Case Report

Hepatitis A: A refreshing perspective through a rare symptom in a teaching hospital in south India

Shashank Shastry, Ramyasri Rajesh, Samarth Sangamesh, Gosavi Siddharth

Department of General Medicine, JJM Medical College, Davanagere, Karnataka, India

Abstract

Hepatitis A virus is a common cause of acute viral hepatitis in India, due to lack of clean water and sanitation. Usual presentations include gastroenteritis or a viral respiratory infection. Hepatitis A has a variety of extra-hepatic manifestations which, if failed to be recognized, evades diagnosis. A 28-year-old lady presented with pain abdomen for 1 week, fever with rashes for 1 day. Patient was febrile at the time of examination. Rash was maculopapular with irregular edges, tender. On examining abdomen, tenderness noted in right hypochondrium and epigastrium with hepatomegaly. Patient was then admitted. Working diagnosis was Viral hepatitis for evaluation. Hepatitis A serology was sent which came positive for Ig M. Patient was treated with IV fluids, bile acid sequestrants, IV PPI, IV and oral antibiotics, antihistamines and 3 doses of injection Vit K. Calamine lotion was also given for skin care. Patient improved symptomatically in 2 days and was discharged after 3 days of hospital stay. In our case, the maculopapular rash spreading to the whole body was the major presenting symptom. The presentation of Hepatitis A with rashes maybe seen in around 10% of patients with extrahepatic manifestations along with arthralgia. Differential diagnosis in this case should be erythema multiforme which is the most common maculopapular eruptive rash. Other viral hepatitis causing agents (Hepatitis B&E) have been documented to present with rashes. SLE and Kawasaki disease rarely present with fever with rash with nonspecific multisystemic involvement. Borrelia, Leptospira also have icterus in their presentations. Early diagnosis and management in this case prevented complication such as autoimmune hepatitis, pleural effusion, ascites acute kidney injury. This case presentation urges the need to consider Hepatitis A to be an important differential diagnosis of fever with rash especially in tropical/sub-tropical countries with poor sanitation.

Keywords: Hepatitis A, LFT, Maculopapular Rashes

Hepatitis A virus is a common cause of acute viral hepatitis due to rudimentary infrastructure in Karnataka and India.

Hepatitis A is an unenveloped RNA virus of the picornavirus family and is one of the causes of infectious hepatitis. Transmission by the faecal-oral route. The incubation period is 2–6 weeks. Shorter incubation periods may result from higher total dose of the viral inoculum.[1]

Address for correspondence: Dr. Gosavi Siddharth, Department of General Medicine, JJM Medical College, Davangere - 577 004, Karnataka, India.
E-mail: ramshyamsid@gmail.com

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Usual presentations include gastroenteritis or a viral respiratory infection. The most common signs and symptoms include fatigue, nausea, vomiting, fever, hepatomegaly and jaundice. Most cases recover completely within 2 to 3 weeks and no chronic infection/carrier state develops.[2]

Hepatitis A has various extra-hepatic manifestations which, if failed to be recognised, evades diagnosis and consequentially delays treatment. These occur in patients who have protracted illness. Such manifestations seem to be immune-mediated.[3]

Herein, we have a case with a few uncommon signs.

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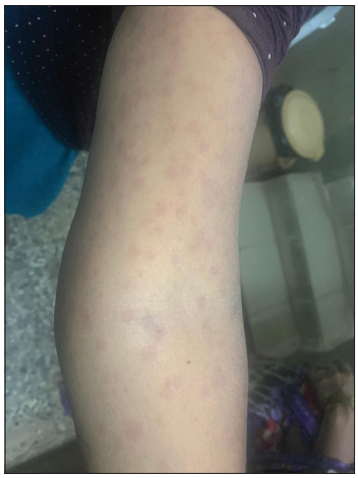

Figure 1: Maculopapular rash on both forearms

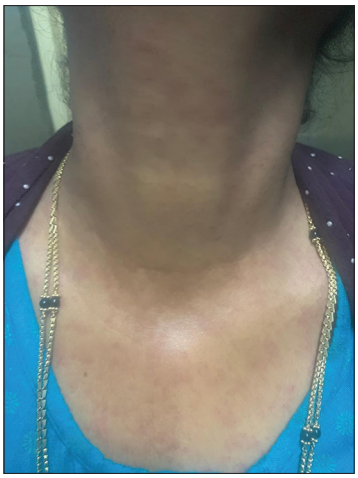

Figure 2: Maculopapular rash on the neck

Figure 3: Maculopapular rash on both forearms

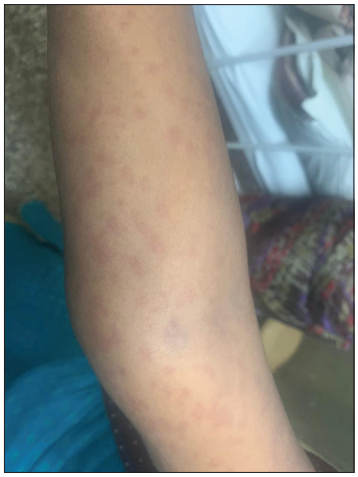

Figure 4: Maculopapular rash on both forearms

Case

A case study was done after obtaining clearance from the institutional ethics committee and after obtaining informed written consent from the patient.

A 28-year-old woman presented to Bapuji Teaching Hospital attached to JJM Medical College, Davangere on 28th January 2020 with abdominal pain for 1 week and fever with rashes for 1 day.

Pain in the abdomen had sudden onset, and was localised to the right hypochondrium and epigastrium regions not radiating, gradually progressive and continuous. Pain did not increase or decrease with meals or passage of stools. No postural variation was observed. Pain was not relieved with analgesics.

She presented with maculopapular skin lesions appearing first over the abdomen, next over the neck and dorsal aspect of both limbs and gradually spreading to the whole body within 1 day. Rashes were red in colour, painful and pruritic. No history of drug intake before the onset of rashes and no history of anaphylactic symptoms were noted.

She also had high grade fever since day 1with no chills, rigors and excessive sweating continuous type.

On general physical examination (GPE), vitals were stable.

The patient was febrile at the time of examination.

BP – 110/80 mmHg measured in the left arm in sitting position

PR – 86 bpm

SpO_2 – 96% at room air

No signs of Pallor, clubbing, cyanosis, generalised lymphadenopathy, oedema.

Icterus was noted.

On head to toe examination, the rash was further examined, it appeared to be maculopapular with irregular edges, tender. Blanches on applying pressure [Figures 1-4].

On examination of the abdomen, tenderness was noted in the right hypochondrium and epigastrium. Hepatomegaly was noted with mild ascites. The liver was tender on palpation. Liver span was calculated to be 17.5 cm. Examination of other systems did not reveal any abnormalities.

Management

The patient was then admitted to Bapuji Hospital's general ward.

The working diagnosis was viral hepatitis for evaluation. Based on the clinical knowhow, hepatitis A serology was sent, and the results came positive for Ig M.

The patient was treated with IV fluids, bile acid sequestrants, IV PPI, IV and oral antibiotics, antihistamines and 3 doses of injection vit K. Calamine lotion was also given for skincare.

The patient improved symptomatically in 2 days and was discharged after 3 days of hospital stay. She was asked to follow-up with a urine routine which was found to be normal.

Investigations

25th January – CBC – Hb – 13.8 g%, TC – 9,400 cells/cumm normal DLC, RBC – 4.56 million cells/cumm, Platelet count – 69,000 cells/cumm, PCV – 36.2, MCV – 79.4, MCH – 30.4, MCHC – 38.2.

RBS – 156.7 mg/dL, Total bilirubin – 1.9 mg/dL, Direct bilirubin – 0.8 mg/dL, Indirect bilirubin – 1.1 mg/dL, Total Protein – 6.8 g/dL, Albumin – 4.2 g/dL, Globulin – 2.6 g/dL.

SGOT – 109.1, SGPT – 150.6, Serum alkaline phosphate – 188.0

28th January – Hepatitis A. IG M – Positive, HIV/HBsAg – Non-reactive USG abdomen and pelvis was advised which showed hypoechoic liver with mild dilatation of intrahepatic bile duct (IHBD) suggestive of infective aetiology, no evidence of gall bladder calculus.

29th January – CBC – Hb – 13.0 g%, TC – 11380 cells/cumm with normal DLC, RBC – 4.4 million cells/cumm, Platelet count – 3.16 lakh/cumm, PCV – 38.7%, MCV – 88.6%, MCH – 29.7, MCHC – 33.6, RDW – 14.7%

Total bilirubin – 7.7 mg/dL, Direct bilirubin –6.4 mg/dL, Indirect bilirubin – 1.3 mg/dL, Total Protein – 7.0 g/dL, Albumin – 3.4 g/dL, Globulin – 3.6 g/dL, Albumin/Globulin ratio – 1.0 SGOT – 1070, SGPT–1478.0, Serum alkaline phosphate – 169.0, GGT – 105.0

Urea – 6.0 mg/dL, Serum creatinine – 0.4 mg/dL.

30th January – PT – 14.8 s, INR – 1.3, APTT – 32 s

Discussion

In our case, the patient did not present with the usual symptoms of hepatitis A such as nausea, vomiting and loose stools.

The presentation of hepatitis A with rashes may be seen in around 10% of patients with extra-hepatic manifestations along with arthralgia.[3]

The rash occurs more often on the lower limbs and may have a vasculitic appearance.[1]

The exact cause of the rash is under discussion. Theories suggest immune complex-mediated vasculitis or dermatitis may be the cause.[3]

Here, the maculopapular rash which spread to the whole body was the major presenting symptom.

Differential diagnosis, in this case, should be erythema multiforme, which is the most common maculopapular eruptive rash. Several other aetiologies such as certain drugs (penicillin, barbiturates, phenytoin), viral infections (HSV, EBV, adenovirus) should be considered. Other viral hepatitis causing agents (hepatitis B and E) have been documented to present with rashes.[4]

Borrelia, Leptospira also presents with icterus.

Since viral hepatitis continues to be prevalent in subtropical countries, unusual presentations should be considered while forming a diagnosis. Through this case study, we would like to reveal one such atypical presentation of hepatitis A, and how it should be considered in the differential diagnosis of fever with a rash with demographics taken into consideration.

Inadequate treatment may lead to fulminant disease. Inadequate healthcare provider knowledge, asymptomatic presentation during early stages and improper diagnostics are major barriers to the control of viral hepatitis in India.[5]

Early diagnosis and management, in this case, prevented complications such as autoimmune hepatitis, cholestasis, acute kidney injury (AKI), rhabdomyolysis, pleural effusion, immune thrombocytopenic purpura (ITP) and pure red cell aplasia (PRCA).[2,6]

Conclusion

This case presentation urges the need to consider hepatitis A to be an important differential diagnosis of fever with rash especially in developing countries with demographic risk factors. The patient should be counselled on the importance of timely CBC and LFT. An effective public surveillance system goes a long way in the prevention of hepatitis A.[6]

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Conflicts of interest

There are no conflicts of interest.

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