https://doi.org/10.17816/uroved34124

FIBROMA OF EPIDIDYMIS

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For citation: Protoshchak VV, Sivakov AA, Karandashov VK, et al. Fibroma of epididymis. *Urology reports (St. Petersburg)*. 2020;10(3):265-268. https://doi.org/10.17816/uroved34124

Received: 20.05.2020 Revised: 22.06.2020 Accepted: 23.09.2020

Benign or malignant tumors of the epididymis are extremely rare. Fibroids of the epididymis and scrotal tissues are rare benign neoplasms. Over the past 10 years, there have been isolated cases in the medical literature describing fibroids of the epididymis and testicular membranes. This article describes a clinical case of surgical treatment of a tumor of the epididymis.

Keywords: paratesticular tissue tumors; testicular appendage tumor; fibroids tumor.

ФИБРОМА ПРИДАТКА ЯИЧКА

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Для цитирования: Протощак В.В., Сиваков А.А., Карандашов В.К., и др. Фиброма придатка яичка // Урологические ведомости. – 2020. – Т. 10. – № 3. – С. 265–268. https://doi.org/10.17816/uroved34124

Поступила: 20.05.2020 Одобрена: 22.06.2020 Принята к печати: 23.09.2020

Доброкачественные или злокачественные опухоли придатка яичка встречаются крайне редко. Фибромы придатка яичка и тканей мошонки — это редкие доброкачественные новообразования. За последние 10 лет в медицинской литературе встречаются единичные случаи описания фибромы придатка яичка и оболочек яичка. В данной статье описан клинический случай хирургического лечения опухоли придатка яичка.

Ключевые слова: опухоли паратестикулярных тканей; опухоль придатка яичка; фиброма придатка яичка.

INTRODUCTION

Paratesticular neoplasms are rare tumors that evolve from various cellular elements of the spermatic cord, epididymis, and vaginal tunic. Tumors of the epididymis constitute approximately 10% of paratesticular lesions, 60% of which have signs of malignancy [1, 2], and only 6% of lesions of the epididymis and paratesticular tissues are fibromas [3].

Currently, neoplasms of paratesticular tissues consist of rhabdomyoblastoma, embryonal rhabdomyosarcoma, leiomyosarcoma, liposarcoma, adenomatoid tumors, fibroma, as well as mesothelioma and cystoadenoma [1, 2].

Fibromas of paratesticular tissues were described for the first time by E. Balloch in 1904 [4]. In 1973, F. Mostofi and E. Price reported two cases of paratesticular fibromatoid pseudotumor. Both single fibromas of paratesticular tissues and accumulations of multiple small fibroids were described [5].

Although scrotal fibroids are rare, they are the second most common among all benign tumors of

the scrotal organs [6]. According to the cases of paratesticular tissue fibroid described in the literature, the left half of the scrotum is often the most affected, and of the cases described, 75% of fibromatoid tumors originate from the vaginal tunic, 10% from the epididymis, and 15% from the albugineous tunic [7].

Approximately 30% of patients with fibromatous tumors of the epididymis and paratesticular tissues have a history of epididymoorchitis or trauma of the scrotal organs [5]. Concomitant hydrocele is detected in 45%–50% of cases [3]. Pain is noted in some patients, although the course can also be asymptomatic. The tumor exists for a long time without increasing in size, with its diameter ranging from 0.5 to 5 cm [8, 9].

Neoplasms are represented by two main types of cellular elements: epithelium-like and fibrous. Fibroids do not metastasize and have a benign clinical course. Surgical removal of fibroids, due to their benign nature, results in the patient's recovery [3, 8, 10].

The treatment of malignant tumors is surgical, consisting of orchifuniculectomy; while in case of benign tumors of the epididymis, its resection or an epididymectomy is performed [11, 12].

CLINICAL CASE

Herein, we present a clinical case from our own practice.

Patient K., 45 years old, sought medical care at the urology clinic of the Military Medical Academy in December 2019, on a scheduled basis, with complaints of the presence of a palpable mass in the right half of the scrotum and recurrent pain sensations that aggravated with walking.

The anamnesis revealed that the patient discovered this mass in his right scrotum in 2017, and then sought for medical help. An ultrasound examination of the scrotal organs revealed a neoplasm of the right testicular epididymis with a diameter of approximately 3 cm, but the patient refused a surgical treatment.

On physical examination, the patient's condition was satisfactory, and the skin and visible mucous membranes were clean and pale pink in color. Superficial lymph nodes were not palpable. Vesicular respiration was perceived in all the lung lobes, but without rales, and the respiratory rate was 18 breaths per minute. The cardiovascular system had no abnormalities, heart sounds were clear, and pulse was regular. The pulse rate was 72 beats per minute with satisfactory volume and tension. Blood pressure was 120/70 mmHg. Regarding the digestive organs, the tongue was clean and the abdomen had a normal shape, participated in respiratory movements, and was soft of palpation and painless in all quadrants. The liver, spleen, and kidneys were not palpable, and punching of the lumbar region was painless. No bladder distension was detected. The external genitals were normally developed, left testicle and epididymis had no abnormalities, right testicle was of normal size and a tightly elastic rounded mass of approximately 3 cm in diameter and painless on palpation was detected in the tail region of the epididymis of the right testicle. Digital rectal examination revealed that the prostate gland was not enlarged, of dense elastic consistency, painless, and with a marked interlobar groove.

Clinical and biochemical blood tests, as well as general urine analysis showed no pathology. According to the ultrasound examination of the scrotal organs, the left testicle and epididymis were of a normal size and location, the right testicle had no abnormalities; in the tail region of the epididymis of the right testicle, a rounded vascularized tumor, approximately 3 cm in size, of tissue echostructure, and with blood flow under color Doppler mapping was detected. Magnetic resonance imaging of the scrotal organs with contrast enhancement was performed, which revealed an oval tumor of 21 × 29 × 31 mm in the structure of the epididymis of the right testicle, with signs of accumulation of the contrast agent (Fig. 1).

A diagnosis of neoplasm of the epididymis of the right testicle was established. Surgical revision of the right half of the scrotum was performed under spinal anesthesia. After a layer-by-layer isolation of the testicular membranes to the albugineous tunic, the epididymis was visualized in the tail region, of which a rounded, densely elastic tumor not linked to the testicle was found. The treatment of the testicle epididymis neoplasm was performed by blunt and sharp dissection within healthy tissues (Fig. 2).

The integrity of the epididymal tissues was restored, and the testicular membrane was sutured by the Winkelmann method. A gross specimen of the right testicle epididymis neoplasm was sent for histological examination (Fig. 3).

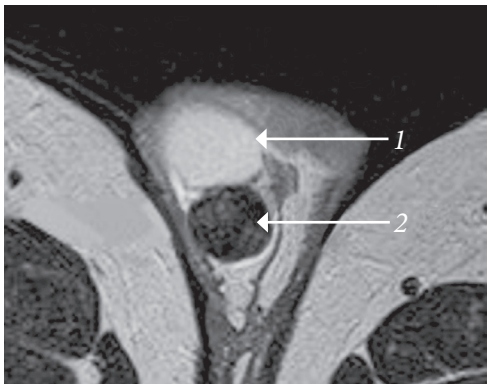


Fig. 1. Magnetic resonance image of a neoplasm of the epididymis of the left testicle: *1* — testicle, *2* — neoplasm of the epididymis
Рис. 1. Магнитно-резонансная томограмма новообразования придатка левого яичка: *1* — яичко, *2* — новообразование придатка яичка

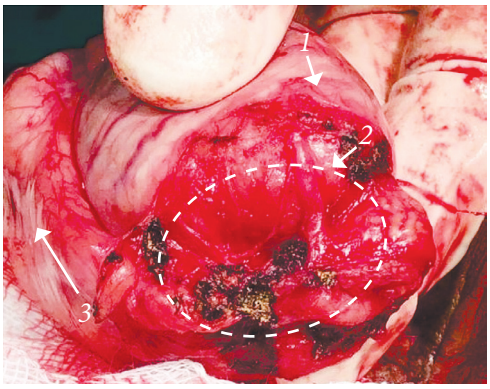


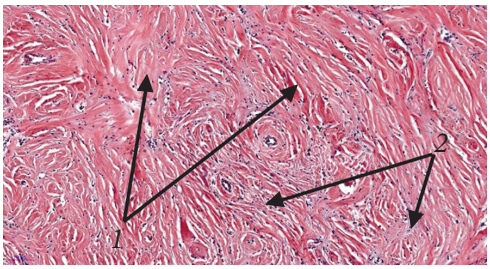
Fig. 2. Surgical field after removal of the neoplasm of the appendage: *1* — left testicle; *2* — the bed of the removed neoplasm (the dotted line indicates the localization of the resected neoplasm); *3* — left epididymis
Рис. 2. Вид операционного поля после удаления новообразования придатка: *1* — левое яичко; *2* — ложе удаленного новообразования (пунктиром обозначена локализация резецированного новообразования); *3* — придаток левого яичка

The early postoperative period was uneventful. The patient was discharged on the day 3 in satisfactory conditions and sutures were removed on day 7. The histological examination revealed a fibroma of the epididymis (Fig. 4).

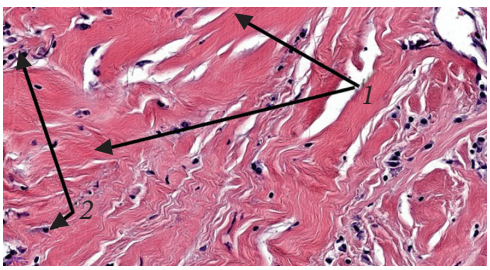
The final diagnosis was fibroma of the right testicle epididymis. An ultrasound examination of the scrotal organs was performed three months after the surgery, which showed no signs of disease recurrence.

This clinical case illustrates the successful detection and surgical treatment of a rare urological pathology, namely a large fibroma of the epididymis of the right testicle.

Fig. 3. Resected neoplasm of the epididymis
Рис. 3. Удаленное новообразование придатка яичка



a



b

Fig. 4. The micropreparation. *1* — bundles of connective tissue fibers having different lengths and thicknesses, located in different directions, with signs of hyalinosis; *2* — endotheliocytes lining the slit-like vessels (stain hematoxylin-eosin, *a* — ×100; *b* — ×400)
Рис. 4. Микропрепарат. *1* — пучки соединительнотканных волокон, имеющих различную длину и толщину, расположенных в различных направлениях, с признаками гиалиноза; *2* — эндотелиоциты, выстилающие щелевидные сосуды (окраска гематоксилином и эозином, *a* — увеличение ×100; *b* — увеличение ×400)

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