

## Rheumatoid Arthritis: Review Questions

*Janet F. Burkholder, MD*

### QUESTIONS

Choose the single best answer for each question.

- 1. A 45-year-old female teacher presents complaining of severe left knee pain. She has a long-term history of rheumatoid arthritis, which has been well controlled for several years on a multidrug regimen of methotrexate, hydroxychloroquine, and a non-steroidal anti-inflammatory drug (NSAID). Which of the following symptoms suggests secondary degenerative joint disease (rather than rheumatoid arthritis) as a cause of her knee pain?**
  - A) Prolonged morning stiffness
  - B) Pain that is exacerbated by activity
  - C) Increased fatigue
  - D) Multiple joint complaints
  - E) Weight loss
- 2. Which of the following statements about rheumatoid factor (RF) is TRUE?**
  - A) Only RF-positive patients have extra-articular complications.
  - B) Forty percent of rheumatoid arthritis patients are RF positive.
  - C) The newest generation of RF tests measures all immunoglobulin classes.
  - D) RFs are antibodies directed against the variable region of immunoglobulin G.
  - E) RFs are specific for rheumatoid arthritis.
- 3. A 33-year-old female accountant with rheumatoid arthritis has severe neck pain and occipital headaches. A flexion-extension radiograph of her neck shows minimal widening of the preodontoid space. Which of the following is the most appropriate course for this patient?**
  - A) Refer the patient to a neurologist for treatment of chronic headache
  - B) Change the patient's current NSAID to another class
  - C) Obtain a cervical spine magnetic resonance image (MRI) with gadolinium
  - D) Check the patient's erythrocyte sedimentation rate and RF levels
  - E) Initiate use of a soft collar for 2 weeks
- 4. A 22-year-old male automobile mechanic who was recently diagnosed with rheumatoid arthritis presents complaining of difficulty holding his wrench and other tools. He also notes an occasional "electric shock" sensation in his right index and middle fingers. Physical examination reveals bilateral (right greater than left) wrist synovitis. He has a solid handgrip and no muscle atrophy. Which of the following is the most likely cause of his symptoms?**
  - A) Tendonitis of the abductor pollicis brevis
  - B) Keinbock's syndrome
  - C) DeQuervain's tenosynovitis
  - D) Rupture of the fourth and fifth extensor tendons
  - E) Carpal tunnel syndrome
- 5. A 37-year-old female bus driver is referred by her primary care physician for evaluation of a polyarthritis of 3 months' duration. On examination, she has a symmetrical distribution of synovitis that is consistent with rheumatoid arthritis; radiographs show periarticular demineralization and soft-tissue swelling. Which of the following is the most appropriate course of therapy for this patient?**
  - A) Methotrexate (12.5 mg/wk) and prednisone (7.5 mg/day)
  - B) Pulse methylprednisolone sodium succinate
  - C) Six week course of NSAIDs followed by reevaluation
  - D) Cyclosporine (1.5 mg/kg/day)
  - E) Tumor-necrosis factor (TNF)  $\alpha$ -inhibitor (25 units subcutaneously, biweekly)

*(turn page for answers)*

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**EXPLANATION OF ANSWERS**

- (B) Pain that is exacerbated by activity.** Patients with rheumatoid arthritis are at increased risk for developing other musculoskeletal problems, including secondary degenerative joint disease, septic arthritis, osteoporotic fractures, and tendon rupture. Differentiating between increased rheumatoid arthritis activity and degenerative joint disease is critical considering the toxicities of disease-modifying antirheumatic drugs (DMARDs). Features that suggest synovitis as a cause of pain include multiple joint inflammation with warmth and swelling, constitutional symptoms, and morning stiffness. Degenerative problems are more common in heavily used and weight-bearing joints, and are therefore more localized. Also, the pain is exacerbated by activity and worse at the end of the day.
- (A) Only RF-positive patients have extra-articular complications.** RFs are antibodies directed against the Fc fragment of immunoglobulin G, and RFs occur in 80% of rheumatoid arthritis patients. RFs are an important prognostic indicator of more severe disease and play a pathologic role in extra-articular manifestations. Although RFs may be in any immunoglobulin class, current tests measure only immunoglobulin M factors. RF is not specific for rheumatoid arthritis because this factor is present both in healthy individuals and in patients with diseases that cause a sustained hypergammaglobulinemia.
- (C) Obtain a cervical spine MRI with gadolinium.** The most common symptoms associated with significant cervical spine disease include persistent pain in the neck or the back of the head. Physical examination is often unreliable in detecting neurologic abnormalities in the presence of severe joint deformities and muscular atrophy. Flexion-extension radiographs of the neck can detect significant atlantoaxial and subaxial subluxation. Patients who have normal or near-normal plain radiographs in the context of typical pain complex should have an MRI with gadolinium to evaluate for the presence of pannus, which can cause a mass effect on the spinal cord. Gadolinium may help distinguish between active inflammation and fibrosis.
- (E) Carpal tunnel syndrome.** The wrist and hand joints are the most common joints first involved in rheumatoid arthritis. The inflammation and damage affect the ligaments, tendons, and muscles as well as the joint. The history of an electric shock sensation is highly suggestive of a neuropathy. Synovial proliferation, even in the presence of early rheumatoid arthritis, can compress the median nerve and cause carpal tunnel syndrome. Physical examination should include wrist flexion for 30 seconds (Phalen's maneuver) and tapping over the median nerve with a reflex hammer to elicit Tinel's sign. Reproduction of the symptoms (ie, numbness, burning, tingling) is a positive finding for Phalen's maneuver and Tinel's sign that indicates carpal tunnel syndrome.
- (A) Methotrexate (12.5 mg/wk) and prednisone (7.5 mg/day).** Initial therapy for rheumatoid arthritis has shifted from the use of analgesics to the use of DMARDs. The first-line DMARDs include methotrexate, hydroxychloroquine, intramuscular gold, and sulfasalazine. Methotrexate is the most widely used of these drugs because of its relatively high efficacy and tolerability. The onset of response is a minimum of 4 weeks. In the case of significant disease activity, steroids (which have a rapid onset of action) are often used to provide symptomatic relief, with the goal of eventual taper. TNF  $\alpha$ -inhibitors are a new class of drugs that also appear to be effective in rheumatoid arthritis, but are currently being used only in patients who have failed other first-line drugs (eg, cyclosporine).

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**RHEUMATOLOGY**

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