

Urology

Original Research Paper

Bilateral Polycystic Testicle: Case Report

Jean Paul Ndamba Engbang^{1,2,3,*}, Alan Hasigov^{1,2}, Amadou Fewou⁴, Ismael Gagloev², Aleksandre Ephiev²

¹Republican Clinical Hospital. Vladikavkaz, Russia

²North-Ossetian State Medical Academy, Vladikavkaz, Russia

³Faculty of Medicine and Pharmaceutical Sciences, The University of Douala, Douala, Cameroon.

⁴Faculty of Medicine and Biomedical Sciences, The University of Yaoundé I, Yaoundé, Cameroon

*Corresponding author(s): Jean Paul Ndamba Engbang, Republican Clinical Hospital. Vladikavkaz, Russia

Email: jean_pen@yahoo.ca

Published: 2016.01.15.

ABSTRACT

Simple serous cyst of the testicle is a rare benign tumor (8-9.8%). Despite of the introduction and the frequent use of ultrasound scrotal scanning, bilateral position polycystic form remains extremely rare. We are presenting a case diagnosed in a 54 year old male patient, with a trauma of genital organ history, with the expressed polycystic transformation of both testicles .A radical orchiectomy was performed with no further treatments.

Keywords: Testicles, Simple cyst, Scrotal scanning, Bilateral polycystic, Genital.

INTRODUCTION

Simple testicular cysts are rare. With the introduction and frequent use of ultrasound scrotal scanning, the prevalence of these cysts is increasing with a frequency of about 8-9.8% [1, 2, 3, 4]. However a bilateral polycystic form of testicle remains extremely rare. Intra-testicular simple cysts occur in men older than 40 years [1]. Although that pathology is usually asymptomatic, Patients may present painless or painful scrotal enlargement [1, 2, 5]. The scrotal ultrasonography and the histological examination are the bases of the diagnosis [1,5]. Despite of the fact that the management of simple intra-testicular cysts is controversial, radical orchiectomy is the main choice for polycystic form. We are presenting a case of bilateral polycystic of the testicle. The informed consent from the patient for this study was obtained.

CASE PRESENTATION

A 54-year-old patient, father of 2 children with a 24 year old first born, presented with complaints of pain in the significant increase scrotum, discomfort during walking and a functional

fistula in the crotch area. No history of sexually transmitted disease. 8 years ago the patient was a victim of a road accident in which he had a genital trauma, leading to surgeries such as episcystomy and interventions of urethral plastication, at the end of which a functional fistula in the crotch area were opted.

On physical examination, scrotum was enlarged, skin wrinkles were smoothed. Both testicles were increased in size with irregular surfaces, painful, full-elastic consistency at palpation (Figure 1). Scrotal ultrasound found expressed polycystic transformations on both testicles, cysts with well-defined outlines and an anechoic content; with some dropsical effusion in the left cavity of the scrotum. Atrophy of the appendage and spermatic cord elements, including the choroid plexus (Figure 2). The abdominal ultrasound -intraabdominal organs were without pathology.

The patient underwent bilateral nephrectomy orchidectomy. On the specimen: two testicles with appendages on the cut multiple cavity with a smooth lining, with a yellowish clear content (Figure 3). The anatomo-pathology's result reveals

Polycystic testicles (simple serous cysts) (Figure 4). The patient was carefully followed up after the operation (Figure 5). One and three months later, he was noted to be doing well.

DISCUSSION

Benign testicular lesions include intratesticular simple cysts, tubular ectasia, epidermoid cyst, tunica albuginea cyst, intratesticular varicocele, abscess and hemorrhage (infarction). Testicular cysts were once considered rare but with the increasing use of scrotal ultrasound, the prevalence appears to be increasing [1, 2]. According to some authors, their frequency varies between 8 % and 9.8% [3, 4]. Intratesticular simple cysts occur in men older than 40 years. The average age in most presented series is between 60 and 65 years [1, 5]. The cysts are usually solitary, but they can be multiple [6]. Simple solitary, testicular cyst is rare, very rare described cases of polycystic or multiple cysts were under 60 years [1, 5]. In our presented case is very rare and interesting because of the bilateral position of cysts and the age of the patient (54 years old).

Clinically, our patient presented with complaints of pain in the scrotum, the scrotum significantly enlarges, discomforts during walking and a functional fistula in the crotch area. Collar et al described a right side polycystic testicle; the patient had pain with simultaneous increase in volume [5]. Kang et al presented a 62-year-old male patient with multiple simple cysts with chronic pain on the right scrotum [1]. According to the literature, Patients may present painless or painful scrotal enlargement, some of which are without symptoms and are found coincidentally after ultrasonography for other reasons [1, 2, 6].

The etiology of simple cysts of testicle remains unknown. However, several assumptions are made. Thus evokes two major theories, one related to the age of the patient and the other to the congenital or acquired disease origin. An infant type caused by congenital anomaly (arising from remnants of Mullerian or Wolfian ducts); and an adult type caused by trauma or infections, which can cause occlusion of the spermatic ducts with subsequent ectasia and cystic alterations in the rete testis [1, 2, 8]. Our presented patient had a history of trauma of genital organs.

For our patient, both testicles were increased in size with irregular surfaces, painful, full-elastic consistency at palpation. Collar et al patient was with testicular polycystic, on physical examination, an increased in size of the right testicle with irregular surface of its anterior edge and with the palpation of multiple cystic formations of different sizes were found. Jackson et al in describing a simple cyst on a child revealed that on examination, the child's left testis were considerably larger and felt somewhat tense on palpation. However, in the literature, simple testicular cysts are almost impalpable and accidentally discovered; but those that are peripherally oriented may be suspected on physical examination by palpation of a focal, non-tender mass [1, 2, 6, 9]. We can therefore conclude that the type of cyst (solitary, polykystosis), the position and volume; are the elements determining its palpability and sometimes the presence of pain.

One of the essential elements in the diagnosis is the scrotal ultrasonography. That diagnostic method is very important because sometimes it is the only way to find non palpable testicular. It is also useful for a differential diagnosis between all masses that could be found in that organ. On ultrasound, simple cysts are anechoic, demonstrate an imperceptible wall

and have through transmission. Testicular cysts normally have a size range from 2 mm to 2 cm in diameter [10]. For a simple cyst studied by Jackson et al, ultrasound demonstrated a left simple intratesticular cyst, approximately 15 mm x 10 mm, within the testicular capsule that appeared to be compressing the normal testicular parenchyma. There was a hyperechoic rim and posterior acoustic amplification [9]. Concerning a case of polycystic testicular described by Collar et al, the ultrasonography confirmed the presence of several testicular cysts of different sizes, with a well-defined outlines and a completely anechoic content with limited surrounding parenchyma [5]. In our presented case, we found expressed polycystic transformation of both testicles; cysts were with well-defined outlines and an anechoic content; we noted also an atrophy of the appendage and spermatic cord elements, including the choroid plexus. The differential diagnosis includes epididymal cysts, epidermoid cysts and cystic dysplasia, and more importantly, germ cell tumors, especially teratomas. This distinction can be made histologically.

According to the literature, macroscopically, the specimen of benign intratesticular cystic revealed a cystic lesion filled with clear fluid free of sperm [1, 8, 11]. In our case, on the cut, we found a multiple cavity with a smooth lining, with a yellowish clear content. Microscopically, the specimen presented polycystic testicles (simple serous cysts) with diffuse parenchymal sclerosis. Collar et al found cystic lesions as well as atrophy of the rest of testicular tissue [5]. Kang revealed a fibrous wall lined with simple flattened epithelium with multilobulated cysts [1]. The histology remains the most appropriate examination to make the final diagnosis of that kind of tumor.

The management of simple intratesticular cysts is controversial. Simple intratesticular cysts can be managed conservatively with regular ultrasound surveillance by an experienced urologist, without the need for surgical intervention [7]. There are reports of organ-preserving procedures for benign disease by enucleation, in which follow-up revealed no evidence of recurrence. However, organ-preserving removal of a small (1 to 2 mm) cyst might be technically demanding, especially for a central location [1]. For Jackson et al, the masses that are characterized as simple cyst, do not involve the tunica albuginea and have a hyperechoic rim. Testis-sparing surgery via an inguinal incision and enucleation of the cyst has been demonstrated to be an effective approach [8]. But, for testicles presenting a great cystic invasion occupying almost the whole structure of the organ as in our case presented, the orchiectomy remains the only possibility.

CONCLUSION

The frequency of simple serous cysts of the testicle is increasing, thanks to the introduction and frequent use of ultrasound scrotal scanning. Despite of that, the polycystic form of that affection combined with the bilateral position remains extremely rare. This kind of development of the disease change the habitual clinic and management of simple intratesticular cyst. Radical orchiectomy is the appropriate treatment.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.



Figure 1. Physical appearance of the patient before surgery. The scrotum increases in volume. The patient underwent several surgeries leading to a functional urethral fistula.

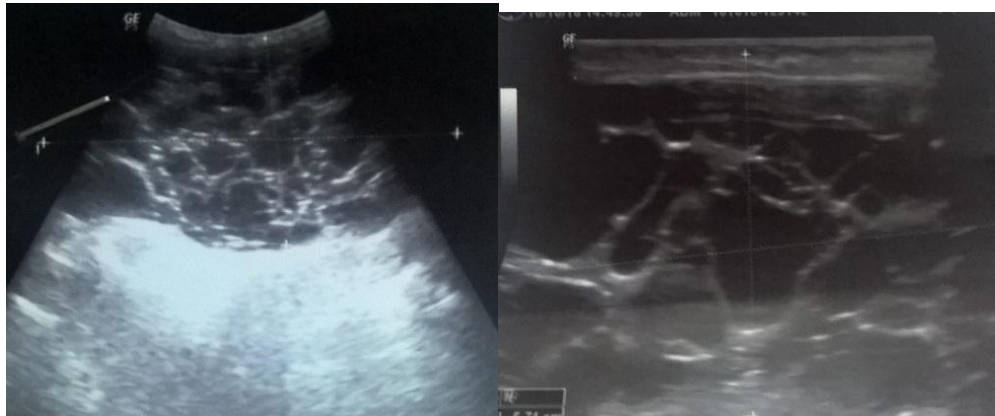


Figure 2. Scrotal ultrasound - Polycystic transformation of testicles. Cysts with well-defined outlines and an anechoic content.



Figure 3. Two testicles with appendages 10.1 x 6.9 x 3.5 cm, 13.0 x 9.8 x 4.2 cm. On the cut multiple cavity with a smooth lining, with a yellowish clear content.

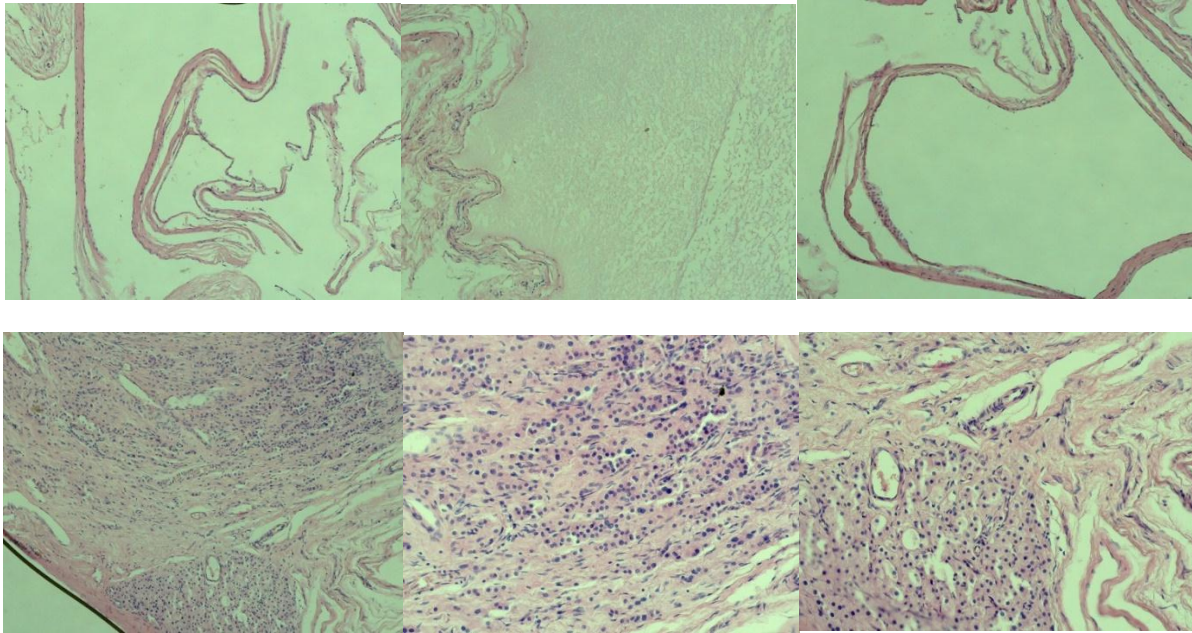


Figure 4. Polycystic testicles (simple serous cysts) with diffuse parenchymal sclerosis and atrophy of the testicles and appendages, solid focal proliferation of Sertoli cells and small focal lymphoid cell infiltration



Figure 5. Physical appearance of the patient one week after the surgery

REFERENCES

- 1.Kang SM, Hwang DS, Lee JW, Chon WH et al. Multiple Intratesticular Cysts. *World J Mens Health*.2013; 31(1): 79-82
- 2.Al-Jabri1 T, Misra S, Maan ZN, Khan K et al. Ultrasonography of simple intratesticular cysts: a 13 year experience in a single centre. *Diagnostic Pathology*. 2011; 6:24 <http://www.diagnosticpathology.org/content/6/1/24>
- 3.Leung ML, Gooding GA, Williams RD. High-resolution sonography of scrotal intratesticular cysts in asymptomatic subjects. *AJR Am J Roentgenol*. 1984; 143:161-4
- 4.Gooding GA, Leonhardt W, Stein R. Testicular cysts: US findings. *Radiology*.1987;163:537-8
- 5.Collar TLR, Perez MP, Sanchez EB, Piñera BMP. Polycystic testicle: case report. *Arch. Esp. Urol*. 2013; 66 (9): 894-895
- 6.Dogra VS, Gottlieb RH, Rubens DJ, Liao L. Benign Intratesticular Cystic Lesions: US Features. *Radiographics*. 2001; 21:S273–81
- 7.Shergill IS, Thwaini A, Kapasi F, Potluri BS, Barber C. Management Of Simple Intratesticular Cysts: A Single-Institution 11-Year Experience. *Urology*. 2006; 67 (6): 1266–1268
- 8.Jackson JN, Zee RS, Herndon A. Simple intratesticular cyst: A rare finding amenable to testis-sparing surgery. *Ped Urol Case Rep*. 2016; 3(6):221-226
- 9.Rifkin M, Cochlin DL. *Imaging of the Scrotum & Penis*. New York, Informa Healthcare; 2002.
- 10.Goldenberg E, Gilbert BR. *Scrotal Ultrasound*. In: B. R. Gilbert (ed.). *Ultrasound of the Male Genitalia*. New York, Springer Science+Business Media; 2015
- 11.Hatsiopoulos O, Dawson C. Simple intratesticular cysts in adults: a diagnostic dilemma. *BJU International*. 2001; 88:248 - 250