Systemic Lupus Erythematosus: Cardiovascular Pathophysiology

Jennifer L. Mullins

Otterbein University, jennifer.mullins@otterbein.edu

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Systemic Lupus Erythematosus: Cardiovascular Pathophysiology
Jennifer L. Mullins, RN, BSN, PCCN
Otterbein University, Westerville, Ohio

What is Lupus?

Pathophysiological Disease Process

- Systemic lupus erythematosus (SLE) is an autoimmune disease potentiating chronic inflammation throughout the human body.
- "Autoantibodies react with circulating protein linked counterparts" (p. 1).

Introduction

- Systemic lupus erythematosus (SLE) is a multisystemic disease.
- "Atherosclerosis is an inflammatory disease initiated by dysregulation of the arterial intima...leading to cardiovascular disease in patients with systemic lupus erythematosus. Journal of cardiovascular medicine, 278(5), 494-500. doi:10.1097/JCM.0b013e31827f0d5"

Signs and Symptoms

- "Dyspea
- Cough
- Fever
- Chest pain
- Abdominal/flank pain
- Skin rash
- Decreased urine output
- Ankle/foot edema
- Elevated C-reactive protein
- Anti-ds DNA
- Elevated troponin I
- Anemia
- Proteinuria
- Sinus tachycardia
- Pericardial effusion
- Mitral valve regurgitation
- Cardiomegaly" (Chen, Chang, Hsu, Liao & Chen, 2014, p. 1118).

Underlying Pathophysiology


Significance of Pathophysiology


Implications for Nursing Care

- Advanced Practice Nurses should monitor SLE patients:
  1. Hypertension
  2. Heart failure
  3. Diabetes mellitus
  4. Labs
  5. Importance
- Advanced Practice Nurses should educate SLE patients regarding cardiovascular risk factors:
  1. Control blood pressure
  2. Smoking cessation
  3. Dietary restriction

Conclusion

- SLE is complicated disease.
- "A collaborative effort between Advanced Practice Nurses and patients is necessary to ensure success on the wellness continuum."
- "Success is achieved through recognizing, educating, and managing the cardiovascular risks associated with SLE."
- "Weinstein et al. (2014) report an increase in cardiovascular risk the first 3 years of SLE, "early aggressive treatment may improve overall survival rates" (p. 137).

References

- "Impact of disease duration on outcomes in SLE patients. Arthritis & rheumatism, 68(1), 219-226. np. doi:10.1002/art.39423"
- "Lupus is a multifaceted disease. SLE activates the immune system...the obstruction limits blood flow or can rupture."

What is systemic lupus erythematosus (SLE)?

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