Dengue fever associated with acute scrotal oedema

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Case report

A 10-year-old boy presented with fever since 7 days, headache and body aches since 3 days. Examination revealed stable vitals, facial flushing and puffiness and soft tender hepatomegaly. The haemoglobin level was 10.8g/dl, total leucocyte count 8,200/cu mm, haematocrit 37% and platelet count 214,000/cu mm. His platelet counts started dropping down day by day to reach a nadir of 17,000/cu mm. He developed hypotension during the course and was managed with intravenous Ringer lactate. His blood and urine cultures were sterile. He was positive for Dengue NS1 antigen and IgM anti dengue antibodies by ELISA. His Widal test, Weil-Felix and peripheral smear for malarial parasite were negative. His kidney function tests were normal. Ultrasonography revealed a 3.5 mm gall bladder wall thickening with pericholecystic fluid, ascites and right pleural effusion. He became afebrile on the 4th day of admission and developed bilateral non tender, erythematous scrotal swelling (Figure 1 A).

Figure 1 A: ***Erythema and swelling of the scrotum***

On the same day his platelet count was 25,000/cu mm. Sonography revealed 5 mm bilateral scrotal wall thickening due to oedema (Figure 1 B), bilateral hydrocele, more on the left side with oedematous enlarged left epididymis measuring 11 x 6 mm and right epididymis measuring 7 x 4 mm. Both testes were normal in size and vascularity. His scrotal swelling subsided within 3 days, platelets count became normal and he was discharged.

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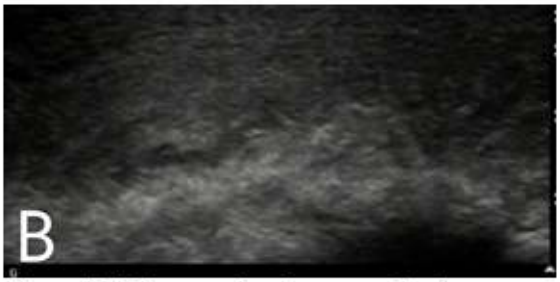

Figure 1 B: ***Sonography of scrotum showing marked thickening of scrotal wall, indicating oedema***

Discussion

The differential diagnosis of scrotal swellings in children includes epididymoorchitis, testicular torsion, incarcerated inguinal hernia and trauma that requires emergency surgical intervention whereas hydroceles and acute idiopathic scrotal edema (AISE) do not need such intervention. AISE is defined as a self-limiting oedema and erythema of the scrotum that usually affects boys between the ages of 5 and 11 years and resolves without sequelae in 1–3 days[1,2]. AISE is one of the important differential diagnoses in children presenting with an acute scrotum and it accounts for 20–30% of acute scrotal disorders[1]. They are asymptomatic or complain of minimal scrotal discomfort[1]. Acute scrotal swelling associated with dengue fever is a rare and self-limiting condition, which resolves in a few days without any complications[1,3]. Authors diagnosed the scrotal swelling in dengue fever as AISE and attributed the cause as a leakage from increased vascular permeability due to dengue haemorrhagic fever and

as an inflammatory response triggered by inflammatory mediators reacting to dengue viral antigen[1,3]. The specific sonographic findings for AISE include thickening and oedema of the scrotal wall and hyperaemia of the scrotum along with normal appearance of the testicles[2,4,5]. Lee et al detected bilateral scrotal wall oedema in 9 out of 12 cases [mean wall oedema was 11.2 mm (4-20.7 mm)] and one had prominent epididymis[4]. However hydrocele (most likely reactive) and prominent epididymis have also been observed along with typical scrotal wall findings in various studies and similar sonographic findings were detected in our child too[2,4,5]. Sonography is the modality of choice in all cases of acute scrotum[2,4]. Our child is a case of AISE, who developed acute scrotal swelling during the course of dengue haemorrhagic fever with consistent sonographic findings and resolved without sequelae in 3 days. To conclude, even though AISE is rare in dengue infection, detailed clinical examination and scrotal sonography should be done to avoid unnecessary surgical exploration in children who presents with acute scrotal swelling.

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