University Journal of Medicine and Medical Specialities

ISSN 2455- 2852 2021, Vol. 7(6)

Unusual Presentation of Infective Endocarditis - Case Report

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Abstract

A patient who presented for pre –op assessment for the drainage of a splenic abscess, was then evaluated prospectively and retrogradely upon identification of a pansystolic murmur. The patient was later diagnosed as a case of valvular heart disease presenting with a complication of infective endocarditis [splenic abscess]. The medical reports of the patient was evaluated, which revealed an evidence of glomerulonephritis three months back. Here, we present the case report of such a rare presentation of two complications of infective endocarditis in a short duration of time.

KEY WORDS: Infective endocarditis, splenic abscess, Glomerulonephritis, embolization

Introduction

Infective endocarditis is a microbial infection of a heart valve , the lining of a cardiac chamber or a congenital anomaly. Endocarditis can take either an acute or a more insidious subacute form.[2] Embolization is a dreaded complication of Infective Endocarditis. Central nervous system involvement more common. Stroke comprises up to 65 percent of embolic events and may be the presenting sign of infective endocarditis in up to 14 percent of cases. Emboli may also involve other organ systems, including liver, spleen, kidneys and lung.[7] Embolism to the spleen can result in splenic infarction in forty percent of the patient, with splenic abscess occurring in five percent of these patients[3]. This case of unusual presentation of infective endocarditis clearly depicts that any case can present in any form but detailed history taking and clinical examination only will clinch the diagnosis.

Case Report

History of Presenting Illness

32 year old female came to medicine department for preoperative evaluation for splenectomy.

She was admitted in surgical department with h/o fever-2 weeks, abdominal pain – 2 weeks. Evaluated and diagnosed as splenic infarct, treated with antibiotics and supportive management and planned for surgical intervention.

Evaluation of history in our department history revealed the following details :

(1) Fever with chills-2 weeks, high grade, intermittent, associated with rash.

(2) Abdominal pain -2 weeks, acute onset, dull aching, left hypochondrium, non radiating, aggravated by deep breathing.

(3) Rashes-2 weeks ,developed in both lower limbs below the knee

(4) Breathlessness-2 days, acute onset , grade 2 (NYHA). No H/O Orthopnea and PND.

(5) Chest pain -2 days, acute onset, retrosternal, dull aching, non radiating, associated with palpitations

(6) Palpitations-acute onset, 2days, regular, paroxysmal.

Past History

There was a past history of similar episode of fever 2 months back. Her previous report showed elevated Total WBC count, microscopic hematuria with proteinuria and RBC casts in urine examination.

She also had a history of emergency open appendicectomy done 4 years back .During pre anaesthetic assessment she was diagnosed to have some cardiac problem, but missed further follow up.

No history of Rheumatic fever and congenital heart disease in the past.

General Examination

On examination, the patient was tachypneic [respiratory rate – 26] and pale with high grade fever. Multiple petechiae [figure 1] were present in both lower limbs below the knee. Patient had a stable blood pressure with a heart rate of 107/ min.

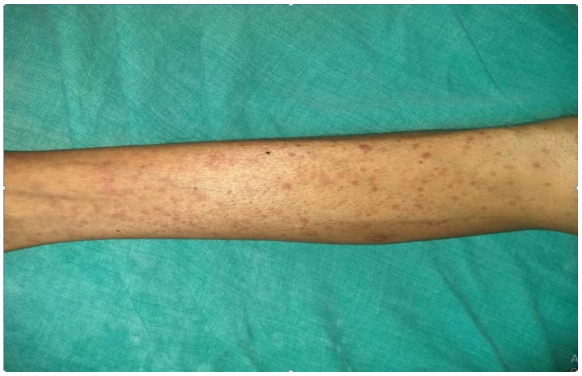

Figure 1: Petechial Spots

Cardiovascular System Examination

(1) Apical impulse felt in the left 6th intercostal space 2 cm lateral to midclavicular line, which was hyperdynamic in nature
(2) A parasternal heave of grade 3 was present.
(3) Systolic thrill was present in the mitral area.
(4) Epigastric pulsation and supraclavicular pulsations were also present.

Auscultation

In the mitral area S1, S2 heard, S1 was soft. Pan-systolic murmur of grade 4/6 was heard in the mitral area and it was conducted to axilla and back, with the breath held in expiration. In the pulmonary area, a loud second heart sound was heard. The patient also had bilateral basal crepitations. Examination of the abdomen revealed tenderness in the left hypochondrium. Fundus examination was normal.

Provisional Diagnosis

RHEUMATIC HEART DISEASE /MITRAL REGURGITATION /PULMONARY HYPERTENSION / ? INFECTIVE ENDOCARDITIS /SPLENIC INFARCT

Investigations

COMPLETE BLOOD COUNT: Hb-6g%, TC-19,000/mm^3 DC (P83,L16,E1), PCV- 18 % ,Plt-1.6 lakhs/mm^3. ESR 30/hr , CRP 12mg/dl
RBS-124mg/dl,
RFT : B.Urea-26mg/dl, S.Creatinine-0.96mg/dl,
ELECTROLYTES : Na+ 139mEq/L, k+ 3.5mEq/L, Cl- 109mEq/L, HCO3- 23mEq/l
LFT: T.Bilirubin-1.5mg/dl,D.Bilirubin-0.5mg/dl,IND.Bilirubin-1.0mg/dl,AST-27 IU/L, ALT-25 IU/L, ALP-64 IU/L, T.Protein- 7.2g/dl,Albumin-4.0g/dl, Globulin-3.2g/dl
Hbs Ag-Negative, Anti HCV –Negative.
Serum Amylase -25 IU/L, PT 14.5 s, control 14.2 s, INR 1.02
URINE ROUTINE- Normal

ECG

Sinus tachycardia/Normal axis/LVH/LAE [Figure 2]

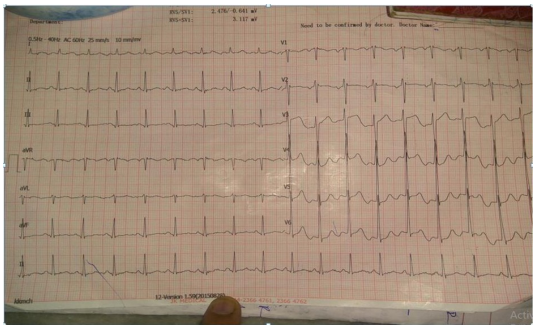

Figure 2 : ECG

Chest X Ray

Cardiomegaly/obliterated pulmonary bay /Pulmonary edema[figure 3]

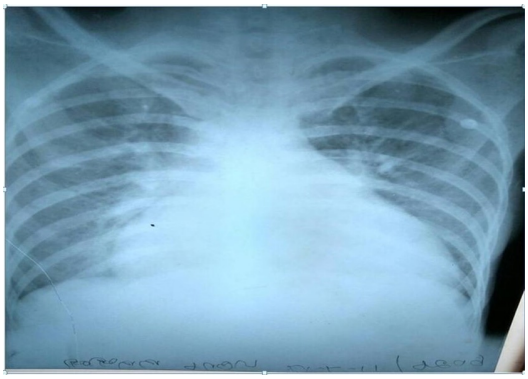

Figure 3 : chest x ray

USG Abdomen

Mild splenomegaly with splenic infarct/abscess, prominent hepatic vein

CT ABDOMEN [figure 4 & 5] splenic infarct

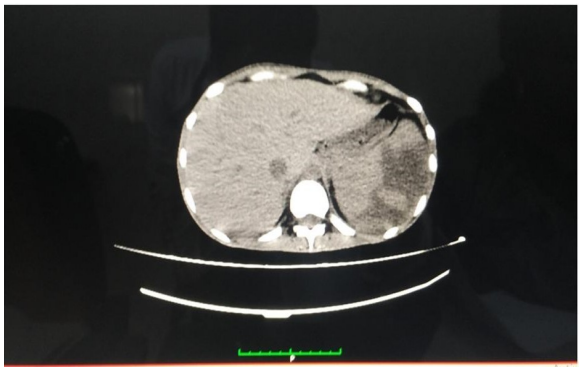

Figure 4 : CT abdomen splenic infarct

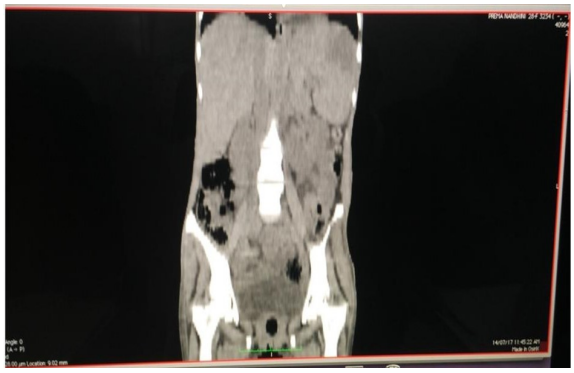

Figure 5 : CT abdomen splenic infarct

ECHO (figure 6,7 and 8)

LA/LV dilated, AML/PML thickened, RHD,MR-moderate, large vegetation of size 1.7x0.8cm attached to AML , multiple small vegetations present in PML. Features s/o infective endocarditis, AS –mild, AR-mild, TR-mild, PAH- severe, LVEF-65

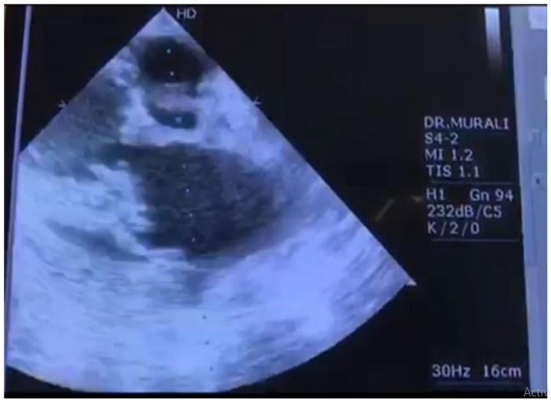

Figure 6 vegetation in mitral valve

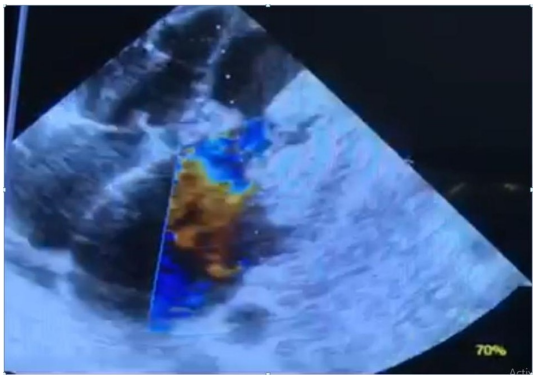

Figure 7 mitral regurgitation

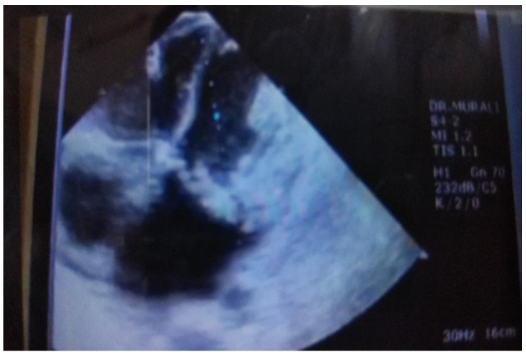

Figure 8 vegetation in mitral valve

Management

The patient was started on empirical antibiotic therapy with vancomycin and gentamycin. The patient was referred to higher centre, where percutaneous drainage of the splenic abscess was done under ultrasound guidance, following diagnosis of splenic abscess in repeat CT - ABDOMEN followed by mitral valve replacement

Discussion

Diagnostic Dukes Criteria [6]

Major Criteria:

(1) POSITIVE BLOOD CULTURE

Typical microorganisms from 2 separate culture (or) persistent positive culture(or) single culture positive for coxiella burnetti.

(2) ENDOCARDIAL INVOLVEMENT

ECHO positive for vegetations (or) new regurgitant lesion

Minor Criteria:

(1) Presence of predisposing heart condition

(2) Fever of more than 38 C

(3) Vascular phenomenon such as major arterial emboli ,septic pulmonary infarct

(4) Immunological phenomenon like glomerulonephritis, oslers nodes, roth spots, rheumatoid factor

(5) Positive blood culture not meeting major criteria

Our case presented with a major finding of echocardiographic evidence of vegetation and minor criteria of fever,septic embolisation of spleen and a predisposing heart condition.

Megan et al reported a case of infective endocarditis, which presented with embolic stroke and splenic infarct, which was treated by emergent valve replacement and robotic splenectomy.[3]

Rasheed et al reported a case of renal infarction caused by infective endocarditis in a twenty nine year old male.[4]

Lee HC et al reported an embolic complication of infective endocarditis, which presented as uveitis.[5]

Pavandeep et al reported a case of multifocal septic arthritis due to infective endocarditis.[1]

In our case, the patient presented with an embolic phenomenon [splenic infarction] and also an immunological phenomenon [glomerulonephritis] within a span of three months.

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