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**Infectious mononucleosis hepatitis: report of two patients**

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Icteric hepatitis and fulminant hepatic failure (FHF) are rare in infectious mononucleosis (IM). We report two patients with icteric IM hepatitis; one died after developing FHF, the other recovered uneventfully. Epstein-Barr virus infection causing hepatitis and FHF should be suspected when tests for other hepatotrophic viral infections are negative. [Indian J Gastroenterol 1997; 16: 113-114]

**Key words:** Epstein-Barr virus

Although anicteric hepatitis is common in infectious mononucleosis (IM), jaundice and fulminant hepatic failure (FHF) are rare in immunocompetent individuals. We report two patients who developed icteric IM hepatitis; one recovered, while the other developed FHF and died.

**Case 1:** A 28-year-old lady presented with fever, myalgia, arthralgia, headache, anorexia, nausea and loose motions of three days’ duration. Maculopapular rashes developed on her face on day 3, and extended to the trunk, palms and soles. These disappeared after a week with residual exfoliation. On day 5, she noticed yellow discoloration of her eyes and urine, associated with dull ache in the right hypochondrium. Examination revealed icterus, generalized lymphadenopathy and hepatosplenomegaly.

**Investigations:** Total leucocyte count 12.2 x 10^9/L (polymorphs 41%, lymphocytes 39%, atypical lymphocytes 12%, eosinophils 3%); no malaria parasite detected. Serum bilirubin 7.8 mg/dL (normal 0.1-1), conjugated 5.7 mg/dL (normal 0-0.2), ALT 250 U/L and AST 178 U/L (normal 0-35), serum alkaline phosphatase 31 U/L, total protein 7.2 g/L, albumin 4.2 g/L. Three blood cultures did not grow any organism. Widal test, HBsAg, IgM anti-HAV, anti-HEV, anti-HCV, and rheumatoid and antinuclear factors were negative. Heterophile antibody test was positive. Ultrasonography revealed hepatomegaly.

She was treated with paracetamol and domperidone. Her symptoms subsided, and icterus and biochemical abnormalities regressed over three weeks.

**Case 2:** A 17-year-old girl presented with fever, sore throat, cough, periorbital puffiness, anorexia, nausea, myalgia and headache of 15 days’ duration. She developed generalized scarlatiniform pruritic rashes following administration of ampicillin elsewhere. Jaundice developed one month later. Examination revealed generalized firm, tender lymphadenopathy, periorbital puffiness, icterus, maculopapular skin rashes, pharyngeal erythema with tonsillar enlargement, and hepatosplenomegaly.

**Investigations:** Total leucocyte count 22.4 x 10^9/L (polymorphs 24%, lymphocytes 70%, atypical lymphocytes 20%) (Fig.), serum bilirubin 12.6 mg/dL, conjugated 7.5 mg/dL, ALT 78 U/L, AST 64 U/L, serum alkaline phosphatase 300 U/L. Widal test was nonreactive. Three blood cultures were sterile. Chest X-ray and ECG were normal. Ultrasonography revealed hepatosplenomegaly without dilatation of intrahepatic biliary radicles. Heterophile antibody test was positive.

As the patient had high fever and marked leukocytosis she was started on ceftriaxone, intravenous fluids, domperidone and paracetamol; she continued to deteriorate and developed grade III hepatic encephalopathy. At this stage she was treated with intravenous, neomycin, bowel wash and anti-cerebral edema measures, she lapsed into deep coma and died.

Though transaminase elevation occurs in 40% of patients with infectious mononucleosis, clinical jaundice is uncommon (less than 5%). Jaundice is usually mild; however, one patient with severe hyperbilirubinemia (more than 10 mg/dL) has been described earlier. Fulminant hepatic
failure due to IM hepatitis is rare.\textsuperscript{4}

Hepatic dysfunction was not regarded as a major cause of death in IM till a study showed it to be responsible in 13 of 30 sporadic and 18 of 31 X-linked lymphoproliferative syndrome cases.\textsuperscript{2} A recent report described fatal FH in a 62-year-old man.\textsuperscript{4} Our report describes one patient who recovered rapidly, and another who died from FHF. Both patients had very high bilirubin levels, a phenomenon thought to be rare earlier.

Physicians need to keep IM in mind in patients with hepatitis when tests for other hepatotropic viral infections are negative.

References

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Colonic chemobezoar — intestinal obstruction due to barium inspissation

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A 72-year-old man presented with constipation of 45 days' duration, with history suggestive of recurrent episodes of subacute intestinal obstruction relieved by passage of fluid and flatus; he had noticed an abdominal lump 30 days prior. Examination revealed a lump corresponding to the contours of the entire large intestine. X-ray showed barium outlining the colon. Enquiry revealed that he had undergone a barium enema study 10 days prior to appearance of the lump. The diagnosis of barium inspissation was confirmed at laparotomy; total colectomy with ileo-rectal anastomosis was done. [Indian J Gastroenterol 1997; 16: 114-115]

Key words: Subacute intestinal obstruction

Barium enema study is usually not associated with any complications. However, the procedure can be problematic in two situations: acute abdomen and intestinal obstruction. In the latter situation it can give rise to impaction.

A 72-year-old man presented with history of constipation for 45 days. He had vomiting and abdominal distension off and on, each episode lasting for 4 to 5 days and relieved by abrupt passage of fluid and flatus. Fifteen days after the onset he noticed a progressively increasing painless lump in the abdomen which started on the left side. The episodes suggestive of subacute intestinal obstruction continued. There were no other symptoms. Fifteen years ago the patient had undergone an operation for similar complaints; at that time an 'ostomy' was done in the right hypochondrium. The details of that surgery were not known. The ostomy had relieved the symptoms and was closed 3 months later.

Per abdomen, a mobile, inderable, non-tender, intra-abdominal lump was palpable outlining the entire colon. Per rectal examination revealed an empty rectum with a loaded sigmoid colon.

X-ray chest revealed free gas under the left dome of the diaphragm. A diagnosis of focal impaction with a sealed-off stercoral perforation was considered. X-ray abdomen (Fig) showed radiopaque material outlining the colon. On enquiry the patient revealed that he had undergone a barium enema 10 days prior to the discovery of the lump. Thus, a diagnosis of barium inspissation was reached. A limited thin barium study showed a possible inflammatory stricture at the rectosigmoid region.

Simple enemas, soap water enemas, and high bowel washes proved to be ineffective and hence a total colectomy with ileo-rectal anastomosis was done. At operation, there was no perforation or contamination. The entire colon was loaded with barium and feces, with minimal bowel distention. The postoperative course was uneventful. Histology of the rectosigmoid junction showed inflammatory changes.

Nelson\textsuperscript{5} compared the use of iodine-based water-soluble dyes with barium for delineation of gastrointestinal tract abnormalities, and concluded that barium was better. He warned, though, that barium should be used with caution in a setting of intestinal obstruction since considerable amount of water would get absorbed and barium impaction and inspissation could follow if barium suspension was allowed to remain in the distal colon for too long. The character of barium sulfate used depends on its additives. Methyl cellulose, for example, prevents the settling of barium suspension, but if excess is added it makes the suspension too viscous and can precipitate impaction.\textsuperscript{2} It is recommended that in a

Fig: Plain X-ray abdomen showing radiopaque material outlining colon.