

## CASE REPORT

# DENGUE WITH SCROTAL SWELLING: RARE CASE REPORT

MAHBUB MAYUKH RISHAD<sup>1</sup>, PRADIPTHA SAHA<sup>2</sup>, ROHIT KHAN<sup>2</sup>, MOHAMMAD ZAHIRUDDIN<sup>3</sup>

### Abstract:

*Dengue fever is a mosquito-borne illness that occurs in tropical and subtropical areas of the world. Dengue fever (DF) is transmitted by Aedes aegypti mosquitoes. With rising disease burden, atypical manifestations have increased as well. We report a case of Dengue fever with acute scrotal swelling. Through detailed history, examinations, investigations including imaging, we confirmed the diagnosis and effectively excluded other possible reasons. Ultimately the swelling got resolved and patient was discharged uneventfully. By examining these cases, we aim to improve awareness of this under-recognized complication and guide healthcare professionals in its diagnosis and treatment.*

**Keywords:** Dengue, Scrotal oedema, AISE, Unusual Presentation

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### Introduction:

Dengue Fever is the matter of public health concern in Bangladesh as day by day the rate of infection is increasing and also the unusual presentation of dengue also frequently seen. It is transmitted by *Aedes aegypti* mosquitoes which is caused by a Flavivirus with four serotypes (DEN-1, DEN-2, DEN-3, and DEN-4).<sup>1</sup> While one serotype offers lifelong immunity to itself and temporary protection against others, secondary infections and those involving multiple serotypes can be more severe than primary infections.<sup>1</sup>

Dengue now-a-days became unpredictable with its widespread of clinical features and diverse presentation.<sup>2</sup> Dengue fever typically manifests with fever, muscle aches, and a rash, but it can also present with less common but significant atypical symptoms<sup>1</sup>. These may include hepatitis, diarrhea, renal failure, acalculous cholecystitis, and cardiac conduction abnormalities.<sup>1</sup> Among these, acute scrotal swelling is a relatively rare finding in dengue patients, with more frequent occurrences seen in conditions like epididymo-orchitis, hydrocele, filariasis, nephrotic syndrome, and heart conduction abnormalities<sup>3</sup>. This case underscores the importance of recognizing such

unusual presentations to enhance awareness and facilitate accurate diagnosis in clinical practice.

### Case Report:

A 25-year-old male came with fever for 4 days, which was high grade continued in nature, not associated with chills and rigor but associated with nausea, highest recorded temperature was 103°F and which subsided on taking antipyretics. He also complained of generalized body ache for same duration and scrotal swelling for 2 days, which gradually increased in size, and it was painless, initially involved only left side and eventually involved bilaterally.

On examination, he was afebrile, vitals were stable, scrotal swelling was present in both sides without tenderness. Transillumination test was negative. Urine Dipstick test was negative. There were no other remarkable findings on general and systemic examination.

Investigations revealed hemoglobin 16 g/dL, Total WBC Count 8680/Cu mm (Neutrophil-47%, Lymphocytes-41%, Monocytes-11%, Eosinophils- 01%), hematocrit was 48% and platelet count 24000/ Cu mm >45000/ Cu mm >70000/ Cu mm >150000/ Cu mm. Urine

1. Assistant Professor of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh
2. Assistant Registrar of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh
3. Professor of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh

**Correspondence:** Dr. Mahbub Mayukh Rishad, Assistant Professor of Medicine, Popular Medical College Hospital, Dhaka, Bangladesh. Email: mahbub.mayukh@gmail.com

RME revealed no abnormalities. Dengue IgG and IgM was positive.

ICT for Filariasis was negative. Ultrasonography of scrotum revealed thick edematous scrotal wall. Scrotal swelling subsided within 4 days and platelet count became normal and patient was discharged.



**Fig.-1:** Swelling of the scrotum

#### Discussion:

The differential diagnosis of scrotal swellings includes epididymo-orchitis, Testicular torsion, Filariasis, Nephrotic syndrome, acute idiopathic scrotal edema (AISE). In case of testicular torsion, that requires emergency surgical intervention. Acute scrotal swelling associated with dengue fever is a rare and self-limiting condition. Diagnosis is primarily clinical but can be supported by ultrasonography (US), which helps visualize anatomical features and rule out other causes of acute scrotum. In cases of acute infectious scrotal edema (AISE), vital signs, urinalysis, urine, tissue cultures, and white blood cell counts are typically normal. Characteristic US findings in AISE include scrotal wall edema with increased blood flow, as well as enlargement and hypervascularity of the inguinal lymph nodes.<sup>4</sup> We also found scrotal wall edema as in AISE but did not detect any lymphadenopathy on ultrasonography. Although the exact cause of AISE is not well understood, it is believed to be a variant of angioneurotic edema.<sup>5</sup> In dengue fever (DF), the etiology of acute scrotal edema (ASE) involves an inflammatory response triggered by inflammatory mediators reacting to dengue viral antigens. This response includes antibody-dependent enhancement, increased dengue virus replication, and the release of TNF, IL-4, and interferon. These factors activate endothelial cells, monocytes, and T-cells, leading to coagulation disruption and vascular leakage, which results in pleural effusion, ascites, and localized or generalized edema.<sup>3</sup> The treatment for AISE is conservative and includes scrotal elevation and support, reassurance,

and the empirical use of antibiotics and antihistamines.<sup>6</sup>

Our patient is a case of AISE, who developed acute scrotal swelling during the course of dengue hemorrhagic fever and resolved without sequelae in 3 days. To conclude, even though Scrotal edema is rare in dengue infection, detailed clinical examination and investigation and clinical co-relation should be done to avoid unnecessary surgical exploration.

Our patient experienced acute scrotal swelling as a case of AISE during dengue hemorrhagic fever, which resolved without complications in three days. The patient was managed conservatively with antipyretics, fluid replacement, and scrotal support. The edema fully resolved within three days.

#### Conclusion:

Scrotal edema is uncommon in dengue infection, thorough clinical examination and investigation, along with careful clinical correlation, are essential to avoid unnecessary surgical exploration.

#### Consent for publication:

Informed written consent was taken from patient to publish details relevant to the disease and management.

#### Conflict interest:

None

#### Authors contribution:

All authors were involved in the management of the patient.

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