Epigastric Pain and Jaundice as Initial Presentation in Patients with Systemic Lupus Erythematosus (SLE): A Case Series in a Tertiary Hospital

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ABSTRACT

Systemic Lupus Erythematosus (SLE) is a multi-systemic autoimmune disorder. Fifty percent will have gastro-intestinal symptoms and 1 to 4% have jaundice.

Two Filipino adolescents with uncommon presentation of SLE are reported: a 14-year old female with intermittent epigastric pain and a 17-year-old male with jaundice. Epigastric pain and jaundice are uncommon presentations in patients with SLE. A high index of suspicion is needed and SLE must be considered in the presence of other clinical and immunologic features.

Key Words: lupus, jaundice, epigastric pain

INTRODUCTION

Systemic lupus erythematosus (SLE) is a rare chronic autoimmune disease of unknown etiology. It may occur in all ages with a prevalence of 1 per 100,000 and is more common in young women, with a 3:1 female to male ratio.[1]

To make a diagnosis of SLE, the Systemic Lupus International Collaborating Clinics (SLICC, 2012) requires at least 4 out of 11 criteria to be fulfilled, with a least one clinical and one laboratory finding or biopsy-proven lupus nephritis with positive anti-nuclear antibody (ANA) or Anti-DSNA.[2] The criteria are cumulative and need not be present concurrently. To assess the severity of SLE, the SLE disease activity index (SLEDAI) was developed. This is composed of 24 descriptors with a corresponding score assigned for each clinical or biochemical criterion present in a patient. A total score between three and twelve is considered mild to moderate disease activity and more than 12 as severe.[3]

SLE presents with varied clinical presentations affecting any organ of the body; most commonly affected are the skin, glomeruli, synovium and serosal membrane due to the deposition of immune complexes. The most common features at disease onset are fever (52.5%) and malar rash (41.0%) whereas the most common features at the time of diagnosis are malar rash (65.3%), renal involvement (62.8%) and photosensitivity (55.1%). Mucocutaneous (92.3%), renal (71.7%) and hematologic (69.2%) involvement are commonly observed during the entire course of illness.[4] Gastrointestinal symptoms in SLE are seen in 50% of cases and patients may present with anorexia, nausea and vomiting mainly attributed to the disease process or effects

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of medications.[5] Very rarely, patients may manifest with signs and symptoms of intestinal vasculitis or overt liver disease. The symptoms of vasculitis vary from non-specific symptoms of bloating, anorexia, post-prandial fullness, diarrhea or recurrent abdominal pain to abrupt and massive gastrointestinal hemorrhage.[6] On the other hand, while around 30-60% of patients with SLE will have elevated liver enzymes and 10-31% with hepatomegaly, only 1 to 4% will present with jaundice.[7]

The present study reports two adolescents seen over a period of one year who initially complained of epigastric pain and jaundice and eventually were diagnosed to have SLE. Early recognition of the significance of these symptoms will lead to prompt diagnosis and treatment. Informed consent for both patients and their parents were done.

CASE 1

A 14-year-old female was admitted with a one-month history of intermittent epigastric and left lower quadrant pain (pain scale of 8/10) that was not relieved with proton pump inhibitor. There was also associated 5% weight loss. Two weeks later, jaundice and icteric sclerae were noted; these resolved spontaneously. Persistence of epigastric pain (pain scale 10/10) prompted admission in our institution.

Physical examination showed a weak-looking patient with severe epigastric tenderness. There was no jaundice and the liver and spleen were not palpable. Initial laboratory examinations showed anemia (hemoglobin 58g/L), leukocytosis (WBC 18.92 x 10^9/L) with predominance of neutrophils (84%) and thrombocytopenia (68 x 10^9/L). Peripheral blood smear exhibited toxic granules in neutrophils with microcytic and normochromic cells and poikilocytosis. Amylase (50U/L) and lipase (18U/L) showed normal levels. The initial assessment was Sepsis and Acid Peptic Disease. The patient was started with antibiotics (Ceftriaxone 100mg/kg, Amikacin 15mg/kg), and given proton pump inhibitor (Omeprazole 1mg/kg). Red blood cell transfusion was also done for the anemia. Septic workup showed no significant growth. With persistence of epigastric pain, an esophagogastroduodenoscopy (EGD) was done and demonstrated generalized erythema of the gastric and duodenal area and erosion at the cardia. There was also bile reflux at the duodenal bulb and blood in the ampullary area. Ultrasound of the hepatobiliary was normal while abdominal CT scan showed mild biliary ectasia with minimal pericholecystic fluid. Omeprazole gave temporary relief of epigastric pain and the plan was to continue the medication for 14 days.

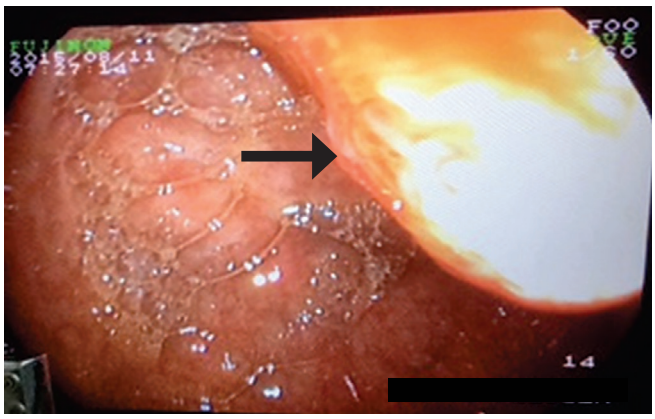

Figure 1. Blood in the ampullary area (arrow) in a patient who underwent endoscopy (Case 1).

However, after 2 days, there was recurrence of severe abdominal pain and tenderness (pain scale 10/10), low grade fever (37.8˚C) and bilateral fine hand tremors. Pertinent laboratory exams showed elevated erythrocyte sedimentation rate (128mm/hr) and C reactive protein (>12mg/L) and the presence of dysmorphic red blood cells, hyaline, granular and white cell casts in the urine, suggestive of nephritis. Repeat blood count showed anemia (hemoglobin 63g/L) with relative thrombocytopenia (109 x 10^9/L) but normal white cell count (6.37 x 10^9/L). A collagen vascular disorder was suspected and screening exhibited elevated anti-nuclear antibody (1/100, speckled type). In the presence of the renal involvement, positive antinuclear antibody and documented anemia and thrombocytopenia, a diagnosis of systemic lupus erythematosus was made. The SLE disease activity index at diagnosis was 10. Hydrocortisone IV was given and later shifted to oral prednisone. There was marked clinical improvement with no recurrence of abdominal pain on follow up.

CASE 2

A 17-year-old male was admitted for a four-month history of jaundice associated with low grade fever (38˚C), intermittent epigastric pain, tea-colored urine and 10% weight loss. There was no history of any drug or substance intake. He was managed in a local hospital were laboratory examinations showed anemia (hemoglobin 61g/L), normal white cell count (5.2 x 10^9/L) with elevated levels of bilirubin (total bilirubin 42.85mg/dL, direct bilirubin 31.27mg/dL, indirect bilirubin 11.58mg/dL) and transaminase (AST 133U/l, ALT 78.5U/l). The anti-HAV IgM, HBsAg and anti-HCV were nonreactive. Abdominal CT scan showed hepatosplenomegaly. Transfusion with packed red blood cells was done and patient was started on Ursodeoxycholic acid. The patient was sent home after resolution of fever and note of decreasing jaundice.

One month after discharge, there was recurrence of fever (38.5˚C) and was observed to have deepening of jaundice, prompting admission at a tertiary hospital. Past medical history and family history were both non-contributory.

Pertinent physical findings included generalized jaundice, pale palpebral conjunctivae, erythema at malar area and epigastric tenderness with firm liver palpable 7cm

below right costal margin. There was also swelling of the 5th digit of the right hand and 2nd digit of the left hand. Further investigation showed leukopenia (2.46 x 10^9/L) and anemia (hemoglobin 61g/L) and peripheral blood smear showed aniso- and poikilocytosis. Direct and indirect Coombs test were both positive. There was also note of elevated levels of reticulocyte count (0.872), ESR (122 mm/hr) and CRP (>12mg/L). Urinalysis exhibited no proteinuria. The patient had malar rash, synovitis, anemia, leukopenia and positive Coomb's test. An ANA test of +4 confirmed the diagnosis of SLE. The SLE disease activity index was eight. Immunosuppressant therapy was started with oral steroids (Prednisone), with note of resolution of symptoms. No recurrence of jaundice was observed.

DISCUSSION

This study reports two Filipino adolescents diagnosed with systemic lupus erythematosus (SLE), both with uncommon initial clinical presentation: one as intermittent epigastric pain and the other as jaundice. These two findings are not part of the SLICC 2012 criteria and may mimic other illness, causing delay in diagnosis and treatment of SLE.

SLE is a multi-systemic autoimmune disorder caused by widespread inflammation of blood vessels and connective tissues, thus it may involve any part of the gastrointestinal tract including the liver and pancreas. In different studies, gastrointestinal symptoms were reported to be present or occurred within 1 month after diagnosis of SLE in nine to 31% of juvenile SLE.[4,8] In a report of 23 Taiwanese with childhood onset SLE, seven (31%) cases presented with recurrent abdominal pain secondary to lupus mesenteric vasculitis.[8] On the other hand, hepatomegaly was the most common (19.8%) gastrointestinal manifestation in 101 Thai children with the disease.[9] In a review of 78 Filipinos diagnosed with juvenile SLE, abdominal pain and vomiting were seen in seven (9%) patients as part of the presenting features but not as an initial and major manifestation, as what we have seen in our first case. Moreover, there was no patient in the Taiwanese, Thai and local series whose initial presentation was jaundice.[4]

Abdominal pain as a symptom of SLE maybe a manifestation of an autoimmune tissue injury caused by serositis, intestinal vasculitis or pancreatitis. It may also be secondary to a gastritis or peptic ulcer disease due to an active SLE or drug induced among those who have been started on steroids. In our first patient, the major presentation was severe epigastric pain in which an acute pancreatitis was excluded with normal amylase and lipase values while the presence of erosive gastritis with blood at the ampullary area, indicative of recent hemorrhage, was demonstrated on endoscopy. In retrospect, the endoscopic findings could have been a sign of SLE-related intestinal vasculitis and together with the anemia and thrombocytopenia, the diagnosis should have been pursued even during the first admission.

The second case presented with a four-month history of persistent jaundice in which other liver conditions including infectious, structural and drug-induced were excluded. It was only during the course of the illness that other features of SLE were recognized, namely, malar rash and synovitis. While liver enzyme abnormalities are seen in 15-55% of SLE patient, jaundice as an initial major presentation is rare. Hikmah[7] reported a 12-year old Indonesian girl who had a 2-month history of jaundice but with associated alopecia, malar rash and oral ulcers at presentation. Similarly, a 15-year old British girl developed jaundice nine months after diagnosis of SLE associated with a one-month history of lethargy, bilateral ankle edema and abdominal pain. Based on liver biopsy and a magnetic resonance cholangiopancreatography, the patient was diagnosed to have autoimmune cholangiopathy.[10] In a pathologic analysis of the liver in 52 cases with SLE, nine (17%) were noted to have cholestasis and 11 (21%) with hepatic arteritis. In adults, SLE has a 25–50% chance of developing abnormal liver tests in their life time. Hepatotoxic drugs, coincident viral hepatitis, nonalcoholic fatty liver disease, hepatic arteritis and nodular regenerative hyperplasia are common causes of liver enzyme abnormalities in SLE patients.[11]

The present report showed that systemic lupus erythematosus should be included in the differential diagnosis of any patient presenting with epigastric pain and jaundice, when supported by other clinical and immunologic criteria of the disease.

Statement of Authorship

Both authors participated in the patient care, data collection and write up of the paper and approved the final manuscript.

Author Disclosure

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