UPDATED: July 2015

ROTATION: ENDOCRINE SURGERY

ROTATION DIRECTOR: Michael Yeh, MD

CHIEF OF ENDOCRINE SURGERY: Michael Yeh, MD

SITES: RRUMC

GOALS AND OBJECTIVES:

Gain exposure in the care and management of patients with benign and malignant thyroid disorders, parathyroid disorders, adrenal disorders, and familial endocrinopathies.

LEVEL OF TRAINEE: R1

DESCRIPTION OF THE ROTATION:

The Endocrine Surgery for PGY1 is a 4 week rotation.

1. The surgery residents will provide inpatient care including routine admissions and critical care of the endocrine surgery patients.

2. Residents will participate in surgical operations needed on these patients under direct supervision of the surgical faculty.

3. Residents will participate in all Department of Surgery educational conferences and didactic presentations.

4. Residents are expected to actively participate at the monthly Endocrine Pathology Conference and bimonthly Endocrine Tumor Board.

ASSESSMENT:

Monitoring of the accomplishment of the stated objectives will be performed using the following methods:

1. Global Rating: end of rotation evaluation of resident performance to assess the resident’s demonstration of Core Competencies with respect to the stated objectives by faculty, other team resident members, students, and nursing staff.

2. Case Logs: auditing of operative cases pertinent to the specialty in the Surgical Operative Log.

3. Written Examination: performance on the annual ABSITE examination, Endocrine (Patient Care Category) section.
4. Patient Survey: performance will be assessed by patient surveys administered though the rotation.

5. For additional information please refer to the Resident Milestones document on the UCLA Surgical Education website:

<table>
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<tr>
<th>ACGME Competency</th>
<th>Developmental Milestones Informing ACGME Competencies</th>
<th>Time Frame</th>
<th>Assessment Methods/Tools</th>
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<tr>
<td><strong>Patient Care</strong></td>
<td>1. Perform a complete and thorough history and physical examination, with emphasis in elements unique to endocrine surgery patients. 2. Initiate the laboratory evaluation and any other initial diagnostic studies with an understanding of the tests to be ordered. 3. Become familiar with the preoperative preparation of the patients for Endocrine surgery and routine postoperative care. 4. Understand the basic indications for common radiological and interventional studies used in the care of Endocrine surgery patients such as ultrasound, CT scans, and functional imaging (e.g. sestamibi, MIBG, and F-dopa scans). 5. Understand basic pathophysiology of endocrine disorders and begin to master the skills necessary to care for the endocrine surgery patient under the guidance of the senior residents and faculty members. 6. Assist in the operating room in Endocrine surgery patients.</td>
<td>4 weeks</td>
<td>Global Rating Case Logs Written Examinations Patient Survey Feedback from faculty/attending physicians at rounds and OR</td>
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<td><strong>Medical Knowledge</strong></td>
<td><strong>Thyroid disorders:</strong> 1. Describe normal thyroid anatomy, embryogenesis, and anatomic variants. 2. Outline the normal thyroid hormone synthetic pathway and the impact of specific medications that regulate thyroid hormone metabolism. 3. Outline appropriate thyroid function testing for hyperthyroidism, hypothyroidism, thyroid nodule, and goiter. 4. Develop an algorithm that includes pertinent history, examination findings, and diagnostic evaluation of a palpable thyroid nodule and a non-palpable thyroid nodule discovered incidentally on imaging. 5. Describe the recognition, evaluation, and management of the following early postoperative complications: hematoma, hypocalcemia. 6. Describe the outpatient management of the following postoperative conditions: thyroid hormone replacement, hypocalcemia, voice changes. <strong>Parathyroid disorders:</strong> 1. Describe normal parathyroid anatomy, embryogenesis, and anatomic variants (including ectopic parathyroid glands). 2. Outline the normal calcium metabolic pathway and the impact of specific medications that regulate calcium metabolism. 3. Outline the evaluation and treatment of life-threatening hypercalcemia. 4. Outline the appropriate evaluation and management for the following: primary, secondary, and tertiary hyperparathyroidism; hypercalcemia associated with malignancy; hypercalcemia associated with medications. 5. Develop an algorithm that includes pertinent history, examination findings, and initial diagnostic evaluation of asymptomatic and symptomatic primary hyperparathyroidism. 6. Describe the recognition, evaluation, and management of the following postoperative complications: hematoma, hypocalcemia, and voice changes. <strong>Adrenal disorders:</strong> 1. Describe normal adrenal anatomy, embryogenesis, and anatomic variants.</td>
<td>4 weeks</td>
<td>Global Rating Written Examinations Completion of rotation specific SCORE assignments Feedback from faculty/attending physicians at rounds and OR</td>
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2. Outline the biosynthesis and physiologic effects of glucocorticoids, mineralocorticoids, adrenal sex steroids, and catecholamines.
3. Identify the etiologies, common signs and symptoms, clinical presentations, and diagnostic evaluation of Cushing’s syndrome.
4. Describe the protocol for perioperative steroid use in a patient taking exogenous steroids.
5. Outline the etiologies, clinical presentation, evaluation and management of adrenal insufficiency.
6. Identify complications of adrenalectomy, including adrenal insufficiency and the diagnosis, treatment, and causes.
7. Describe the signs, symptoms, and evaluation of primary hyperaldosteronism.
8. Differentiate between primary and secondary hyperaldosteronism.
9. Describe the general attributes of adrenocortical carcinoma.
10. Describe the physiology, clinical presentation, treatment, and preoperative preparation of pheochromocytoma.
11. Perform a thorough physical examination and be familiar with signs of hormone excess. (hirsutism, striae, acne, facial changes, clitoral hypertrophy, etc).

**Familial endocrinopathies:**
Describe the mode of inheritance, components, diagnostic approach, treatment, and prognosis of the following familial disorders:
1. MEN 1, 2A, and 2B
2. Familiar medullary thyroid cancer
3. Familiar papillary thyroid cancer
4. Familiar non-MEN hyperparathyroidism

Complete all relevant modules of the SCORE curriculum: https://portal.surgicalcore.org/home

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<tr>
<th>Practice Based Learning</th>
<th>1. Develop a personal program of self-study and professional growth with guidance from the teaching staff, senior residents, and fellow. An understanding of the etiology, pathogenesis, pathophysiology, diagnosis and management of endocrine disorders will allow for sound surgical judgment, which relies on knowledge, rational thinking and the surgical literature.</th>
<th>4 weeks</th>
<th>Global Rating Written Examinations Patient Survey Feedback from faculty/attending physicians at rounds and OR</th>
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<td>2. Utilize current literature resources to obtain up-to-date information in the care of endocrine patients and practice evidence-based medicine.</td>
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<td>3. Participate in the educational pathology and tumor board conferences.</td>
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<td>4. Participate in activities of the Department of Surgery (including all teaching conferences) and assume responsibility for teaching and supervision of medical students.</td>
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<td>5. Participate in the Department Morbidity &amp; Mortality conference and utilize information to further improve patient care.</td>
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<td>6. Participate in daily teaching rounds and be able to present patients in an organized and complete fashion.</td>
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<th>Professionalism</th>
<th>1. Practice compassionate patient care maintaining the highest moral and ethical values with a professional attitude.</th>
<th>4 weeks</th>
<th>Global Rating Patient Survey Feedback from faculty/attending physicians/hospital staff/patients</th>
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<td>2. Demonstrate understanding of the needs and feelings of others, including the patient's family members, allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.</td>
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<td>3. Communicate and collaborate effectively in a team of health care providers.</td>
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<td>4. Demonstrate respect, compassion and integrity in the care of endocrine surgery patients on a daily basis.</td>
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<td>5. Demonstrate mature and educated approach to Ethical issues commonly encountered in an endocrine surgery care setting.</td>
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<td>6. Show sensitivity to patients’ culture, age, gender, and disabilities.</td>
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<td>7. Be self-aware and have knowledge of professional limits by practicing on-going medical education and self-improvement.</td>
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<td>8. Be accountable to professional standards in their actions and</td>
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Interpersonal Relationships And Communication

1. Create and sustain a therapeutic and ethically sound relationship with patients and patient families.
2. Work effectively with other members of the medical team including allied health care personnel (nurses, clerical staff, etc.), fellow residents, and medical students.
3. Maintain professional interactions with other health care providers and hospital staff.

Systems Based Practice

1. Understand how the health care organization affects surgical practice of endocrine surgery.
2. Demonstrate cost-effective health care.
3. Be able to coordinate multi-specialty and multidisciplinary endocrine surgery care including discharge planning, social service, rehabilitation, and long term care.
4. Follow established practices, procedures, and policies of the Department of Surgery and integrated and affiliated hospitals.
5. Maintain complete medical records, operative notes, staff sheets and notes, patient database cards and other patient care related documentation in a timely, accurate and succinct manner.

REFERENCES:

UCLA Section of Endocrine Surgery Reading Syllabus

**Thyroid Disorders**


6. Nixon IJ, Ganly I, Patel SG, Palmer FL, Di Lorenzo MM, Grewal RK, Larson SM, Tuttle RM, Shaha A, Shah JP. The results of selective use of radioactive iodine on survival and on recurrence in the management of papillary thyroid cancer, based on Memorial Sloan-


11. Randolph GW, Duh QY, Heller KS, LiVolsi VA, Mandel SJ, Steward DL, Tufano RP, Tuttle RM; American Thyroid Association Surgical Affairs Committee’s Taskforce on Thyroid Cancer Nodal Surgery. The prognostic significance of nodal metastases from papillary thyroid carcinoma can be stratified based on the size and number of metastatic lymph nodes, as well as the presence of extranodal extension. Thyroid. 2012 Nov;22(11):1144-52.

**Parathyroid Disorders**


Adrenal Disorders


**Familial Endocrinopathies**


**General Endocrine Surgery**