SM 404 Musculoskeletal Module Cases

- **Lupus Nephritis**
  - A 45-year-old woman with systemic lupus erythematosus (SLE) presents to the emergency department with complaints of headache and fatigue.
  - Her prior manifestations of SLE have been arthralgias, hemolytic anemia, malar rash, and mouth ulcers, and she is known to have high titers of antibodies to double stranded DNA as well as anti Sm antibody.
  - She currently is taking prednisone, 5 mg daily, and hydroxychloroquine, 200 mg daily.
  - On presentation, she is found to have a blood pressure of 190/110 with a heart rate of 98 beats/min.
  - A urinalysis shows 25 red blood cells (RBCs) per high-powered field with 2+ proteinuria.
  - Her blood urea nitrogen is 88 mg/dL, and creatinine is 2.6 mg/dL (baseline 0.8 mg/dL).
  - She has not previously had renal disease related to SLE and is not taking nonsteroidal anti-inflammatory drugs.
  - She denies any recent illness, decreased oral intake, or diarrhea.

What is the most appropriate next step in the management of this patient?

a) Initiate azathioprine (immune suppressing agent).
b) Prepare for kidney transplantation.
c) Initiate high-dose steroid therapy (pulse steroid therapy).
d) Initiate plasmapheresis (technique used to wash out the harmful antibodies)
e) Withhold all therapy until renal biopsy is performed

- **Rheumatoid Arthritis.**
  - A 32-year-old female presents with episodes of pain, stiffness, and swelling in both hands and wrists for approximately 1 year.
  - The episodes last for several weeks and then resolve.
  - More recently, she noticed similar symptoms in her knees and ankles.
  - Joint pain and stiffness are making it harder for her to get out of bed in the morning and are interfering with her ability to perform her duties at work.
  - The joint stiffness usually lasts for several hours before improving. She also reports malaise and easy fatigability for the past few months, but she denies having fever, chills, skin rashes, and weight loss.
  - Physical examination reveals a well-developed woman, with blood pressure 120/70 mm Hg, heart rate 82 bpm, and respiratory rate 14 breaths per minute.
  - Her skin does not reveal any rashes.
  - Head, neck, cardiovascular, chest, and abdominal examinations are normal. There is no hepatosplenomegaly.
  - The joint examination reveals the presence of bilateral swelling, redness and tenderness of most proximal interphalangeal (PIP) joints, metacarpophalangeal (MCP) joints, the wrists, and the knees.
  - Laboratory studies show a mild anemia with hemoglobin 11.2 g/dL, hematocrit 32.5%, mean corpuscular volume (MCV) 85.7 fL, white blood cell (WBC) count 7.9/mm3 with a normal differential, and platelet count 300,000/mm3.
  - The urinalysis is clear with no protein and no red blood cells (RBCs). The erythrocyte sedimentation rate (ESR) is 75 mm/h, and the kidney and liver function tests are normal.
- **The diagnosis is**
  a) Gout
  b) Scleroderma
  c) Systemic lupus
  d) Rheumatoid arthritis

- **The diagnostic test of choice for this condition is**
  a) Anti CCP antibody
  b) Anti Sm antibody
  c) Antidouble stranded DNA
  d) Anti Scl-70 antibody

Summary: This is a 32-year-old woman with a 1-year history of symmetric polyarticular arthritis and morning stiffness. Joint examination reveals the presence of bilateral swelling, redness and tenderness of her PIP joints, MCP joints, wrists, and knees. She has a mild normocytic anemia with an otherwise normal complete blood count (CBC). Urinalysis, renal, and liver function tests are normal. The ESR is elevated, suggesting an inflammatory cause of her arthritis.