Clerkship Title: PULMONARY DISEASES

Location: LAC + USC Medical Center

Credit Level: Selective B or Elective

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Length of time: 4 or 6 weeks
Dates offered: All year
Number of students: 5
Visiting students from other US medical schools? n/a
Prerequisites: n/a

Place and time to report on first day: GNH 11-900 at 8:00 am

Textbooks/Availability:
- Any internal medicine test (preferably- Kelly, 1990)

Learning Objectives – At the conclusion of the clerkship the student should be able to:
- The pulmonary clerkship will provide advanced clinical experience in pulmonary disease and offer the student an opportunity for active participation at the internship level in the delivery of care to sick inpatients as well as outpatients. In addition, the student will consolidate his knowledge in the basic sciences pertaining to respiratory disease. The student will attend and actively participate in clinical conferences (Tuesday and Thursday) and Journal Club (Wednesday).

Procedure
- The student will be assigned to a team comprising an intern, resident, fellow and a faculty member who will meet regularly with his students to assure that the schedule meets the goals of the student and the student is making satisfactory progress.
Clinical Period (Wards 11-400 and 11-600)

- The student will work as an intern and will have direct patient responsibility under supervision of the resident. The patient load will be minimal for the student who will be required to handle only one admitting period per week (24 hours). He will have total responsibility from the day of admission until the patient is discharged and the clinic for followup, if there is any. The student will be required to request and arrange for necessary investigative procedures, e.g., bronchoscopy, lung scan, angiogram, liver and scalene node biopsies and thoracotomy. He will be required to witness and assist in performing the procedures. If the patient dies, student shall obtain the consent for an autopsy, and attend and assist the dissection. Every Monday, each student will attend the Chest Clinic. Each student will examine at least two patients per week. During the clinical period, students may be required to present a patient at morning conferences.

Core Material

Students will be required to read and have the clinical and pertinent basic science information on the following topics:

**Chronic Obstructive Pulmonary Disease**
1. Clinical definition of bronchitis
2. Clinical definition of emphysema
3. Radiological, pathological and physiological differences between bronchitis and emphysema
4. Diagnosis and management plan for patient with COPD
   a. Acute respiratory failure
   b. Chronic respiratory failure- include antibiotics, bronchodilators, postural drainage, inhalation therapy, O administration, tracheostomy and physical therapy and exercise.
5. Preventive aspects of COPD
   a. Air pollution
   b. Smoking
   c. Genetic aspect
   d. Alpha-1 antitrypsin deficiency

**Pulmonary Tuberculosis**
1. Clinical presentation
2. Diagnosis and detection
3. Acid-fact bacilli-bacteriology
4. Special procedures
   a. Skin test
   b. Culture-2-N staining
   c. Chest x-ray
   d. Guinea pig inoculation
5. Management
   a. Anti-TB drugs
   b. Steroids
c. Surgery

**Lung Cancer**
1. Incidence, predisposing factors
2. Clinical features – sign and symptoms, extrathoracic manifestations
3. Type of lung cancer – differences in clinical behavior and prognosis.
4. Management – medical, surgical
5. Immunological aspects of lung cancer

**Bronchial Asthma**
1. Intrinsic and extrinsic asthma
2. Reversible and irreversible airway obstruction
3. Management of acute and chronic asthma
4. Physiological abnormalities – effects of therapy
5. Drugs in asthma
6. Sudden death in asthma

**Granulomatous Disease**
1. Causes and classification of granulomatous disorders
2. Differences between sarcoidosis and other granulomatous disorders
3. Immunological features of sarcoidosis.
4. Management
   a. Steroids
   b. Chloroquine
   c. Surgery

**Coccidioidomycosis and Other Fungal Diseases**
1. Incidence – importance of geographic location
2. Clinical features
3. Management – amphotericin B, use and side effect surgery

**Inhalation Therapy**
1. Definition
2. Use of an IPPB machine – type, indications
3. Nebulizer – type, indications

**Pulmonary Physiology**
1. Spirometry in obstructive and restrictive pulmonary disease
2. Lung volumes
3. V/Q relationship in the lung

**Chest Radiology**
1. Proper positioning of patients for x-rays
2. Interpret as chest x-ray, common pitfalls
3. Value of lateral chest x-ray; when to order an apical lordotic
4. Interpret silhouette sign, air bronchogram
5. Indications or ordering CT and MRI

**Micro bacteriology**
1. AFB and fungi – morphologic and cultural characteristics
2. Complement fixation test in fungal diseases
3. Straining, Grams, AFB, India ink sand.

Special Procedures
Students will be required to observe and perform skillfully the following procedures:

- Arterial puncture
- Thoracentesis
- Spirometry
- Skin Tests
- Cardiac resuscitation
- Intubation

Evaluation
Students will be evaluated on the basis of their day to day progress. Weekly feedback from the residents and the attending staff will help the faculty member responsible or the students to explore deficiencies in the early stage of the clerkship. He will then assign extra reading exercises for the deficient students. No formal examinations are planned.