Rare case of Systemic Lupus Erythematosus- Lupus Nephritis and Pulmonary tuberculosis in a 37 year old male

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Abstract:

SLE is an autoimmune inflammatory disease caused by immune system when it attacks its own tissues. This condition is relatively rare within autoimmune disorders. The co-existence of SLE-lupus nephritis with PTB shares clinical features of fever, breathlessness, fatigue and weight loss which are common in both the conditions, hence the presence of coexisting SLE and PTB needs a high degree of clinical suspicion, (Love et al. ,1990). Therefore, we hereby report a rare case of a young male presented with SLE-SLN, T2DM, PTB. Early recognition, diagnosis and management of both the conditions should be done for a favourable outcome.

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INTRODUCTION:

SLN is the most common lupus and chronic disease that can have phases of worsening symptoms that alternate with some period of mild symptoms, which include joint pain, fatigue, joint swelling, headache, skin rashes, anaemia, most common organ affected by SLE is renal system termed as LUPUS NEPHRITIS (SLN) (Cornelis et al.,2010). SLN consists of 5 grades, lupus symptoms are also symptoms of many other diseases which make the diagnosis difficult. The treatment becomes more difficult and complicated with the co-existence of other systemic infection such as pulmonary tuberculosis and immune compensated diseases like type 2 diabetes mellitus (Vitali,C et al.,1992). The current case highlights the co-existence of SLE-SLN, T2DM with pulmonary tuberculosis. Delayed diagnosis and management can cause increased fatality.

HISTORY:

37-year-old male came with the chief complains of fever and difficulty in breathing for 2 days, fever is not associated with chills and rigors, difficulty in breathing was sudden in onset and was present even at rest (MMRC GRADE 4). He denied history of chest pain, palpitations, syncope, and has comorbidities of T2DM for 2 yrs under regular treatment and SLE-SLN under regular treatment for 5 yrs. Clinical examination revealed that the patient was conscious, oriented, febrile, dyspnoeic, and tachypneic at rest. He was non(anaemic, icteric, cyanotic, clubbing). Vitals showed BP: 120/70mmhg, pulse rate: 140 bpm, RR: 22, SPO2: 85%@RA, CBG: 335mg/dl, and temp: 97degreeF, BMI: 22Kg/m, CVS: s1s2presnt no murmurs and added sounds, RS: bilateral coarse crept present (left>right), decreased air entry in bilateral infra-axillary region (left> right), per abdomen: soft and non-tender, no

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organomegaly, CNS: no focal neurological deficit (E4V4M6).

BLOOD ROUTINE INVESTIGATIONS:

All base line investigations were done and are as follows
CBC, TC, DC: NORMAL
HB: 8.5 Gm/dl
ESR: 79MM
LFT: NORMAL

URINE ROUTINE:

URINE ACETONE 2 +
URINE PROTEIN 3+
URINE PROTEIN 4+

RADIOLOGICAL INVESTIGATION:

1USG: NORMAL STUDY
2.CTCHEST: THICK-WALLED CAVITY CONSOLIDATION, MILD LEFT PLEURAL EFFUSION, CENTRILOBULAR OPACITIES, TREE IN BUD APPAEARANCE IN BILATERAL MIDDLE LOBE, PLEURAL THICKENING LEFT UPPER AND LOWER LOBE REGION. (figure 1,2)

(Figure 1)

(figure 2)

TREATMENT:

Patient clinically presented with signs and symptoms of SLE-SLN, and was initially started with steroids and broad spectrum antibiotics, in view of hypoxemia, patient was intubated after a NIV trial, due to persistent de saturation and infection HRCT chest was taken, which showed thick walled consolidation and cavity, mild pleural effusion, patient was empirically started ATT UNDER NTEP 4FDC HRZE REGIMEN, even after starting antibiotics and steroids, patient haven't shown any sign of improvements.

DISCUSSION:

SYSTEMIC LUPUS ERYHEMATOUS/SLE accounts to 70 out of 1, 00,000 in women SLE is an auto immune disorder where our body antibodies attacks our own body tissues, SLE is more common among the female gender. The prevalence is comparatively very low in India (Prabu,V.N.N et al.,2010). Most common antibodies involved are ANA (anti-nuclear antibody) and anti-Smith antibody (Egner et al.,2000). The pathophysiology contributing to SLE is genetics and environmental causes. It involves multi organ dysfunction especially it involves renal system which is named as SYSTEMIC LUPUS NEPHRITIS (SLN) and has 5 grades, lupus involving skin causes skin rashes such as discoid / butterfly rashes, more common symptom's involve pain swelling joints, extreme fatigue and tiredness, particularly this patient has a overlapping pulmonary tuberculosis which is caused by mycobacterium tuberculosis where lung consolidation and cavities which increase the complication and mortality of the patient, therefore the possibility of getting re infection and immune compromised state of T2DM with underlying SLE-SLN and pulmonary tuberculosis resulted a unsatisfactory prognosis (Zhang L.et al., 2008).

Conclusion:

This case highlights the importance of managing an immune compromised state SLE-SLN with type2 diabetes mellitus with overlapping pulmonary tuberculosis, unusual presentation not responding to high standard care. High suspect for autoimmune disorder should be done as early as possible to prevent complications and mortality (Kim, J et al.,2000)..

Author contribution

Authors have equally contributed in the study.

Informed consent

Written and oral informed consent was obtained from the patient

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Conflicts of interest

The authors declare that there are no conflicts of interests

Data and materials availability

All data associated with this study are present in paper.

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