DoM | DEPARTMENT of MEDICINE
Improving Lives

DESCRIPTIONS FOR MED 3 ROTATIONS

Endocrinology A3S

A. Diabetes Mellitus

Diabetes is the commonest endocrine disorder. Diabetics represent up to 20% of the general hospital in-patient population. House staff should know:

- Definition/classification and basic pathophysiology of Type 1 and Type 2 diabetes mellitus (DM), and be able to differentiate between the two.
- The rationale behind intensive glycemic control in Type 1 DM, Diabetes Control and Complications Trial (DCCT) and the means by which this is achieved (multiple daily injections).
- The role of diet, oral hypoglycemics (OH) and insulin (e.g. different types of preparations, adjustment of insulin doses for in- and outpatients), in the management of Type 2 DM.
- The importance of preventative strategies in DM and the role of the multi-disciplinary team.
- The symptoms, signs, and management of common diabetic complications.
- The management of common diabetic emergencies (see below also):
    - Diabetic Ketoacidosis (DKA)
    - Hyperosmolar Non-Ketosis (HONK)
    - Hypoglycemia

Scenario: A 23 year old man with a 15 year history of Type 1 DM, poor glycemic control, elevated Hb A1C, and elevated blood pressure.

Endocrinology A3

B. CHD

CHD is the commonest cause of death in our population and hyperlipidemia is the most important factor in its etiology.

Trainees should understand the rationale underlying the management of cardiac risk.

Specifically they should be aware of lipid disorders within the context of:

- the major clinical trial evidence (4S, CARE, WOSCOPS) in support of lipid lowering
- national evidence-based guidelines for the management of dyslipidemia

Scenario: A 62-year old man who has elevated cholesterol and a history of an acute MI six months ago.

C. Thyroid Disorders

Thyroid disorders are common. Trainees should be familiar with the typical symptoms and signs of thyroid hyper- and hypofunction, and the management of these disorders. They should understand tests of thyroid function and factors that may affect these, as well as thyroid imaging techniques.

Trainees should also be familiar with the work-up for thyroid nodule(s), and the management of thyroid cancers.

Scenario: a 27-year old woman presents with palpitations, sore eyes and amennorhoea.

Endocrinology A3

D. Pituitary & Adrenal Disorders

These conditions, whilst rare, offer important diagnostic and management challenges. Pituitary tumors may present with features of hyperfunction (prolactinomas, Cushing's, acromegaly) or hypofunction.

Trainees should be familiar with the symptoms, signs and diagnostic work-up for each of these conditions, as well as the differential diagnosis of a pituitary mass. Specifically, they should understand the role of stimulation/suppression tests and the use of diagnostic imaging in assessment.

They should also understand the roles of medical treatment, surgery and radiotherapy in the management of these conditions. They should be familiar with the assessment and treatment of diabetes insipidus.

Scenario: A 53-year old man with headache, reduced libido and dizziness.

E. Adrenal

Adrenal hypersecretion may result in Cushing's syndrome or endocrine hypertension (Conn's syndrome, pheochromocytoma).

Adrenal hyposecretion (Addison's disease) is a rare and potentially fatal condition. Trainees should be familiar with the symptoms and signs, diagnostic work-up and management of this condition.

Scenario: A 29 year old woman with weight loss, fatigue and abdominal pain.

F. Endocrine Hypertension

Endocrine causes of hypertension are rare but important since they are potentially reversible. Trainees should be familiar with the symptoms and signs, and diagnostic work-up for Conn's syndrome and pheochromocytoma. This includes the role of urinary assays, diagnostic imaging and invasive assessment.

Scenario: A 37-year old woman presents with sweating episodes, headaches and hypertension refractory to treatment.

Endocrinology A3

G. Hypercalcemia

Hypercalcemia is a common biochemical finding. Trainees should be familiar with the symptoms and differential diagnosis (malignancy, hyperparathyroidism, and sarcoidosis) as well as the diagnostic work-up.

The acute management of severe hypercalcemia represents an endocrine emergency.

Scenario: *You are consulted to see a 72-year old man who is an in-patient with cancer of the bladder. He has symptoms of gastritis and his calcium is 3.37 mmol/L.*

H. Osteoporosis

Osteoporosis is a common cause of morbidity and mortality in the aged population. Trainees should be familiar with the diagnostic assessment and management of osteoporosis including the role of BMD determination, the indications and contraindications for HRT and the use of bisphosphonates.

Scenario*: You are asked to see a 67 year old woman who has recently undergone surgery to repair a fractured hip and was found on x-ray to be osetopenic.*

I. Obesity

Obesity, whilst common and serious in terms of its sequelae, is a poorly understood and poorly treated condition. Trainees should know about the epidemiology and medical consequences of weight excess and the significance of visceral versus generalized adiposity. Trainees should be familiar with the differential diagnosis and assessment of obesity and the available treatment modalities.

Scenario: *A 49 year old man presents with abdominal obesity with a BMI of 37, hypertension and recurrent boils.*

J. Hyperandrogenism

Hirsutism and anovulatory syndromes are common complaints usually attributable to polycystic ovarian syndrome (PCOS).

Endocrinology A3

Trainees should be familiar with the diagnostic work-up for hirsuties and anovulation (PCOS, and testosterone secreting tumors), and the management of these problems.

Scenario: *A 22 year old woman presents with excessive hair on her face (upper lip, chin, sideburns) and acne.*

K. Endocrine Emergencies

Trainees should be familiar with the principles of management of each of the following scenarios:

- Diabetic Ketoacidosis (DKA)
- Hyperosmolar Non-Ketosis (HONK)
- Hypoglycemia
- Thyroid storm
- Addisonian crisis
- Severe hypercalcemia/hypocalcemia
- Pheochromocytoma

L. Specific Skills

Trainees are expected to know the indications/interpretation of:

- Oral glucose tolerance test
- Intravenous insulin therapy
- Pituitary function tests
- Dexamethasone suppression tests
- ACTH stimulation test
- 24-hour urine collections for hormones/metabolites
- Screening for pheochromocytoma
- Screening for hyperaldosteronism

Approved by Department of Medicine Undergraduate Medical Education Committee
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