Systemic Lupus Erythematosus in Hospital Patients

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KEYWORDS

• Systemic lupus erythematosus • Hospitalized patient • Lupus flare

HOSPITAL MEDICINE CLINICS CHECKLIST

1. Systemic lupus erythematosus (SLE) most commonly affects white women between the ages of 16 and 55 years.
2. The American College of Rheumatology criteria and the Systemic Lupus International Collaborating Clinic criteria are two methods of diagnosing SLE.
3. The definition of an SLE flare is a measurable increase in disease activity that results in a change in therapy.
4. The two most common causes of hospitalization for patients with SLE are SLE flare and infection, but infection must be ruled out first. Other common causes are thromboembolism, adverse drug reaction, and acute coronary syndrome.
5. The two most common SLE flares are arthritic flares and mucocutaneous flares.
6. An arthritic SLE flare is a nonmigratory, symmetric polyarthritis that affects the small joints, knees, and wrists, and the degree of joint pain exceeds the objective physical examination findings.
7. The three forms of mucocutaneous SLE are acute cutaneous lupus erythematosus, subacute cutaneous lupus erythematosus, and chronic cutaneous lupus erythematosus.
8. In classic SLE flares, erythrocyte sedimentation rate and anti–double-stranded DNA antibodies are increased and C3 and C4 are low. However, none of these tests are sensitive or specific. C-reactive protein can be helpful in differentiating SLE flare from infection.

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9. All patients with SLE in the hospital should have a urinalysis to look for lupus nephritis or renal flare regardless of their creatinine level.
10. Antimalarials should not be stopped in patients with SLE with infection because stopping anti malarial may lead to an SLE flare.
11. Most SLE flares can be treated with nonsteroidal antiinflammatory drugs or high-dose oral glucocorticoids and only severe flares with end-organ damage, such as renal flares or neurologic lupus flares, require intravenous pulse steroids.
12. Preventive care in patients with SLE consists of avoidance of sun exposure, cardioprotective lifestyle, close follow-up, and immunizations (pneumococcal polysaccharide vaccine [23-valent], influenza, and human papilloma virus). Live vaccines such as varicella should be avoided.

DEFINITIONS AND BURDEN OF SYSTEMIC LUPUS ERYTHEMATOSUS

How is systemic lupus erythematosus defined and diagnosed?

Systemic lupus erythematous (SLE) is a systemic autoimmune disease that spares no organ.[1] Its clinical presentations are extremely varied but it most commonly presents with a mixture of constitutional symptoms (skin, musculoskeletal, hematologic) and serologic involvement. Because of this wide variation, the American College of Rheumatology (ACR) criteria were created (**Table 1**).[2] There are 11 criteria and if 4 or more of the criteria are met, either serially or simultaneously, then the diagnosis of SLE is made.

However, the ACR criteria have inherent weaknesses:

- The original study on which the criteria were based was done in a predominately white population so the ability to generalize them to other ethnic groups is unknown. This limitation is especially important because Hispanic and African American people have increased frequency of SLE.
- The ACR criteria may not capture early lupus, neurologic lupus, and some patients with lupus nephritis.
- The ACR criteria do not take into account new immunologic tests and do not include many of the cutaneous manifestations of SLE.

In order to address these concerns, the Systemic Lupus International Collaborating Clinic (SLICC) criteria were created using a set of 702 expert-rated patient scenarios and validated on a new sample of 690 expert-rated scenarios (see **Table 1**).[3] In these criteria, patients have SLE if they have:

1. Four of 17 criteria, the but patient must have 1 criteria from both the clinical and immunologic criteria, or:
2. Biopsy-proven SLE nephritis in a patient with antinuclear antibodies (ANA) or anti–double-stranded DNA (dsDNA) antibodies

Compared with the 1997 ACR criteria, the SLICC criteria have increased sensitivity (94% for SLICC and 86% for ACR) but less specificity (84% for SLICC and 96% for ACR).[3] However, they are more consistent with advancing concepts in SLE pathogenesis and knowledge. For example, the following were changed in SLICC compared with ACR criteria: