



## “MORE THAN IT MEETS THE EYE” – AN ATYPICAL CASE OF DENGUE AND ENTERIC FEVER COINFECTION COMPLICATED BY PULMONARY EMBOLISM

### General Medicine

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### ABSTRACT

At a time when infectious diseases, bacterial, viral and fungal are yielding to stratagems such as immunization and antimicrobial agents, dengue fever continues to pose major clinical, social and epidemiological challenges both in India and Worldwide. Dengue is a mosquito born viral disease by the vector *Aedes aegyptii* or *Aedes albopictus* during the taking of a blood meal. Dengue infection can be either asymptomatic, or progress to involve haemorrhagic manifestations with shock.[5]

Enteric fever is a systemic disease characterized by fever and abdominal pain caused by dissemination of *Salmonella typhi* or paratyphi A, B or C. Fever is documented at presentation in more than 75% cases and typically prolonged and continuing up to 4 weeks if untreated.

Here we present an Atypical case of Dengue and Enteric fever coinfection in a young male where the unusual and ever changing clinical manifestation posed a nerve wrecking challenge in the management of this case. Thrombotic events have not been extensively reported, despite the wide range of increased procoagulant activity during illness.[6,7] And the peculiarity in this case was the severe dehydration leading to a thrombophilic state which led to the dichotomy of whether to use Anticoagulants in the phase of severe dengue fever leading to very low platelet count which predisposes to spontaneous bleeding.

### KEYWORDS

#### CASE REPORT:

A 31 year old gentleman presented to us with diarrhoea and fever for the past 10 days and he carried a report of dengue serology which was nonreactive. There was associated chill and rigor and myalgia. No h/o rash, bleed, abdominal pain, neck stiffness, headache or any burning sensation in micturition. The patient was severely dehydrated with tachycardia and associated with decrease in urine output.

On examination Peripheries were cold and clammy, tongue – dry, skin pinch delayed. There was tachycardia with tachypnea associated with hypotension. Systemic examination was unremarkable except for decrease in breath sounds, vocal fremitus and resonance in the left 7th intercostal space posteriorly. Patient was started on aggressive fluid management with Injection PPI and injection Ceftriaxone and tablet azithromycin. Keeping on mind the presentation and prevalence of dengue fever in tropical countries repeat dengue serology was sent and blood cultures were sent with other routine investigations.

His significant blood reports were Total count 2940, Hb 12.2, PCV 36.7, Na 124, K 2.8, ESR 24, SGOT 243, SGPT 114. USG Whole abdomen B/L pelvic/colic system dilated, splenomegaly, chink of ascites.

IgM and IgG dengue was highly reactive and WIDAL test showed a rising titre, Procalcitonin 4.65. Blood culture showed a growth of *Salmonella typhi* sensitive to Ofloxacin, Azithromycin and Ceftriaxone. However patient continued to be extremely dehydrated and with a trend of decreasing haemoglobin and platelet and haemoconcentration. His lowest recorded platelet was 12 thousand and Hess's capillary test was positive. In view of the impending possibility of spontaneous bleeding and faltering vitals he underwent transfusion of 4 units of Random donor platelet. Repeat platelet after transfusion rose to 28000 and other vital parameters and electrolyte abnormalities were adequately corrected.

Despite patient becoming afebrile there was inappropriate tachycardia and tachypnea and an euthyroid state on thyroid hormone assay. In view of the current scenario a probable diagnosis of Dengue and Enteric fever coinfection complicated by Myocarditis. Taking into account his age and features a CPK was sent which was normal, echo was unremarkable. D Dimer was elevated. USG lower limb venous Doppler showed normal flow. CECT thorax revealed B/L pleural

effusion causing underlying passive collapse consolidation of both lower lobes and presence of Central thrombus in tertiary branches of Right pulmonary artery.

Meanwhile patient's platelet and total count showed rising trend. Patient was screened for thrombophilic state, Protein C 94, Protein S 78, Lupus Anticoagulant 1.77.20, 2, 48.40, Ratio 1.50 (Moderate presence). Patient was started on Heparin. Patient was reviewed by cardiologist and was started on Dabigatran.

Patient condition continued to improve and his tachycardia began to settle and patient was finally discharged. A repeat testing for Lupus Anticoagulant was repeated after 12 weeks which showed moderate presence (Ratio 1.58). Thus a diagnosis of Acquired thrombophilia complicated by pulmonary embolism in case of Complicated Dengue and Enteric fever coinfection was made.

#### DISCUSSION:

Though the first recognised epidemics of dengue was known in the early 1780s, concurrent illness with dengue and typhoid have been rarely reported[1]. Both the entities are very common as a single entity in tropical countries but coinfection is rare. Due to the varied clinical presentations, these diseases are often under reported or misdiagnosed.[1,2,3].

Dual infections tend to have prolonged fever and increased risk of complications [4]. It is necessary that clinicians be aware of the prevalence of dual infections to make a prompt diagnosis in order to initiate appropriate treatment.

In the monsoon season it may be prudent to ask for a serological test for dengue NS1 or specific Antidengue Ab or both according to the time of presentation and blood culture at first contact to save time and reduce morbidity and probably mortality as well. Key learning points that we were able to learn are

- i) While dealing with dengue fever possibility of coinfection with enteric fever to be kept in mind
- ii) Blood culture for *salmonella typhi* is recommended to confirm coinfection with enteric fever
- iii) The diagnosis of coinfection with enteric fever should not be based on rapid card test alone which may give false positive results due to cross reactivity.



**Figure 1 & 2 .** CECT Thorax Showing Passive Collapse Consolidation Of Both Lower Lobes And Presence Of Central Thrombus In Tertiary Branches Of The Right Pulmonary Artery

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