CONCURRENT INFECTIONS WITH DENGUE FEVER, SCRUB TYPHUS AND VIRAL HEPATITIS A IN A YOUNG GIRL

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INTRODUCTION

Tropical infections due to dengue, malaria, leptospira, scrub typhus and many other vector borne diseases are commonly seen in South Asia including Indian subcontinent. These infections have overlapping clinical manifestations and season of presentation. Scrub typhus or tsutsugamushi disease is a febrile illness caused by bacteria Orientia tsutsugamushi of the family Rickettsia. Dengue is prevalent throughout India and outbreaks of dengue have been seen from months of October to December. Although concurrent infections are reported, they are not very common. Viral hepatitis A is spread through feco oral route and has an incubation period 15-45 days. Diagnosis of concurrent infections becomes difficult for a physician leading to delay in institution of appropriate treatment. We hereby report a rare case of a patient having concurrent infection with dengue, scrub typhus and hepatitis A.

CASE REPORT

Kamaljit Kaur, a 4 year old female child was admitted in our emergency department with complaints of fever 4 days prior to admission, pain abdomen and vomiting 3 days prior to admission. On examination child was having irrelevant talk, Respiratory rate was 66 breaths/minute, Pulse rate of 134 beats/minute, Blood pressure of 80/60 mmHg, Temperature of 100°F, CFT of 4 seconds. Child was having pallor, deep icterus, periorbital and pedal edema. On systemic examination, per abdomen examination revealed distension and hepatomegaly, Respiratory examination revealed reduced air entry bilaterally. In view of marked tachypnea, child was shifted to PICU and started on non invasive ventilatory support. Child was initially managed as a case of tropical fever with hypotensive shock. Initial laboratory results revealed low platelet counts with raised hematocrit, markedly deranged liver function tests (table 1,2). At this stage possibility of dengue fever was kept and child managed with intravenous fluids and NIV support. Dengue NS1 came out to be positive (table 3). However as child continued to have high grade fever and reduced platelet counts over next 3 days.

At this time child's work up for other causes was done. Reports came out to be positive for scrub typhus (table 3), for which oral Azithromycin was added. Fever subsided but LFTs didn't show much improvement. Blood samples were sent for viral markers. Anti HAV came reactive (table 3). After 14 days of hospital stay child was discharged. On follow up LFTs started improving.

Table 1: Biochemical Reports

Biochemical labs	Value	Interpretation
urea	48 mg/dl	normal
creatinine	1.4 mg/dl	increased
sodium	130 mmol/L	decreased
potassium	6.0 mmol/L	increased
Bilirubin (total)	8.05 mg/dl	increased
Bilirubin (direct)	6.04 mg/dl	increased
SGOT	826 U/L	increased
SGPT	857 U/L	increased
ALP	560 U/L	increased
Total proteins	5.2 g/dl	decreased
Albumin	1.8 g/dl	decreased

Table 2: Microbiological Reports

Microbiology labs	Value	interpretation
Hepatitis B surface antigen	0.18	Non Reactive
Anti HCV	0.08	Non Reactive
Anti HAV	9.77	Reactive
Anti HEV	0.004	Non Reactive
Dengue NS1	73.15	Reactive
Scrub Typhus serology	1.909	Reactive
Leptospira serology	0.50	Non Reactive
Bood culture	No growth	No Growth

Table 3: Pathological Reports

Pathology Labs	Value	Interpretation
T.L.C	22,400/dl	increased
Neutrophils	60%	normal
Lymphocytes	30%	normal
Eosinophils	0.3%	reduced
Hemoglobin	12.8 gm/dl	normal
Hematocrit	38.4 %	increased
Platelet count	17,000/dl	reduced
PTI/INR	17.4/1.59	increased
APTT/Ratio	82.1/2.65	increased

CONCLUSIONS

In case of coinfection with dengue and scrub typhus, vigilant monitoring of vitals, platelets transfusion, and timely treatment with doxycycline/azithromycin are necessary. This possibility of concurrent infection should be thought early enough to decrease morbidity and possibly mortality as well.