Deflate-gate: Conservative Management of a Large Ruptured Hydrocele

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A R T I C L E   I N F O

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A B S T R A C T

A hydrocele is a common cause of intrascrotal swelling that results when fluid accumulates between the parietal and visceral layers of the tunica vaginalis. Over time, fluid may collect to form a massive hydrocele and result in significant discomfort for the patient. In this case report, we present a rare event of a 28-year-old gentleman with a documented massive hydrocele measuring 14.1 × 8.9 cm who ruptured his hydrocele during sexual intercourse. We expectantly managed the patient’s ruptured hydrocele and encountered no complications throughout the course of his recovery.

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Introduction

Hydroceles are among the most common urological diagnosis made in adult males, and procedures to correct for hydroceles are among the highest performed in urological practice. Occasionally, hydroceles can become significantly enlarged and cause patients to suffer from great discomfort secondary to increased intrascrotal pressure and size. In rare situations, a hydrocele may rupture spontaneously or secondary to trauma, resulting in decompression of the hydrocele.1–4 In this case report, we present an adult male who presented to the emergency department with a massive hydrocele that ruptured after engaging in sexual intercourse with his wife.

Case presentation

The patient was a 28-year-old gentleman with a 2-year history of stable right scrotal swelling and a recent increase in hemiscrotal size. He complained of a constant, dull scrotal pain that was interfering with his quality of life. On CT, the scrotum measured approximately 14.1 × 8.9 cm, and on physical exam it appeared tense, but with no erythema or induration (Fig. 1). An ultrasound of the scrotum and testicles confirmed a large right hydrocele with no venoocclusive process or associated lesions. The patient was discharged with anti-inflammatory and pain medication, and was instructed to follow up with the urologist as an outpatient.

The patient was lost to follow up, but a year later returned to the emergency department complaining of worsening scrotal pain that began during sexual intercourse with his wife. Physical examination revealed a decompressed right hydrocele, with mild ecchymoses and stable vital signs (Fig. 2). Laboratory results were all within normal range. A repeat ultrasound demonstrated a reduced hydrocele that now measured 5.2 × 6.5 cm with testicular septations (Fig. 3). The diagnosis was a ruptured right scrotal hydrocele secondary to trauma from sexual intercourse. The patient was expectantly managed with anti-inflammatory and pain medication, and was instructed to wear daily scrotal support for 2 weeks to aid with his discomfort.

At an outpatient follow up visit 1 month post-rupture, the patient's right scrotum had re-accumulated fluid, so he opted to have a hydrocelectomy.

Discussion

A hydrocele occurs when fluid collects in the potential space between the parietal and visceral layers of the tunica vaginalis. It may be a congenital or acquired abnormality. In a congenital hydrocele, the processus vaginalis remains patent and keeps direct communication between the parietal peritoneum and the tunica vaginalis, allowing peritoneal fluid to accumulate in the scrotum. Acquired hydroceles are usually idiopathic in nature. However, they may also be caused by infections, trauma, surgery, or...
malignancy. The pathophysiology of a hydrocele is the result of imbalance between the reabsorption and secretion of fluids from the tunica vaginalis, and in some cases due to lymphatic obstruction.5

Patients with hydroceles usually present with a painless scrotal swelling. As the hydrocele enlarges, patients will complain of physical discomfort and a dragging sensation.5 A hydrocele is often diagnosed with an ultrasound of the scrotum and testicles. The sonogram will typically demonstrate a thin-walled, anechoic fluid collection on the anterolateral aspect of the testicle.

Hydroceles are typically managed by an open surgical procedure known as a hydrocelectomy, which removes the fluid filled sac by either resection or plication. Another option is to aspirate the fluid filled sac followed by sclerotherapy.

Rupture of a hydrocele is a rare occurrence. A literature search through various databases came up with only four documented accounts of a ruptured hydrocele in the past 50 years.1-4 In these accounts, the cause of rupture was either by trauma or spontaneous rupture during sleep. The largest documented ruptured hydrocele measured 15 cm in diameter,1 comparable to our patient’s massive hydrocele, with the other hydroceles being much smaller.

In our patient’s case, the rupture occurred secondary to trauma from sexual intercourse. Clinically, the patient appeared stable and his hydrocele had drastically decompressed leading us to take a conservative approach. We prescribed anti-inflammatory and pain medication, and provided scrotal support for temporary relief of pain and discomfort. Unfortunately the hydrocele gradually recurred after a month and hydrocelectomy was performed for definitive treatment. Interestingly, in most of the previous accounts that a conservative approach was applied, the hydrocele recurred and surgery was required for definitive correction.

Conclusion

In summary, we report of an unusual case of massive scrotal hydrocele that ruptured secondary to trauma during sexual intercourse. The patient was expectantly managed after decompression of his scrotum, but despite the temporary improvement, swelling recurred and definitive surgical management was performed.

Consent

No personal identifying information is provided in this case report.

Conflict of interest

No conflict of interest.

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References

1. Quint HJ, Miller JJ, Drach GW. Rupture of a hydrocele: an unusual event. *J Urol*. 1992;147:1375–1377. Print.
2. Ruibal M, Quintana JL, Fernández G, Zungri E. Acute rupture of a hydrocele. *Br J Urol*. 2002;89(1):45–46. Print.
3. Cuervo C, Rodríguez JP, Abengozar A, et al. Ruptura espontánea de hidrocele: una complicación inusual. *Actas Urol Esp*. 1998;22:610–612.
4. Wiwanitkit V. Accidental rupture of hydrocele. *Urol J*. 2011;8(2):163–164.
5. Rubenstein RA, Dogra VS, Seftel AD, Resnick MI. Benign intrascrotal lesions. *J Urol*. 2004;171:1765–1772. Print.