Coexistent Leptospirosis & Dengue Infection
(A Rare Case Report)

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I. Introduction

Leptospirosis And Dengue Are Endemic In Countries With Subtropical Or Tropical Climates And Have Epidemic Potential 1. It Is Important To Distinguish Leptospirosis From Dengue As Early Antibiotic Therapy In Leptospirosis Leads To A Favourable Outcome, While Dengue Has No Specific Treatment, Yet Early Recognition Is Vital For Close Monitoring And Careful Fluid Management. Leptospirosis, A Zoonotic Infection And Dengue, An Arthropod Born Viral Infection. Both The Conditions Often Present As Acute Febrile Illness, Characterised By Sudden Onset Of Fever, Headache, And Myalgia 2,3. Despite The High Prevalence Of Both These Infections, Co-Infection Of Leptospirosis And Dengue Is Very Rare & Rarely Reported In Literature. We Present The Case Of Co-Infection With Leptospirosis And Dengue In A Young Male.

II. Case Report

A 32 Years Old Male Patient Was Admitted To MGM Hospital With Chief Complaints Of Fever With Chills Since 7 Days, Generalised Bodyache, Pain In Abdomen, Dry Cough And Black Coloured Stool Since 4 Days. There Was No History Of Burning Micturition, Hemiaturia, Nausea, Vomiting, Breathlessness, Hemoptysis, And Rash. On Initial Examination Patient Was Comfortable In Bed & Found To Have No Icterus, Cyanosis, Raised JVP, Petechial Haemorrhages/ Rashes Over The Body, Edema Feet, He Was Mildly Pale & Had No Signs Of Respiratory Inadequacy. Pulse Was 80/Min Regular, RR 22/Min, SpO2 98%, BP 100/70 MmHg. In Respiratory System, Left Lower Zone Minimal Basal Crepts Were Present. The Liver Was 3 Finger Palpable With Mild Tenderness Below The Right Costal Margin And Spleen 2 Finger Palpable Below The Left Costal Margin. On Same Day Of Hospitalisation In The Night Patient Had An Episode Of High Grade Fever With Mild Breathlessness For Which Symptomatic Treatment Was Provided. After 14 Hours Of Hospitalisation Patient’s Condition Deteriorated With RR-34 Per Min., PR-110/Min, BP-100/70 MmHg, Spo2 90% With Nasal O2, Temperature 101 F And Patient Was Noted To Have Bilateral Excessive Crepts In Lower Zones, Tender Hepatomegaly, Hepatojugular Reflex Positive, Mild Ascites And Splenomegaly. Also Patient Had Bilateral Pedal Edema With Bilateral Conjunctival Suffusion. Laboratory Investigation On Admission Revealedhb-10.3 G/Dl, Platelet Count-113000/Cmm, TLC-5300/Cmm (N-87%, L-4%, M-85, E-1%, B-0%), Raised Creatinine 2.2mg/Dl, Mildly Raised Liver Enzymes (Sr. Bili.+T-2.8 Mg/Dl, Direct-2.7 Mg/Dl, SGOT-126 U/L, SGPT-125 U/L, ALP-191 U/L), Peripheral Smear For Malaria Was Negative, Widal Test Was Negative And Dengue IgM ELISA Was Positive. Patient Was Shifted To ICU Andx Ray Chest Was Done Which Revealed Floppy Shadows Right Lower Lobe With Moderate Bilateral Pleural Effusion. Patient Was Taken On Non Invasive Ventilation For 4 Hours & Later Intubated And Put On Mechanical Ventilation And Started With IV Antibiotic Piperacillin Tazobactam & Levofloxacin And Other Supportive Therapy. On Day 2 Of ICU Admission Patients Condition Further Deteriorated With Drop Of Platelet Counts To 53000/Cmm, Urea 135 Mg/Dl, Sr. Creatinine 3.0 Mg/Dl, Bilirubin 6.1 Mg/Dl, Direct 5.1 Mg/Dl, SGOT 375 U/L, SGPT 137 U/L, ALP 300 U/L. Patient Was Taken On Peritoneal Dialysis. Owing To The Rapid Renal, Hepatic & Pulmonary Involvement Leptospirosis Was Considered & The ELISA Test Was Positive (Reactive) For IgM. Patient Despite Receiving Antibiotics Piperacillin Tazobactam & Levofloxacin, Fever & Symptoms Did Not Regress. Doxycycline Was Added &
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Supportive Care Was Taken. After 7 Days Of Mechanical Ventilation, IV Antibiotics, Doxycycline, Patient Improved Clinically, Radiologically & Serologically. Patient Was Shifted To General Ward. A Diagnosis Of Coexistent Leptospirosis With Dengue Infection Was Made And Discharged On Day 14 With Normal Vital Parameters.

III. Discussion

Cases Of Dengue And Leptospirosis Are Seen Throughout The Year During The Monsoon & Are Endemic In Countries With Tropical & Subtropical Climates. In 2015, An Indian Study Revealed 1.7% Of Patients Who Presented With Acute Febrile Illness Found To Have Coinfection With Leptospirosis & Dengue Finger Countable Cases Of Co-Infections Are Being Reported In The Literature From India5,6,7. The Clinical Manifestations Of Leptospirosis And Dengue Range From A Mild Self-Limiting Febrile Illness To A Severe And Potentially Fatal Illness Characterized By Thrombocytopenia, Bleeding, And Hepatitis With Cholestatic Jaundice, Myositis And Renal Failure. The Vast Overlapping Spectrum Of Symptomatic Manifestations Of Dengue And Leptospirosis Makes The Clinical Diagnosis Challenging For Treating Physicians When Acute Co-Infection Is Present. The Coexistent Infection May Bear Importance That The Severity Of The Disease May Carry A High Mortality Rate. Early Recognition, Early Administration Of Appropriate Antibiotic Will Reduce The Dreaded Complications & Mortality Significantly.

References