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Case Report

Chronic Left Epididymo-Orchitis Complicated by Pyocele: A Rare Presentation

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ABSTRACT

Epididymitis and epididymo-orchitis are common diseases that present with swelling in the scrotum and are mostly seen in surgical outpatient departments. Epididymitis and epididymo-orchitis normally resolve after adequate antibiotic treatment, although it may lead to several complications. Scrotal pyoceles are uncommon purulent collections in the potential space between the visceral and parietal tunica vaginalis surrounding the testicle. We present a case of epididymo-orchitis that progressed to pyocele despite antibiotic treatment. Through clinical, physical, and radiographical evaluation and by intraoperative findings, he was diagnosed with chronic left epididymo-orchitis with pyocele. A left orchidectomy was performed that helps to prevent further complications.

Keywords: Epididymo-Orchitis, Pyocele, Testicular abscess, Orchidectomy.

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INTRODUCTION

Epididymo-Orchitis (EO) is characterised by inflammation of theepididymis andtestis. It primarily affects adult males.[1] The differential diagnosis of this case includes testicular torsion, epididymitis, and a scrotal abscess. EO manifests as unilateral pain and swelling. It is typically managed with antibiotics; however, it might lead to complications such as scrotal pyocele.[2] A scrotal pyocele is a rare urologic issue that must be detected and treated immediately to avoid testicular injury or Fournier's gangrene. Scrotal pyocele is an uncommon purulent collection in the tunica vaginalis caused by severe EO or a ruptured testicular abscess.[3] Acute and non-acute scrotal illnesses frequently have similar symptomatology and clinical appearance, with pain and swelling of the scrotum being the most prevalent causes for patients to seek medical care.[4] Scrotal pyoceles appear with subacute development of pain and swelling, which can resemble other pathologies. Early detection using ultrasound, therefore, will help prevent the development of sepsis and retain a functional outcome. Antibiotics, incision and drainage of the abscess cavity, and orchidectomy of the affected testicle are the most common treatments for EO-caused scrotal pyoceles.

CASE REPORT

A 60-year-old male patient consulted a physician in the outpatient department in Santhiram Medical College & General Hospital with chief complaints of swelling in the scrotum since one-week, dull aching pain over the swelling in the scrotum, and loss of appetite. There was no local rise in temperature, and tenderness was also not noted. Based on physical examination and impression of USG (Ultrasound Sonography) of scrotum, the physician diagnosed it as acute left epidydmo-orchitis. Doctor prescribed antibiotics such as Tab. DOXY (Doxycycline) 100 mg BD, Tab. OFLOX-OZ (Ofloxacin+Ornidazole) BD, and other drugs such as Tab. PANTOP 40 mg OD, Tab. ACECLO-P (Aceclofenac+Paracetamol) BD, and Tab. CHYMORAL FORTE (Trypsin+chymotrypsin) TID. Scrotal support was also recommended. Patient was informed to come for follow-up after 10 days.

After 9 days, the patient admitted to the hospital since swelling in the scrotum and pain over swelling was not reduced. Patient was apparently normal 15 days ago, but later he noticed a swelling in the scrotum that was insidious in onset, gradually progressive, and attained the present size of 8*5 cm. The swelling is not reduced on lying down, and there were no aggrevating or relieving factors of swelling. Pain over the swelling is dull aching type, intermittent type, pain aggravated on prolonged standing and relieved on taking rest or lying down. Patient had also complained of loss of appetite. There were no similar complaints in the past, and the patient had no history of surgeries. Patient was referred to general medicine since high blood pressure was

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noted after admission. The physician diagnosed it as DENOVO hypertension and treated with Tab.DILNIP 10 mg BD. Patient is a chronic smoker and alcoholic. On physical examination, left testicular swelling was noted over the genitals. The patient was provisionally diagnosed with chronic epidydmo-orchitis with pyocele with left testicular carcinoma. After obtaining consent, the patient was exposed from nipple to midthigh and examined in standing and supine positions. On local examination of external genitalia, swelling in the left side of the scrotum extending from root to base of the scrotum measuring about 8*5 cm was noted; tenderness was present; skin is mildly stretched and firm to hard in consistency. Right testis is palpable and cord structure is normal, whereas left cord structure is thickened, hard in consistency, and swelling is not reducible. On systemic examination, multiple swellings (neurofibromas) were noted. On a scrotal scan, multiple irregular heterogeneously hypoechoic areas in the left testies, left epididymitis, left funiculitis, and right testicular cyst were also noted as shown in Figures 1A and B. During intraoperative findings, a left testicular abscess with epidydmo orchitis (thickened cord structures) present with pus of about 100-150 mL was noted. The physician advised some other lab investigations, such as a complete blood picture, blood sugar levels, and 2D ECHO, and their abnormal values were given below in Table 1. A review scan of the scrotum was suggested to know the presence of paraechoic lymphnodes, but they were not noted as shown in Figure 2. The patient was finally diagnosed with chronic left epididymo-orchitis with pyocele.

TREATMENT

The plan of care for this patient was left orchidectomy, which is performed after obtaining consent from the patient. Postoperative treatment includes IV fluids and drugs. Inj. MONOCEF 1gm IV BD, Inj. METROGYL 500 mg IV TID were the antibiotics given for the first 3 days, Tab. TAXIM 200mg BD and Inj. MONOCEF for the next 2 days, and Inj. ZOSTUM 1.5 g IV BD for the next 3 days. Other drugs include Inj. PANTOP 40 mg OD, Inj. DOLOKIND AQUA IV BD, Tab. CHYMORAL FORTE, Tab. DILNIP 10 mg BD, nebuliser DUOLIN, and BUDECORT. SCROTAL SUPPORT was also recommended. Tab. LIMCEE OD, Cap.B. COMPLEX OD, and Oint. METROGYL were also added further. Vitals were monitored regularly. Treatment is continued for 9 days post operatively. Postoperative scan of scrotum showed normal status as shown in Figure 3. Regular dressing was performed. Patient condition was stable and the wound was healthy at the time of discharge.

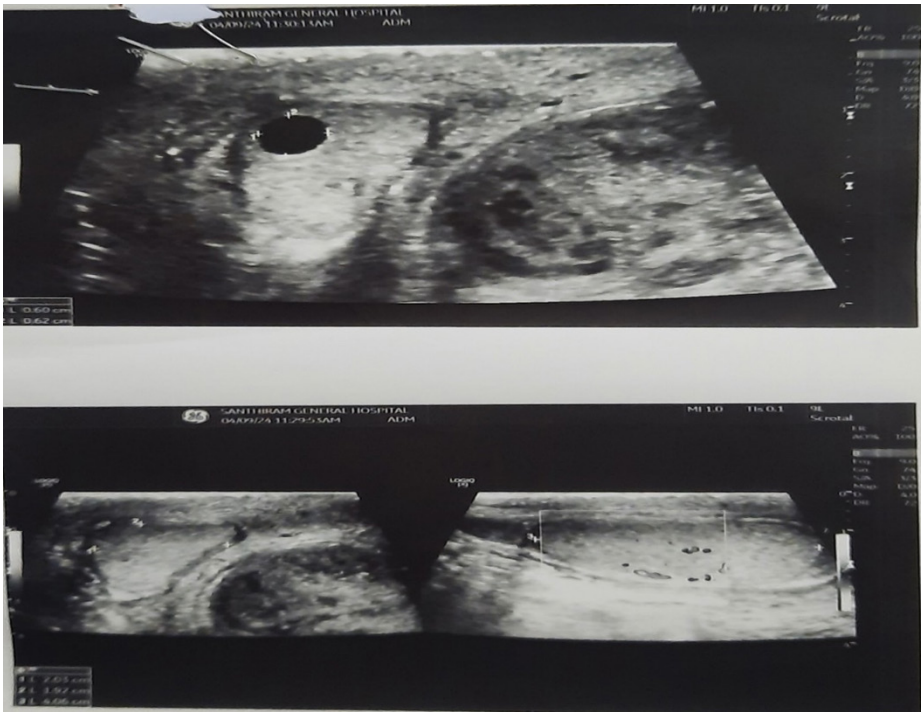
DISCUSSION

Epididymitis frequently coexists with orchitis, because of the anatomical proximity of both organs. Although epididymo-orchitis can be treated by antibiotic therapy, sometimes it may lead to several complications. As a result, quick diagnosis and treatment are critical for avoiding consequences such as abscess formation and testicular atrophy. A scrotal pyocele is a rare consequence nowadays, especially in a patient with no other pre-existing comorbidities and only a week of history,[5] as seen in our case. Epididymitis and orchitis can be identified by seminal fluid analysis, Nucleic Acid Amplification Test, urinalysis, blood culture, or imaging modalities like ultrasound. In this case ultrasound is performed. Some cases of epididymitis result in pyocele formation, necessitating immediate surgical intervention to prevent testicular gangrene.[6] In our case, a left orchidectomy was performed to prevent such complications. Our case of acute epididymo-orchitis without symptom relief after antibiotic treatment was aggravated by pyocele. Since testicular carcinoma was also suspected, orchidectomy was the best way for treating and preventing it. A review scan of scrotum was also performed following surgery, and the impression showed normal post-operative health.

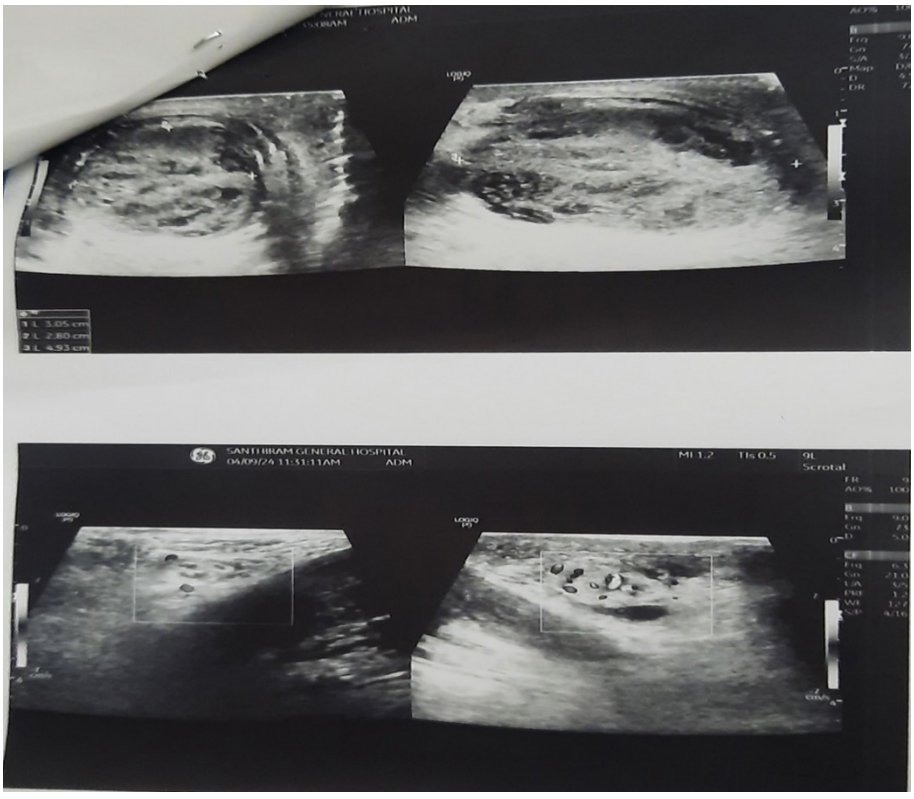
In our case presentation, the chronic left epididymo-orchitis patient with pyocele was treated with antibiotics (Inj. MONOCEF, Inj. METROGYL, Tab. TAXIM), pain management (Inj. DOLOKIND AQUA), and scrotal support. The holistic treatment approach can be proposed as a novel intervention because it meets the complex needs of the patient. The antimicrobial combination and pain relief facilitated the mitigation of the severity of symptoms, while support to the scrotum facilitated the healing process. The other challenge in this case was the hypertension of the patient, which had to be handled very carefully during the treatment process.The patient's blood pressure was monitored regularly and treated with drug (Tab. DILNIP) for blood pressure control. This highlights the need for individually tailored care by taking into consideration the patient's particular needs and history. In the future, treatment guidelines can include exploring

Table 1: Lab Investigations Showing Abnormal Values.

Complete blood picture	Abnormal range	Normal range
Differential leucocyte count		
Lymphocytes	18 %	25-40%
Eosinophils	08%	01-04%
T.R.B.C.	4.2	4.5-5.5/millions/cmm
MCV	99 FL	86-98 FL
MCH	34 pg	27 -32 pg
Post Prandial Blood Sugar	180	110- 160 mg/dL
Fasting Blood Sugar	149	70-110 mg/dL
HbA_{1c}	4.0	Non-diabetic: <5.7% Pre- diabetic: 5.7-6.4% Diabetic: >6.5



(A)



(B)

Figure 1: A and B show multiple irregular heterogeneously hypoechoic areas in the left testis, left epididymitis, left funiculitis, and right testicular cyst.

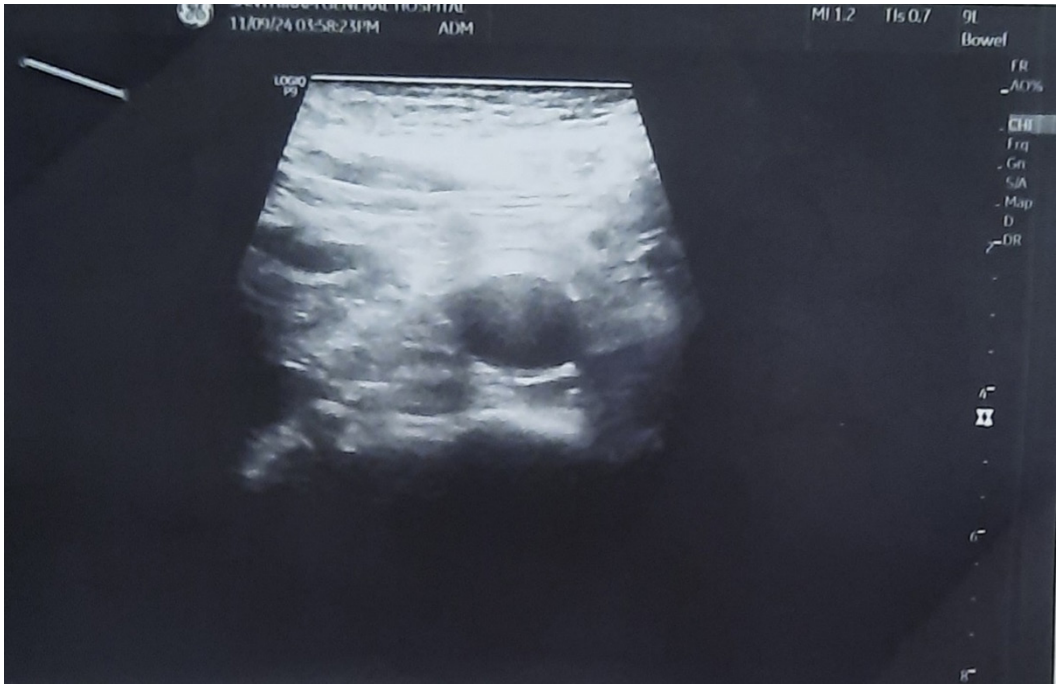


Figure 2: Is a review scan that shows no evidence of paraechoic lymphnodes and visualized bowel loops appear normal in caliber and peristalsis.

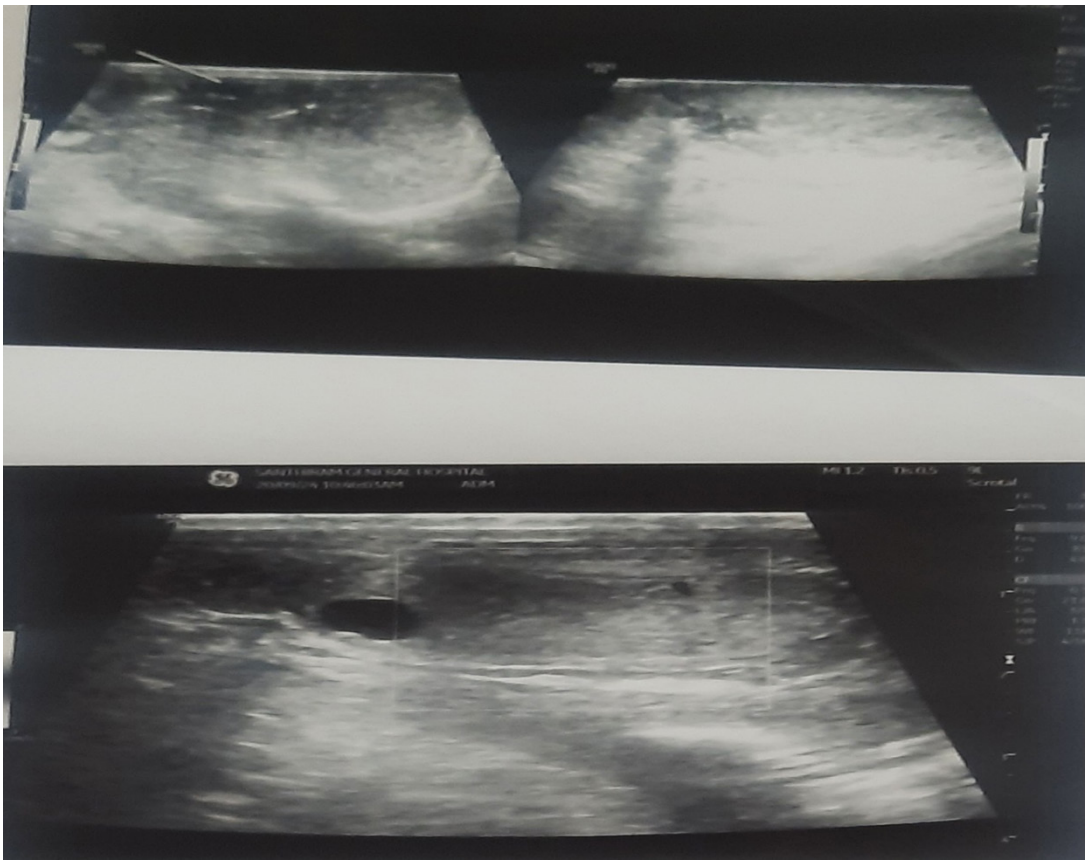


Figure 3: Shows normal postoperative status after left orchidectomy.

alternative minimally invasive surgical techniques or novel antibiotic medications.

Swollen and painful scrotum might indicate a variety of disorders. The differential diagnosis of such condition includes epididymitis, Epididymo-Orchitis (EO), testicular torsion, and a scrotal abscess. So correct diagnosis plays a major role to prevent further progression of disease. Surgical treatment is regarded the standard of care and the recommended treatment for pyocele in order to avoid subsequent complications like Fournier's gangrene, permanent infertility, sepsis, or even in some cases death. Patients with epididymitis or EO who do not improve or worsen while taking antibiotics should be monitored closely.

CONCLUSION

Scrotal pyocele is an uncommon complication of epididymo-orchitis that needs surgical intervention to avoid future complications. Correct diagnosis of the disease through clinical, physical, and radiographic tests, as well as intraoperative findings and its prompt management, helps to prevent complications. In our case of chronic left epididymo-orchitis with pyocele, since testicular carcinoma was also suspected, left orchidectomy was performed. This surgical procedure contributes to a better functional outcome. Even though epididymo-orchitis can be managed by antibiotic treatment, its early diagnosis and management aid in preserving the life of the patient.

ABBREVIATIONS

EO: Epididymo-orchitis; **USG:** Ultrasound Sonography.

ETHICS APPROVAL

The Santhiram Medical College and General Hospital provided IEC approval. The reference number is SRCP/IEC/PD-2025/004.

PATIENT CONSENT

Patient provided his consent after informed the content.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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