CASE REPORT
TYPHOID FEVER AND VIRAL HEPATITIS IN A G6PD DEFICIENT INDIVIDUAL

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Simultaneous occurrence of multiple diseases is unusual but not rare. We are reporting an unusual combination of Typhoid fever and viral hepatitis in a G6PD deficient individual.
KEY WORDS: Typhoid fever, Viral Hepatitis, G6PD Deficient

INTRODUCTION

Usually patients presenting with infectious diseases have one particular illness. They may have other concurrent chronic medical problems, e.g. Diabetes Mellitus or Hypertension.[1] But acquiring more than one infectious disease simultaneously is unusual. Given the laws of probability, the coincidental occurrence of two unrelated diseases in a patient should happen in a large population. The other disease may be overlooked if one problem dominates attention. Diagnosing the other condition is also important, as presence of one disease provides no immunity against the other.[2]

The standard teaching in medical science is to explain the patient's symptoms and signs on one diagnosis.[2] However in clinical practice one can encounter puzzling cases in which multiple medical problems cannot be justified by a single disease entity. In the third world countries water borne infections are common.[3] One may acquire two diseases simultaneously. The case discussed below describes one such patient.

CASE REPORT

A young man 23 years of age reported to our hospital with ten days history of fever, and two days history of jaundice. He was in his usual state of health when he developed low grade fever, which later became high grade and remittent. It was associated with dry cough, body aches and pains. He reported to a local doctor who advised Tab Chloroquine and Aspirin. There was no improvement in fever, but the patient developed anorexia, jaundice and dark coloured urine. There was no history of drowsiness, joint problem, urinary or bowel complaint. On examination he was febrile, pale, and deeply jaundiced. There was no skin rash or lymphadenopathy. On systemic examination his liver was palpable 4 cm below the costal margin, firm and tender. Spleen was palpable 3 cm below the left costal margin. Rest of the clinical examination was within normal limits.

Investigations revealed hemoglobin 9 gm/dl, total leucocyte count 3.5 x 10^9 /L, normal differential count, platelets 289 x 10^9/L. RBC morphology showed normochromic normocytic picture with a reticulocyte count of 6%. His MP slides were negative. Bile salts and Bile pigments were present in the urine. Liver function tests showed Bilirubin 450 umol/L and ALT 2300 U/L. LDH level was 2000 U/L. His urea, creatinine and chest X-Ray were normal.

Given this scenario, additional tests were done, G6PD deficiency was detected, Typhidot IgM and HEV IgM antibodies present. Later his blood culture was positive for Salmonella typhi, sensitive to quinolones and 3rd generation cephalosporins. The patient was treated with Inj ceftriaxone 1 gm I/V twice daily for ten days. His fever gradually settled. He remained admitted for four weeks during which his liver functions improved, and he was discharged provided a list of drugs which can cause haemolysis in G6PD deficient individuals with advice to avoid these in future.

DISCUSSION

There is a scientific canon that urges investigators to use the simplest explanation to define all the facts observed. Applying to the Medical Sciences, clinicians are often guided by the principle of Diagnostic Parsimony-which advocates searching for the simplest possible interpretation of patient's symptoms, signs and laboratory data.[2] It holds true most of the times; but there are exceptions. One must be on the lookout for unusual combination of diseases when clinical and lab data do not support a single unifying diagnosis.[3]

Abnormal liver function tests are frequently seen in Typhoid fever[4] and mild jaundice may occur, and may be due to hepatitis, cholangitis, cholesystitis or hemolysis.[5] Patients with Viral hepatitis may present with fever. Features that may distinguish Typhoid hepatitis from Viral hepatitis are, duration of fever, toxic look of the patient, absence of deep jaundice, relative bradycardia, low peak ALT levels, and associated complications of typhoid fever, if present.[6,7] In viral hepatitis fever is present in the prodromal phase but usually subsides with the appearance of jaundice.[8, 9]

A potential diagnostic problem is when the two infections are present simultaneously especially in endemic areas. If fever is present in the icteric phase of hepatitis, typhoid fever should be considered in the differential diagnosis.[9]

Acquisition of Typhoidal salmonella and Hepatitis E virus occurred via breach in public health measures; as more than one pathogen was acquired simultaneously.[9] Additionally G6PD deficiency of our patient also became manifest.

Medical training urges clinicians to have a broad differential diagnosis while treating individual patients. In a busy clinical practice the clinicians may strive to keep the care simple by focusing on one diagnosis. However if the patient's presentation does not support a single diagnosis, one must try to find other explanation. Too narrow a focus or tunnel vision may leave an important clinical condition undiagnosed and untreated.[10]

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