Giant infected hydrocele: a case report

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Abstract

We present the case of a 72-year-old male admitted with a giant infected hydrocele. His medical history includes a transurethral resection of the prostate for benign prostatic hyperplasia and a total thyroidectomy complicated by postoperative hematoma necessitating a tracheostomy. The patient reported a three-year history of right hemiscrotal enlargement, with significant symptom exacerbation in the preceding month. Physical examination revealed a markedly enlarged, tender scrotum with epidermolysis and a body temperature of 38°C. Laboratory findings showed leukocytosis and elevated C-reactive protein levels. Imaging studies demonstrated well-vascularized testes with significant inflammatory changes and septations, consistent with a complex hydrocele. Surgical intervention involved drainage of approximately 3 liters of purulent fluid, debridement of necrotic tissue, and right orchiectomy. Postoperative management included a 10-day course of antibiotics, leading to favorable progress. The patient was discharged on the tenth postoperative day and remained in good health at the three-month follow-up.

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Introduction

Hydrocele, characterized by the accumulation of serous fluid within the tunica vaginalis surrounding the testis, is a common condition in urological practice.[1] While most hydroceles are benign and asymptomatic, they can occasionally attain considerable size, leading to patient discomfort and functional impairment.[2] In rare instances, hydroceles may become infected, escalating to a urologic emergency due to the risk of severe complications such as testicular damage or the development of Fournier's gangrene.[3,4] We present a distinctive case of a 72-year-old male with a giant infected hydrocele (Figure 1), remarkable for its extensive size and the rapid progression of infection.[2] This case is unique due to the substantial volume of purulent fluid accumulation and the associated systemic inflammatory response, which are uncommon in typical hydrocele presentations.[4] Our report aims to detail the clinical course, diagnostic challenges, and therapeutic interventions undertaken, thereby contributing valuable insights to the limited literature on managing such extraordinary cases.[2,5]

Case Report

A 72-year-old male presented with a three-year history of right hemiscrotal swelling, significantly worsening over the past month. His medical history includes a transurethral resection of the prostate for benign prostatic hyperplasia four years prior and a total thyroidectomy for multinodular goiter, complicated by postoperative hematoma necessitating a tracheostomy. On examination, the scrotum was markedly enlarged, tender, and exhibited epidermolysis, with erythema extending proximally onto the penis. The patient was febrile, with a body temperature of 38°C.

Laboratory investigations revealed a white blood cell count of 25,220/μL, indicating leukocytosis, and an elevated C-reactive protein level of 211 mg/L. Urinalysis showed 2-3 red blood cells and 2 white blood cells per high-power field. Scrotal ultrasound demonstrated well-vascularized testes with significant inflammatory changes and septations, suggesting a complex hydrocele. Computed tomography confirmed these findings and excluded intra-abdominal pathology.

Surgical exploration revealed a giant hydrocele containing approximately 3 liters of purulent fluid. The procedure included

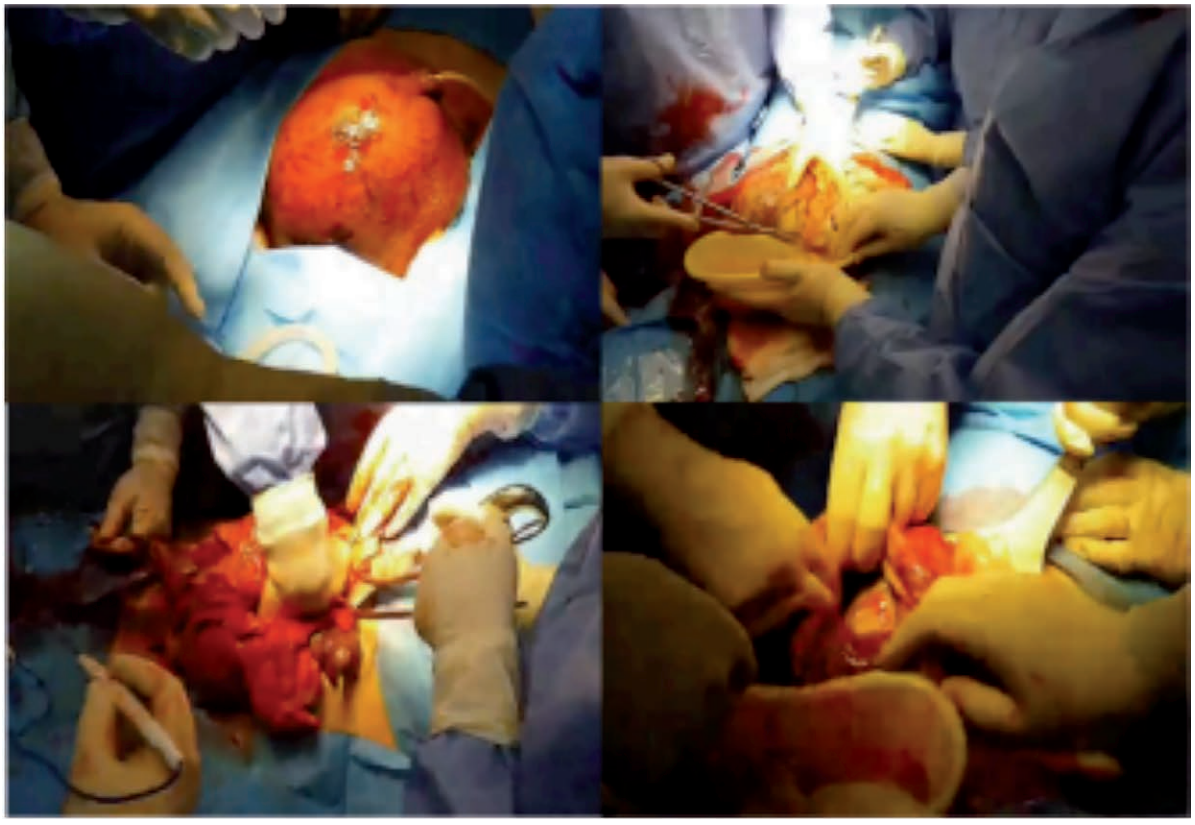

Figure 1. Infected hydrocele.

drainage of the fluid, debridement of necrotic and inflammatory tissues, and a right orchiectomy due to non-viable testicular tissue. Empirical antibiotic therapy was initiated with intravenous ciprofloxacin (400 mg every 12 hours) and clindamycin phosphate (600 mg every 8 hours) for 10 days, resulting in favorable progress. Additionally, the patient received amikacin for three days. Microbiological cultures identified *Escherichia coli*, *Acinetobacter spp.*, and *Staphylococcus spp.* as the causative organisms. Histopathological examination of the excised tissue revealed fibro-fatty segments, likely corresponding to parts of the testicular coverings, with marked vascular congestion overlaid by hemorrhagic and inflammatory infiltrate. Skin sections exhibited significant vascular congestion, hemorrhagic necrosis, and pronounced chronic inflammatory infiltrates. The testis showed atrophy of the spermatogenic epithelium and areas of hyaline sclerosis of the seminiferous tubules.

The patient was discharged on the tenth postoperative day. He remained in good health at the three-month follow-up, with no signs of recurrence or complications.

Discussion

This case underscores the importance of prompt recognition and management of infected hydroceles to prevent severe complications.[3,4] The patient's delayed presentation contributed to the development of a giant hydrocele with significant purulent accumulation, a rare occurrence in clinical practice.[5] Early surgical intervention and appropriate antimicrobial therapy were crucial in achieving a favorable outcome.[3,4] This case adds to the limited literature on giant infected hydroceles and highlights the need for increased awareness and timely management of such conditions.[2,5]

Conclusions

Infected hydroceles, particularly of significant size, are uncommon but pose serious risks if not promptly addressed. This case illustrates the successful management of a giant infected hydrocele through surgical intervention and targeted antibiotic therapy. Clinicians should maintain a high index of suspicion for such presentations to initiate timely and appropriate treatment, thereby preventing potential complications.

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