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ACUTE SCROTAL PAIN - DIAGNOSTIC DILEMMA -- TESTICULAR APPENDIX TORSION

Radiodiagnosis

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ABSTRACT

Torsion of the appendix testis is not an uncommon cause of acute hemiscrotum. It is frequently misdiagnosed as acute epididymitis, orchitis, or torsion of testis. This condition accounts for 35% to 67% of acute scrotum cases and has a higher incidence than testicular torsion. Though conservative management is the treatment of choice for this condition, prompt surgical intervention is warranted when testicular torsion is suspected. We report a case of torsion of a appendix testis. Emergency exploration of it revealed a appendix testis with torsion. After excision of the appendix testis, the wound was closed with an open drain. The patient had an uneventful and smooth postoperative recovery.

KEYWORDS

CASE REPORT:
A 13-year-old boy presented to the pediatric OPD (outpatient department) with history of a acute scrotal pain predominantly on right side since 1 day. There was no precedent history of any trauma or exercise.

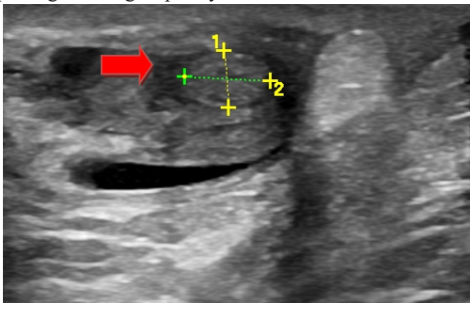
CLINICAL FINDINGS:
On examination the patient had swelling of the right hemiscrotum with edema and erythema of the scrotal skin. Blue dot sign was absent.

On palpation local temperature was raised, skin was tender, and testis was not palpable separately. Left side scrotum and testis were normal.

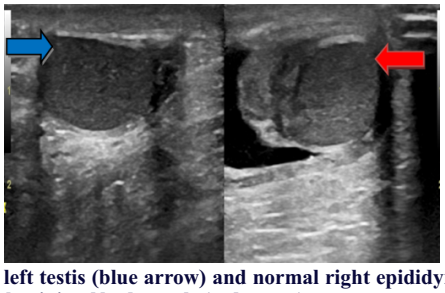
LABORATORY INVESTIGATION:
On investigation hemoglobin was 12.8 g/dL, total leukocyte count was 12140 per microliter, and other blood parameters were within normal limits.

USG FINDINGS:

- Mild point tenderness at the junction between the testicular upper pole and the epididymis.
- Well defined round echogenic non-vascular mass (nodule) with a small anechoic area within is noted adjacent to right testis from which testis and epididymis is seen separately.
- Bulky and heterogeneous right epididymis. The right spermatic cord appears thickened.
- Minimal right sided hydrocoele.
- Scrotal wall appeared thickened and edematous.
- Both testes, mediastinum testis, and the left cord structure were normal.
- Doppler study revealed an enlarged right epididymis with increased vascularity with a normal flow pattern into the right testis.
- The sonographic diagnosis of torsion of a right testicular appendage with right epididymitis and funiculitis was made.

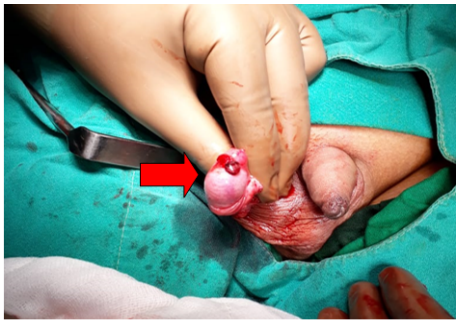


Well defined round echogenic non-vascular nodule



Normal left testis (blue arrow) and normal right epididymis and testis with minimal hydrocoele (red arrow)

Than patient was taken for emergency exploration of acute scrotum, which confirmed the finding of torsion of appendix of testis.



DISCUSSION:
Acute and subacute scrotal pain is a diagnostic dilemma in the pubescent and adolescent male subject.

The appendix of testis otherwise known as hydatid of Morgagni is a remnant of upper portion of the paramesonephric duct (Müllerian duct), whereas portion of the mesonephric duct, cranial to the testis, forms the appendix of epididymis. Both torsion of the testicular appendages and epididymitis may have scrotal pain, local erythema, and scrotal swelling as presenting features, which appear similar to testicular torsion. It is frequently misdiagnosed as acute epididymitis, epididymoorchitis, or torsion of testis. Amongst the patients presenting with acute scrotum, testicular torsion is the most common diagnosis in the prepubertal male

Torsion of appendix testis usually presents with sudden onset hemiscrotal pain without any systemic symptoms or urinary complaints. Clinically, the scrotum may be swollen and edematous with tenderness limited to the upper pole of the testis. Spermatic vein

infarction simulating the classic pea-sized blue nodule found at the superior pole of the testicle with torsion of an appendage. Presence of a paratesticular nodule along with blue dot sign is pathognomonic for the diagnosis of this condition but this is found only in 21% of cases. Blue dot sign with a normally palpable, nontender testis usually excludes torsion of testis clinically but absence of ipsilateral cremasteric reflex is an indication for strong clinical suspicion of a testicular torsion.

Ultrasonography with Doppler done early can be diagnostic. Delay in doing the test frequently leads to misdiagnosis of epididymitis or epididymoorchitis due to increased blood flow to the adjacent epididymis and testis with possibly a reactive hydrocele. An oedematous appendix and head of epididymis sometimes give a "Mickey Mouse" appearance in ultrasonography on transverse lie. Doppler sonography reveals normal flow pattern into the testis, with occasional hypervascularity due to reactive inflammation. Radionuclide imaging with technetium-99m (99mTc) sodium pertechnetate may show a hot-dot sign due to an area of increased tracer uptake.

The treatment for this condition is basically conservative with rest, observation, analgesics, and scrotal support. Surgical intervention is indicated when the diagnosis of testicular torsion cannot be ruled out and the symptoms are prolonged and do not resolve spontaneously. The gangrenous appendage can be excised easily through a small scrotal incision, resulting in prompt relief of symptoms.

CONCLUSION:

Torsion of appendix testis is a common cause of acute scrotal pain, frequently misdiagnosed because of its atypical presentation. The classical finding of torsion of appendix testis with a typical blue dot sign is seen only in few cases. Strong clinical suspicion with a high resolution sonography with Doppler can diagnose this condition. USG play an important role in avoiding unnecessary surgery. prompt surgical intervention is required in clinically equivocal cases.

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