.
6. Fournier G, Hubert J, Chassagne S, Menut P, Delavierre D, Mangin P. Métastase d'un adénocarcinome rénal au cordon spermatique et à l'épididyme : 2 cas. *Prog Urol* 1995;5:714—6.
7. Itoh M, Li XQ, Miyamoto K, Takeuchi Y. Degeneration of these miniferous epithelium with ageing is a cause of spermatoceles? *Int J Androl* 1999;22:91-6.
8. Homayoon K, Suhre CD, Steinhardt GF. Epididymal cysts in children: natural history. *J Urol* 2004;171:1274-6.
9. Sharpe RM. Hormones and testis development and the possible adverse effects of environmental chemicals. *Toxicol Lett* 2001;120:221-32.
10. Woodward PF, Schwab CM, Sesterhenn IA. From the archives of the AFIP: extratesticular scrotal masses: radiologic-pathologic correlation. *Radiographics* 2003;23:215-40.
11. Broth G, Bullock WK, Morrow J. Epididymal tumors. 1. Report of 15 new cases including review of literature. 2. Histochemical study of these so-called adenomatoid tumor. *J Urol* 1968;100:530-6.
12. Schmidt SS, Morris RR. Spermatic granuloma: the complication of vasectomy. *Fertil Steril* 1973;24:941-7
13. Perez-Guillermo M, Thor A, Lowhagen T. Spermatic granuloma. Diagnosis by fine needle aspiration cytology. *Acta Cytol* 1989;33:1-5
14. Lijian Gao, Hualin Song, Kun Mu, Jiaxin Wang, Baoyin Guo, Benkang Shi, and Gang Li Primary epididymis malignant triton tumor: case report and review of the literature *Eur J Med Res.* 2015; 20(1): 79.
15. Jelloul L, Billerey C, Ait Ali Slimane M, Mboyo A, Aubert D. Epididymal cysts in adolescents. *Ann Urol (Paris)* 1999;33:104-8.
16. A. Baumelou, L. Zini Kystes et tumeurs de l'épididyme EMC (Elsevier Masson SAS, Paris), Urologie, 18-655-B-10, 2008.

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