Department of Internal Medicine
Texas Tech University Health Sciences Center
Odessa, Texas

Rheumatology Curriculum

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I. Educational Purpose and Goals: Internists provide comprehensive care to patients with rheumatic disease. They must oversee a host of subspecialists in order to do this competently. The rheumatology rotation educates the resident to institute appropriate evaluation of patients in whom rheumatic disease is suspected. Thorough, systematic, respectful history taking, physical exam skills and arthrocentesis are taught, enabling the resident to formulate a broad differential diagnosis. Residents learn screening and detailed musculo-skeletal exam and appropriate diagnostic testing/interpretation (including x-rays, labs, microscopic inspection of synovia and urine). Residents learn to deferentially treat, educate and counsel patients about a variety of rheumatic syndromes. Residents learn appropriate evaluation before referral for co-management. Residents will become familiar with the new treatment modalities of Rheumatoid Arthritis and the autoimmune arthritides.

II. Principal Teaching Methods:
   a. Supervised Direct Patient Care:
      i. New consultations primarily occur in the outpatient clinic and much less frequently (less than 5%) in the hospital. The resident will perform a complete history and physical on each new patient. The case is discussed and seen jointly by the resident and the attending. For in-patients, residents will dictate the history and physical. Attending will discuss the history, physical and test data and assist the resident in formulating the assessment and plan.
      ii. The resident will interview and examine established patients in the clinic setting and much less frequently in the hospital. Resident and attending will discuss each resident assigned case and the attending will assist the resident in determining what diagnostic tests and procedures are needed, performing arthrocentesis if indicated, examining synovia and formulating a therapeutically useful assessment and plan.
      iii. Physical exam skills are reviewed with the resident after patient encounters are completed at the end of the day.

   b. Didactic Learning:
      i. Residents will learn to critically examine DEXA scans for technique, interpret risk factors and results.
      ii. Lectures/discussion: occurs at the time of patient encounter.
      iii. The resident will continue to attend all didactic lectures established by the Internal Medicine Residency.

   c. Required Presentation:
      i. Residents will present at least one case with a review of the literature to the attending for discussion.
d. Assigned Readings:
   i. Primer for Rheumatic diseases: Chapters on the history and physical, diagnostic criteria for rheumatic diseases and all clinically based chapters. The basic science chapters are not required
   ii. Screening Musculo-Skeletal Exam by Dr. G. Lawry
   iii. Detailed Musculo-Skeletal Exam by Dr. G. Lawry

e. Additional Reading:
   i. Residents have on line access in the office:
      http://rheuma.bham.ac.uk/arthritishelp/primermain.html
      http://omni.ax.uk/browse/mesh/DO12216.html

III. Educational Content:
   a. Mix of diseases: Residents see a broad mix of diseases and disease severity: All rheumatic diseases are seen with fibromyalgia as a very minor component of the resident’s experience. Children (all ages) are occasionally seen.
   b. Patient characteristics: Patients come from all over Midland/Odessa and represent the broad range of Midland/Odessa’s socio-economic society. The resident is assigned to patients to enhance the learning experience. Residents are not used for service.
   c. Learning Venues:
      i. Type of clinical encounters: Resident interaction with patients occurs 95% in the rheumatology clinic office of a busy private community rheumatologist. 5% of encounters occur in the hospital.
      ii. Procedures: Residents learn arthrocentesis, synovial and urine microscopic examination and DEXA interpretation.
      iii. Services interacted with: Residents learn to interact with on-site occupational therapists.
   d. Structure of Rotation:
      i. Rheumatology clinic starts at 8:00 AM and finishes at about 5 PM.
      ii. Resident duty hours are less than 80 hours a week. The attending sets weekend duty. No call is required.
      iii. Residents continue to attend their weekly general medicine continuity clinic and mandatory conferences.

IV. Principal Ancillary Educational Materials: available in the rheumatology clinic.
   a. Arthritis in Black and White by Ann Brower
   b. The Dermatological Manifestations of Rheumatic Disease by Sontheimer
   c. Lupus Erythematosus by Dubois.
   d. Rheumatology Examination and Injection Techniques by Doherty et al
   e. Muscle Testing by Daniels and Worthingham
   f. Physical Examination of the Spine and Extremities by Hoppenfeld
   g. Arthritis and Allied Conditions by Koopman
   h. Textbook of Pediatric Rheumatology by Cassidy
   i. Resident is expected to read case-directed materials independently.
V. Methods of Evaluation:
   a. Resident Performance
      i. Faculty will complete the evaluation forms provided by the Internal Medicine Residency office. The evaluation is competency-based. The evaluation is shared with the resident, is available for review by the resident at his/her convenience, and is internally reviewed by the residency office. The evaluation is part of the resident file and is incorporated into the semiannual performance review for directed resident feedback.
      ii. Residents record completed procedures. The supervising physician verifies the resident understands the procedure's indications, contraindications, complications and interpretation.
      iii. Chart reviews are conducted daily in the contact of patient care on resident-generated documents.
   b. Program and Faculty Performance On completion of the rotation, the resident completes a service evaluation commenting on the faculty, facilities, and service experience. The program reviews evaluations and attending faculty physicians receive anonymous semiannual copies of aggregate completed evaluations. Collective evaluations serve as a tool to assess faculty development needs.

VI. Rotation Specific Competency Objectives:
   a. Patient Care
      i. History taking: Residents will be able to obtain a detailed, thorough, hypothesis driven history.
      ii. Physical Exam: Residents will perform a comprehensive physical exam on all new patients and, perform a screening and detailed physical examination of the musculo-skeletal system as dictated by the situation. Residents will describe the physiologic and anatomic basis for the findings.
      iii. Charting: Residents will record data in a legible, thorough, systematic manner.
      iv. Procedures: Residents will be able to demonstrate knowledge of: procedural indications, contraindications, necessary equipment, specimen handling, patient after-care and risk and discomfort minimization. Procedures include arthrocentesis, joint injection, bursal injection, trigger finger injection, carpal tunnel injection, synovial and urine microscopy.
      v. Medical Decision Making: Residents will be able to develop a prioritized, differential diagnosis. They will be able to understand their limitations and understand when to seek advice of consultants. Residents will establish and understand an orderly succession of testing for patients with suspected rheumatic disease (including understanding limitations of ANA testing, reading x-rays and differentiating the arthritides based on them and learning to use various questionnaires). They will understand the administration, side effects, monitoring and drug-drug interactions of the Disease Modifying Anti-Rheumatic Drugs, biologic agents, NSAIDS and steroids. Residents will begin to formulate an appropriate therapeutic plan for patients with a variety of rheumatic diseases. Residents will learn the epidemiology and natural history of treated and untreated rheumatic
conditions. Residents will learn target joints for various diseases (helping them differentiate the arthritides).

vi. Residents will learn to interact and appropriately order ancillary services such as occupational therapy, physical therapy, CAM practitioners and orthotists.

vii. Residents will learn when to appropriately refer to the various subspecialists including neurology, orthopedics, oncology, pulmonary, general surgeons.

b. Medical Knowledge
   i. Residents will demonstrate a progression in knowledge of the rheumatic diseases to include basic science, clinical criteria, current treatment and side effects and psycho/social/functional behavior.
   ii. Residents will recognize rheumatic emergencies and urgencies and expedite care.

c. Interpersonal and Communication Skills
   i. Residents will exhibit ethical, respectful behavior to patients and staff.

d. Professionalism
   i. Residents will demonstrate professionalism as detailed in the Internal Medicine Residency hand book.

e. Practice Based Learning and Improvement
   i. Residents will use clinic based literature and electronic references to support patient care and education.

f. Systems Based Practice
   i. Residents will effectively participate in the ambulatory rheumatology office, recognizing and facilitating the consultative and primary care activities of the specialty practice.
   ii. Residents will strive to assist patients with rheumatic diseases in their navigation of ancillary care activities, including physical therapy, occupational therapy, home care, and other systems of care.