ENDOCRINOLOGY

Overview

The practice of Endocrinology is the prevention, diagnosis and management of disorders of the endocrine system. The educational purpose of this clinic based rotation is for residents to acquire the knowledge and skills necessary to become competent in the evaluation and care of patients with common endocrine disorders, and to learn which patients should be referred to, or managed jointly with, an endocrinologist. Although emphasis is placed on the effective management of diabetes and the prevention of diabetic complications, residents will be exposed to the major areas of endocrinology which should be mastered by a competent general internist. Residents will see patients in Endocrinology clinic under the supervision of a faculty Endocrinologist and may also have the opportunity to perform supervised inpatient Endocrine consultations. Services available to assist residents in the care of patients with endocrine problems include full laboratory and phlebotomy services, full radiologic services (CT and MRI), and dieticians and nurse educators.

Goals

(All PGY levels)

- To proficiently evaluate and manage common endocrine disorders.
- To identify and evaluate the endocrinologic implications of abnormal electrolytes, hypertension, fatigue, and other nonspecific presentations.
- To effectively manage endocrine emergencies including Diabetic Ketoacidosis, Hyperosmolar Nonketotic stupor, severe hyper- and hypo-calceemia, and addisonian crisis.
- To effectively recognize, evaluate and treat Diabetes Mellitus.
- To learn when to consult an endocrinologist for Diabetes Mellitus.

Objectives

Unless specified, objectives should be met at all levels of training.

Patient Care

- To improve ability to interview and examine patients with endocrine problems, in an effective, efficient and sensitive manner.
- To obtain accurate and essential medical information from previous medical records, outside facilities, and from primary care providers.
- To effectively examine patients with endocrine/diabetes problems.
- To identify certain signs and their possible disease associations.
- To formulate an appropriate differential diagnosis.
- To provide patient focused care that is compassionate, appropriate, and effective.
- To understand the indications for endocrine testing, diabetes screening and follow-up testing.
- To correctly interpret results of screening and diagnostic tests for common endocrine disorders.
To recommend appropriate treatment of common endocrine diseases.
To identify and recommend health care strategies that promote prevention and risk factor reduction.
To educate patients about their endocrine/diabetes problems.

Medical Knowledge (see also Knowledge to be Assessed)

To expand knowledge of the basic and clinical sciences underlying endocrine disorders/diabetes.
To broaden knowledge in the pathophysiology of common endocrine disorders/diabetes.
To understand the pathophysiologic basis for specialized endocrine testing (stimulation and suppression tests).
To learn to access and critically evaluate current medical information and scientific evidence relevant to a patients' medical illnesses.
To utilize scientific evidence in determining the best diagnostic approach and therapeutic intervention(s) for a given patient with endocrine disease.
To understand when to use imaging techniques as part of the work-up of endocrine disorders.
To understand the actions, interactions, and side effects of medications commonly employed in the treatment of endocrine disorders/diabetes.
To broaden knowledge in the pharmacologic and non-pharmacologic treatment(s) of patients with endocrine problems/diabetes.

Practice-Based Learning and Improvement

To develop a logical and organized approach to the most common endocrine disorders/diabetes.
To identify deficiencies in one's knowledge, skills and attitudes in the care of the patient with endocrine diseases/diabetes.
To develop strategies for correcting deficiencies in one's knowledge, skills and attitudes in the care of the patient with endocrine problems/diabetes.
To review outcomes of patients cared for by the endocrinology/diabetes clinic or endocrine consult service.
To appraise and apply scientific evidence to the care of patients with endocrine disease/diabetes.
PGY-2/3 To facilitate the learning of interns, students and other health care professionals.

Interpersonal Skills and Communication

To communicate in a sensitive and effective manner, with patients and families from diverse ethnic and socioeconomic backgrounds.
To ensure that a patient's questions pertaining to his or her endocrinologic disease(s) have been satisfactorily answered.
To communicate clearly and effectively with physicians who have requested consultation regarding the reasons for consultation and the specific clinical questions to be addressed.
• To complete a concise consultation note with clear, detailed recommendations.
• To document completely and legibly the necessary information for daily progress (SOAP) notes, including an assessment of the patient's condition and response to therapy, and a plan for ongoing care.
• To ensure that all questions asked by the requesting physician/team have been satisfactorily answered.
• PGY-2/3 To communicate effectively with other members of the health care team to ensure that the plan of care is understood.
• PGY-2/3 To obtain the skills necessary to present topics informally and formally to a group.

Professionalism

• To be professional in all interactions with patients, families, colleagues and all members of the health care team.
• To demonstrate caring and respectful behaviors toward patients, families, colleagues and other members of the health care team.
• To maintain a professional appearance at all times.
• To be punctual for rounds, scheduled meetings and conferences, and to fulfill consult requests in a timely fashion.
• To demonstrate a commitment to excellence and to ethical principles of care.
• To ensure patient understanding of their endocrine diseases/diabetes and consent to treatment plans.
• To maintain confidentiality of patient information.
• To demonstrate respect for alternative, but appropriate treatment plans recommended by one's resident and faculty colleagues.
• PGY-2/3 To role model professional behaviors and to facilitate professionalism among students and interns.

Systems-Based Practice

• To demonstrate awareness of interdependencies in the health care system that affect quality of care.
• To work with interdisciplinary teams to improve patient care.
• To assist the requesting service in the coordination of their patient's care.
• To assist with scheduling of any tests, treatments or physician appointments to ensure that effective, continuous medical care is accomplished.
• To use evidence-based, cost conscious strategies in the medical care of patients.
• To advocate for high quality patient care.
Knowledge to be assessed

Residents should develop knowledge and understanding of a variety of endocrine conditions (pathophysiology, clinical features, diagnosis, and treatment) including but not necessarily limited to the following endocrinology problems:

<table>
<thead>
<tr>
<th>1. Diabetes Mellitus</th>
<th>4. Pituitary</th>
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<tbody>
<tr>
<td>a. diagnosis</td>
<td>a. hyperfunction-acromegaly, hyperprolactinemia</td>
</tr>
<tr>
<td>b. types:</td>
<td>b. hypofunction-panhypopituitarism</td>
</tr>
<tr>
<td>c. RX</td>
<td>c. nodules</td>
</tr>
<tr>
<td>d. etiology and risk factors</td>
<td>5. Reproductive</td>
</tr>
<tr>
<td>e. complications acute-hypoglycemic, DKA, hyperosmolar/non kenotic hyperglycemia</td>
<td>a. Hypogonadism -male and female</td>
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<td>f. complications chronic-retinopathy, nephropathy, neuropathy, atherosclerotic related complications</td>
<td>b. Hirsutism</td>
</tr>
<tr>
<td>2. Thyroid</td>
<td>c. Menstrual Disorders</td>
</tr>
<tr>
<td>a. hyperthyroidism, Grave’s disease and toxic nodular goiter</td>
<td>d. Galactorrhea</td>
</tr>
<tr>
<td>b. hypothyroidism, 1º and 2º</td>
<td>6. Parathyroid</td>
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<tr>
<td>c. thyroid nodules and cancer</td>
<td>a. hyperparathyroidism</td>
</tr>
<tr>
<td>3. Adrenal</td>
<td>b. hyperparathyroidism</td>
</tr>
<tr>
<td>a. Cushing’s disease and syndrome</td>
<td>7. Bone</td>
</tr>
<tr>
<td>b. adrenal insufficiency, Addison, 1º and 2º</td>
<td>a. osteoporosis and Osteopenia</td>
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<tr>
<td>c. adrenal nodules</td>
<td>c. Paget’s Disease</td>
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<td>d. pheochromocytoma and hyperaldosteronism</td>
<td>8. Obesity</td>
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Methods of achieving objectives

- Direct patient care under the supervision of the Attending Endocrinologist (Endocrinology/Diabetes Clinic and consult rounds).
- Didactic (teaching) sessions with the Attending Endocrinologist.
- Core Noon Conference series
- Self study using any one of several recommended basic (reference) textbooks
- Selected handouts and journal articles on pertinent topics (provided by Endocrinology Attending).
- OU-Tulsa library electronic databases and computerized resources

Assessment tools

- The supervising endocrinology attending will evaluate each resident’s history and physical examination of patients daily.
- The endocrinology attending will monitor all aspects of Resident's performance in Endocrinology/Diabetes Clinic.
- The supervising endocrinology attending will review and critique resident clinic/consult notes daily.
- The supervising endocrinology attending will critique each resident’s assessment and plan pertaining to the endocrine problem being addressed.
The endocrinology attending will assess and monitor each resident’s skill in the interpretation of lab results and other diagnostic data.

The supervising endocrinology attending will monitor each resident’s interaction with patients and other health care team members.

The supervising endocrinology attending will assess and monitor each resident’s self-directed learning efforts.

The supervising endocrinology attending will assess resident fulfillment of the objectives detailed above.

**Evaluation process**

- Faculty and resident will review the goals and objectives at the beginning of the rotation. Each resident will sign an attestation statement verifying review of the goals and objectives.
- The supervising endocrinology attending will provide verbal feedback throughout and at the completion of the rotation.
- The supervising endocrinology attending will complete a formal evaluation through MyEvaluations.com at the conclusion of the rotation.
- Each resident will acknowledge review of their final evaluation through MyEvaluations.com.

**Teaching Faculty**

David Harris, M.D.

This document was reviewed by the faculty of the Department of Medicine OUCMT 9/06 who approve and support the contents.