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A symptomatic case of pancreatitis with Systemic lupus erythematosus in 20-year-old female patient

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Abstract

Aim of the Study: The aim of the study is to present a case of pancreatitis with Systemic lupus erythematosus in 20-year-old female patient.

Background: Systemic lupus erythematosus (SLE) is a multisystemic disorder characterized by wide range of manifestation with varied outcome. Incidences of SLE in younger age group is not well reported due to paucity of its diagnosis. Clinical manifestation of SLE in younger age group is very diverse and have atypical presentations as compared to adults.

Case description

A 20-year-old female was admitted to intensive care unit of hospital with main complain of pain in abdomen since 15 days. The intensity of epigastric pain was increasing day by day but was not radiating to back. She gave history of nausea and occasional episodes of vomiting since 15 days but had no difficulty in passing urine.

Following investigations were carried out: blood glucose, PS smear, total blood count including TLC & RBC count, ESR, Liver function tests, Lipid profile, Renal function tests including PC ratio, C3c, C4, ANA profile and Procalcitonin as inflammatory marker. Laboratory findings included: PS smear showed features of pancytopenia - normocytic, normochromic anemia with leukopenia with thrombocytopenia. High level of serum Total and direct Bilirubin, AST, ALT, amylase and lipase, deranged level of cholesterol and triglyceridemia, creatinine, procalcitonin and leukocytosis. Hemoglobin, S. Total Protein, albumin, C3c and C4 were reported low. Urine analysis showed increased Protein creatinine ratio. ANA profile was strongly positive (++) for ds DNA and histones, positive for nucleosomes. IgG4 Sub class was 0.69 g/L (0.03-2.0). Diagnosis of pancreatitis with Lupus nephritis associated with SLE was confirmed. Treatment and management was carried out for the same.

Conclusion: The clinicians should take into consideration acute pancreatitis secondary to SLE in listing the provisional diagnosis, in its initial stage of

manifestation with abdominal pain and vomiting as early diagnosis shall aid in prompt treatment and favorable outcome.

Keywords: ANA profile, autoimmune pancreatitis, protein creatinine ratio, systemic lupus erythematosus,

Introduction

Systemic lupus erythematosus (SLE) is a multisystemic disorder characterized by extensive range of clinical manifestation. The incidence of SLE was 0.9–3.1 per 100,000 and the prevalence was 4.3–45.3 per 100,000 in Asia–Pacific region[1]. However, in India incidences of SLE in younger age group is not well reported due to paucity of its diagnosis. Clinical manifestation of SLE in younger age group are very diverse and have atypical presentations as compared to adults. The presented case highlights the importance of considering acute pancreatitis secondary to SLE in its initial stage of manifestation as early diagnosis shall aid in prompt treatment and favorable outcome.

Case history

A 20-year-old female was admitted to intensive care unit of hospital with chief complain of pain in abdomen since 15 days. The intensity of epigastric pain was increasing day by day but was not radiating to back. She gave history of nausea and occasional episodes of vomiting since 15 days but no difficulty in passing urine. On detailed history taking, she disclosed incidence of high grade fever with chills about 3 months back and had nonspecific joint pain for a duration of few days during the same period.

On examination, the patient had generalized pallor ++, cervical lymphadenopathy, alopecia ++, periorbital edema +, facial puffiness +, malar rash present and no icterus and petechial hemorrhage. Her vitals on admission were recorded as follows: Blood pressure 110/74 mmHg, Respiratory rate 24/min, Pulse rate 60/min. Her abdomen was distended, mild epigastric tenderness to deep palpitation without sign of peritoneal irritation.

Her blood samples were sent for laboratory and results were as follows: TLC- 2,100 cells/cumm (4.000-11,000), neutrophils 42% (40-80), lymphocytes 54% (20-40), eosinophil's 02% (1-6), monocytes 02% (2-10), ESR 60 mm/1st hour (0-20), RBC - 1.93 millions/cumm (4.5-5.5), Reticulocytes 1.2%(0.5-2.5), PCV- 22.7% (36-46), Platelet Count- 0.45 lakhs/cumm (1.5-4.0), Platelet distribution width (PDW) 17.9% (8.2-9.8) and Mean platelet volume (MPV) 10.1 % (9.2-10.4). PT- 19.5 sec (11.64-15.64), PT-INR-1.45 (0.8-1.2), aPTT- 37.8 secs (24.00-34.00). Urine microscopy shower pus cells- 8-10/hpf (0-5), erythrocytes 15-20/hpf (0-3). Complete blood count – whole blood with K2 EDTA was processed in Unicell DxH800, ESR in CUBE 30. Coagulation profile STAGO STA Compact Max 3. Urine analysis in Sysmex UF1000i. PS smear showed features of pancytopenia - normocytic, normochromic anemia with leukopenia with thrombocytopenia).

Biochemical analytes : Total cholesterol - 204 mg/dl (5-200), TG - 391 mg/dl (5 -200), HDL- 40 mg/dl (Female - greater than 65 [no risk]), LDL- 47 mg/dl (optimal, less than 100), Total cholesterol: HDL ratio 5.1 (no risk- less than 5), TSH – 3.38 micro IU/L (0.5-4.3), BUN- 23.84 mg/dl (6-20), S. Creatinine – 3 mg/dl (0.50-0.90), S. Uric acid - 6.9 mg/dl (2.4-5.7), S. Amylase - 614 U/L (28.0-100), Lipase - 3557 U/L (13-60), LDH - 560 U/L (135-214), T.Bilirubin-1.46 mg/dl, D. Bilirubin- 1.26 mg/dl, T. Protein - 5.1gm/dl, Albumin- 2.0 mg/dl, ALT-69 U/L(1-33), AST- 697 U/L (0-31), ALP - 215 U/L (35-104), GGT - 1643 U/L (6 -40), S. Calcium - 7.0 mg/dl (8.4-10.2), S. Magnesium - 1.8 mg/dl (1.7—

2.55), S. Ferritin - greater than 1000 ng/ml (15-150), Vitamin B12 - greater than 1000 picogram/ml (deficiency less than 150), C3c less than 40 mg/dl (90-180), C4 - less than 8.0 mg/dl (10-40). Serum Procalcitonin - 1.48 ng/ml (low risk < 0.5). These profiles were analyzed in VITROS® 5600 Ortho Clinical Diagnostics. ANA profile was strongly positive (++) for ds DNA and histones, positive for nucleosomes. IgG4 Sub class by Nephlometry was 0.69 g/L (0.03-2.0). Ultrasound abdomen and pelvis showed – Features suggestive of acute pancreatitis, moderate ascites and bilateral pleural effusion.

Discussion

The common causes of acute pancreatitis in general population includes hepatobiliary tract induced obstruction, hyper triglyceridemia, alcohol abuse, steroid therapy and others [2]. About 20 % of cases of acute pancreatitis are idiopathic [3]. The presented case has features of acute pancreatitis with systemic lupus erythematous and overlapping features of lupus nephritis. Pathophysiology of SLE induced autoimmune pancreatitis comprises vasculitis, microthrombus formation, anti-pancreatic antibodies and inflammation due to T- cell infiltration and complement activation [4].

Auto immune pancreatitis with SLE has an average of about 0.4- 1.1 per 1000 patients worldwide. There is increased female gender predisposition [5]. The presentation of features of active SLE develops within first few years of onset of disease. The diagnosis of acute pancreatitis is based on clinical symptoms, with elevated pancreatic enzymes (amylase and lipase), in addition to abdominal scan findings. SLE patients has presentation of autoimmune pancreatitis with serological findings, ANA profile comprising positive dsDNA, anti-histone antibodies and IgG4 value. However, chest X ray and echo cardiogram recorded no abnormality. No abnormality was detected in ophthalmoscopy examination. The other significant findings accompanying autoimmune pancreatitis can also include features of pancytopenia [6].

Glucocorticoid therapy is one of the likely cause of pancreatitis but in contrast to it, in these sort of presentation, patient showed marked improvement with prednisolone treatment. Increased mortality rate is associated in cases of pancreatitis presenting with lupus symptoms. However, in cases where there is no significant manifestation of SLE symptoms in association with pancreatitis showed better prognostic features [7]. During listing of provisional diagnosis, the clinicians should take into consideration, pancreatitis with SLE as one among them when there are presenting features of abdominal pain and vomiting. Cutaneous changes like malar rashes and nephritis are more common in SLE as in this case. Nevertheless, diagnosis is mostly by serological findings as in this case. However renal biopsy could not be performed as consent was refused.

As differential diagnosis, common cause of pancreatitis should be initially ruled out. Drug induced pancreatitis due to exposure to the following drugs: Chlorothiazide, rifampin, hydrochlorothiazide, methandrostenolone, lamivudine, carbamazepine, octreotide, cisplatin, acetaminophen, phenformin, interferon alfa-2b, enalapril, erythromycin, cyclopenthiazide and others should be ruled out as some of these drugs are easily available over the counter [8]. This case showed no history of medication with any of these drugs which otherwise could have precipitated pancreatitis.

Steroids stand as the drug of choice along with other immune modulating therapies can also be started. Patient

was started with platelet transfusion for thrombocytopenia, Injection Parantis 1-gram SOS, injection PIPTAZ IV 4.5 gram and titrated according to creatinine clearance. Patient was started ion pulse IV Methyl prednisolone and BUDECORT nebulization during stay in the hospital. She was followed up on Tab Wysolone 30 mg once daily during discharge and to be reviewed during further follow up. After 2 weeks on OPD review showed marginal improvement and no fresh complaints.

Conclusion

Due to its nonspecific presentation, its diagnosis can be overlooked. It is important to have a high index of suspicion, for early diagnosis of the clinical condition and start treatment, so as to have better prognosis.

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