Acute Scrotal Edema: An Atypical Manifestation of Dengue

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Abstract
Acute scrotal edema associated with dengue fever is a rare and self-limiting condition resolving in a few days without any complication or sequelae. We report two cases of dengue fever in father and son which presented simultaneously with acute scrotal edema.

Introduction
Many atypical presentations have been described in dengue fever like encephalopathy, encephalitis / aseptic meningitis, intracranial hemorrhages / thrombosis, mononeuropathies / polyneuropathies /Guillaine–Barre syndrome, myelitis, hepatitis / fulminant hepatic failure, acalculous cholecystitis, febrile diarrhea, acute pancreatitis, febrile rash, hemolytic uremic syndrome, renal failure, myocarditis, conduction abnormalities, pericarditis, ARDS, pulmonary hemorrhage, myositis, rhabdomyolysis, spontaneous splenic rupture and lymph node infarction. We are reporting two cases of dengue fever in a father and son duo, who simultaneously presented with acute scrotal swelling.

Case Reports
Two cases, 45 year and 21 year old males, father and son came together with fever and headache from last 4 days and generalized body ache with heaviness in scrotum for 3 days. On examination both were febrile, vitals were stable, scrotal erythema and swelling was present in both without tenderness, father had generalized erythema on abdominal wall and lower limbs also. No other remarkable findings on general and systemic examination. Investigations of father revealed hemoglobin 15.1 g/dl, total leukocyte count 5300/cu mm (neutrophils 35%, lymphocytes 60%, and platelet count 11,000/cu mm which increased 21,000/cu mm by next day. ESR was 11 mm/hr. His urea was 16 mg/dl, creatinine 1.0 mg/dl, total bilirubin 0.7 mg/dl, direct bilirubin 0.27 mg/dl, AST 177 IU/L, ALT 8 IU/L and alkaline phosphatase 87 IU/L. Urine routine and microscopy of both was within normal limits. Both were positive for dengue NS1 antigen, IgM and IgG anti dengue antibodies. Chest x-ray PA view and ultrasonography abdomen did not show any fluid collection in both patients. Ultrasonography of scrotum using high frequency linear probe revealed bilateral hydrocele and subcutaneous scrotal sac edema in both; testis and epididymis were normal. Filarial serology was not done because both patients neither had lymphadenitis or lymphangitis nor they had epididymitis or orchitis. Scrotal swelling of both subsided within 3 days, platelet count became normal and both were discharged.

Discussion
Acute scrotal swelling associated with dengue fever is a rare and self-limiting condition, which resolves in few days without any complications. Previous case reports, attributes this condition as acute idiopathic scrotal edema (AISE). AISE is a self-limiting edema and erythema of the scrotum that usually affects boys of 8 to 11 years and resolves without sequelae in 1–3 days. AISE is one of the important differential diagnoses in children presenting with acute scrotum edema and it accounts for 20–30% of acute scrotal disorders. The specific ultrasonographic findings of AISE include thickening, edema and hyperemia of the scrotum along with normal appearance of the testicles. Hydrocele (most likely reactive) has also been observed along with typical scrotal wall findings in various studies.

The etiology of AISE is not well understood. Previous case reports believe that the condition is caused by an allergic reaction rather than an infectious or traumatic etiology. The cause of AISE in DF may be plasma leakage from increased vascular permeability as a consequence of inflammatory response triggered by inflammatory mediators reacting to dengue viral antigen.

The differential diagnosis of AISE includes epididymo-orchitis, testicular or appendiceal torsion, incarcerated inguinal hernia, and trauma that requires surgical intervention. It is important to differentiate AISE from a scrotal surgical emergency based on detailed history, physical examination, and scrotal ultrasonography to avoid unnecessary surgical exploration.

The highlights of our case are: 1) Rare atypical presentation of acute scrotal edema in dengue. 2) Simultaneous occurrence in father and son 3). In adults, AISE is very rare and has only been documented in a handful of case studies (10 cases).

Conclusion
AISE can be a rare manifestation of Dengue fever and can mimic a scrotal emergency.

References


