

Surgical Management of a Giant Hydrocele of the Vagina in Adult

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Abstract

Introduction: Vaginal hydrocele is an amber-colored, sterile collection found between the parietal and visceral testis. It is said to be giant when it is larger than the patient's skull or when it contains more than two liters of liquid. **Objective:** To report our method and the result of the surgical treatment. **Observation:** The authors reported an observation of a 50-year-old patient who consulted for a painless large left bursa. Clinical and paraclinical investigations, in particular scrotal ultrasound, have made it possible to diagnose a giant hydrocele of the vagina. The patient had surgical treatment which consisted of resecting of the vagina with hemostatic suture of the resected vaginal slice. The post-operation effects were not complicated. After a six-month setup, we did not notice any recurrence. **Conclusion:** Resection of the vagina with hemostatic suture of the resected vaginal slice in case of giant hydrocele could certainly give good results.

Keywords

Giant Hydrocele, Surgical Treatment

1. Introduction

The vaginal hydrocele is an amber and sterile collection present between the parietal and visceral vaginal tunic of the testicle [1]. It is due to an imbalance in the balance between secretion/re-absorption of the vaginal mucous either by an excess of secretion or by a lack of lymphatic drainage [2]. It is called giant when it is larger than the skull of the patient or when it contains more than two litres of

liquid. We report a case of giant hydrocele of the vagina and explain our surgical method.

2. Case Presentation

Our observation is that of a patient aged 50 married, who has 7 children. He has no history of stock market trauma or urinary tract infection. He consulted for a large painless left testicle (**Figure 1**). This big testicle had been evolving for 10 years. It was gradually increasing and hampered walking.

The physical examination found a painless, soft, renitent and transilluminable left unilateral scrotal swelling. There was a disappearance of scrotal striations. The scrotal skin was healthy. The left testicle was not palpable. The other external genitalia were healthy. There was no associated inguinal hernia. We suspected a vaginal hydrocele that was confirmed by an ultrasound of the stock exchanges. There was no underlying epididymal-testicular pathology.

Under spinal anaesthesia, we made a horizontal incision of the scrotum (**Figure 2**) to the vaginal plane recognised by its bluish tinge and covered with a thin vascular lacin (**Figure 3**). The vagina was speckled and aspiration through this speck collected 2 litres of citrine liquid. The testis and epididymis were macroscopically healthy. The vaginal was healthy. It was opened longitudinally along the long axis of the testicle to better expose it (**Figure 4**). Then it was extensively removed with electrocautery one half centimetre from the testicle (**Figure 5**). The haemostasis of the vaginal section slice, was made by a serration passed to vicryl 3/0 crimped after electro coagulation of the main vessels (**Figure 6**). The testicle has been drained. The envelopes and skin were closed again (**Figure 7**). The drains were removed on D2 post-operation. After the surgery, the patient had analgesics and local care. The post-operation effects were uncomplicated and the patient went out three days after. Cytobacteriological examination of the liquid did not find any *wuchereria bancrofti*. After a six-month setup, we did not note any recurrence.



Figure 1. Large left purse in supine position.



Figure 2. Horizontal incision of the scrotum.



Figure 3. Blueish vaginal covered with fine vascular lacing.

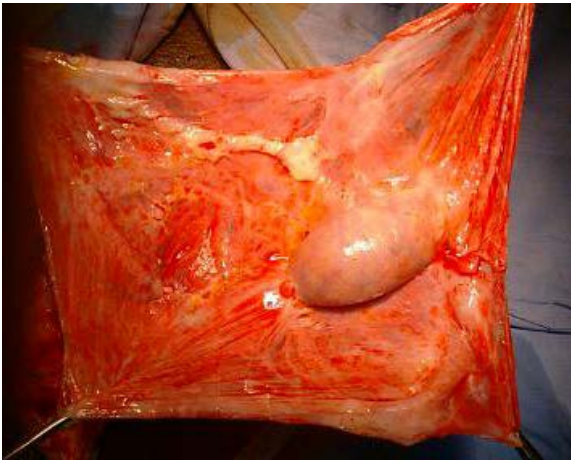


Figure 4. Externalisation of the testicle and vagina.

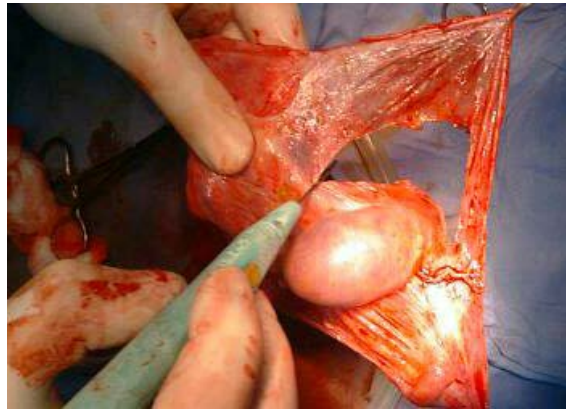


Figure 5. Resection of the vaginal.



Figure 6. Hemostatic suture on the vaginal slice.



Figure 7. Skin closure and scrotal drainage.

3. Discussion

Adult vaginal hydrocele is a peri-testicular fluid collection between the parietal and visceral leaves of the vagina. It is due to an imbalance in the balance between secretion/re-absorption of the vaginal mucous either by excess secretion or by lack of lymphatic drainage [2].

An endemic disease in Africa, adult vaginal hydrocele is of idiopathic or reactive origin to filariasis. It is benign and frequent [2]. However, few studies on its

giant form have been reported in the literature.

On the other hand, there is no consensus on the definition of voluminous vaginal hydroceles. According to Hirano *et al.*, vaginal hydrocele is said to be giant when the quantity of liquid collected is greater than 1 litre [3]. For Akpo, a giant hydrocele of the vagina is defined as a hydrocele whose size is larger than the patient's skull [4]. In this author's series of three large hydroceles larger than the patients' skulls, he also found a respective quantity of 4 litres, 3.7 litres, and 6.5 litres [4]. In our case, the quantity of liquid collected, two litres, confirmed our diagnosis of giant hydrocele.

The diagnosis of hydrocele is essentially clinical. The examination finds a large renal grant, very often under tension. There is no sign of inflammation and the purse is transilluminable. The tension and volume of the effusion make it impossible to palpate the testicle [5] as in our observation. No additional examination is required except for adults. However, when there is doubt, scrotal ultrasound is useful [4].

Hydrocele is idiopathic in most cases. In some cases it is secondary to infections (orchitis, epididymitis, tuberculosis, filariasis). It can also be secondary to torsion, tumour or testicular trauma [6]. The case we are reporting could correspond to an idiopathic hydrocele because the interview did not find a history of scrotal trauma or infection. The testis and epididymis were macroscopically healthy. Also, the bacteriological examination of the hydrocele fluid was sterile.

The occurrence of voluminous hydrocele of the vagina is due to delayed consultation. This delay in consultation is due to several factors including poverty, and prejudices related to surgery. These prejudices are sexual impotence and infertility [7]. In our observation, prejudices related to surgery were the reasons for the delay in consultation. In addition to this delay in consultation, the absence of pachyvaginitis would favour the extensibility of the vagina and therefore the increase in the volume of the hydrocele. In the Akpo series, scrotal ulceration and penetration difficulties during sexual intercourse were the reasons for consultation [4]. In our case, walking discomfort was the reason for the consultation.

The purpose of the treatment is to correct the imbalance in hydrostatic exchanges between the secretion and absorption of the serosa by either suppressing vaginal secretion or improving venous lymphatic drainage. Therapeutic methods are controversial [8]. There are several processes. The medical treatment exceptionally proposed in the context of reaction hydrocele or the treatment of the cause causes the fluid effusion to decrease. However, in the particular case of lymphatic filariasis, surgical treatment is necessary, under the guise of medical treatment for parasitic infection [7]. Evacuation/sclerosis puncture, a simple technique, exposes patients to postoperative pain, infections and epididymal lesions. Its results are disappointing, with a high risk of recurrence [4] [6] [9].

There are three commonly used surgical techniques. Vaginal plication according to LORD [10]. Its principle is to plicate the parietal vagina in order to sup-

press its secretion and expansion. This technique has the advantage of limiting dissection and therefore the risk of bleeding and infection. It is only effective for essential to healthy vaginal hydrocarbons. Fenestration according to Ozdilek modified by Falandry consists in making a small permanent vaginal opening allowing the re-absorption of the liquid exuded by the lymphatics of the subcutaneous cellular tissue and the dartos [2]. This technique gives less satisfactory results for patients with bulky hydrocele, old or compartmentalised [2]. According to Chiron et al, in precarious conditions, fenestration and at a lower level plication are the most appropriate techniques for healthy vaginal surgery, whereas only resection is possible in the case of pathological vaginal surgery [11]. This vaginal resection, which consists of removing the parietal vaginal and thus eliminating the source of the exudate, is the only technique indicated in the event of a vaginal anomaly. It is effective in reducing hydrocele, but is characterised by poor operative outcomes [12]. For Cariou, hydrocele is a “chronic vaginalitis with effusion” and its logical treatment is the resection of the sick vaginal [12]. In our case, although resection is only considered in the case of pathological vaginal disease, the age and volume of the hydrocele causing a large surface area of the parietal vaginal has oriented our therapeutic attitude towards resection.

In some studies concerning the treatment of vaginal hydrocele, drainage is not necessary because there is no significant difference in the incidence of postoperative infections [13]. Chiron to avoid scrotal hematoma performed a compressive scrotal bandage. For Cariou, it is necessary to avoid compression dressings, which can irreversibly fix the testicle in a high scrotal position [12]. In our patient, scrotal drainage was performed to avoid the occurrence of postoperative hematoma. Also, to reduce the risk of infection, the drains were removed in the immediate postoperative.

4. Conclusion

Resection of the vagina with hemostatic suture of the resected vaginal slice in case of giant hydrocele could certainly give good results.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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