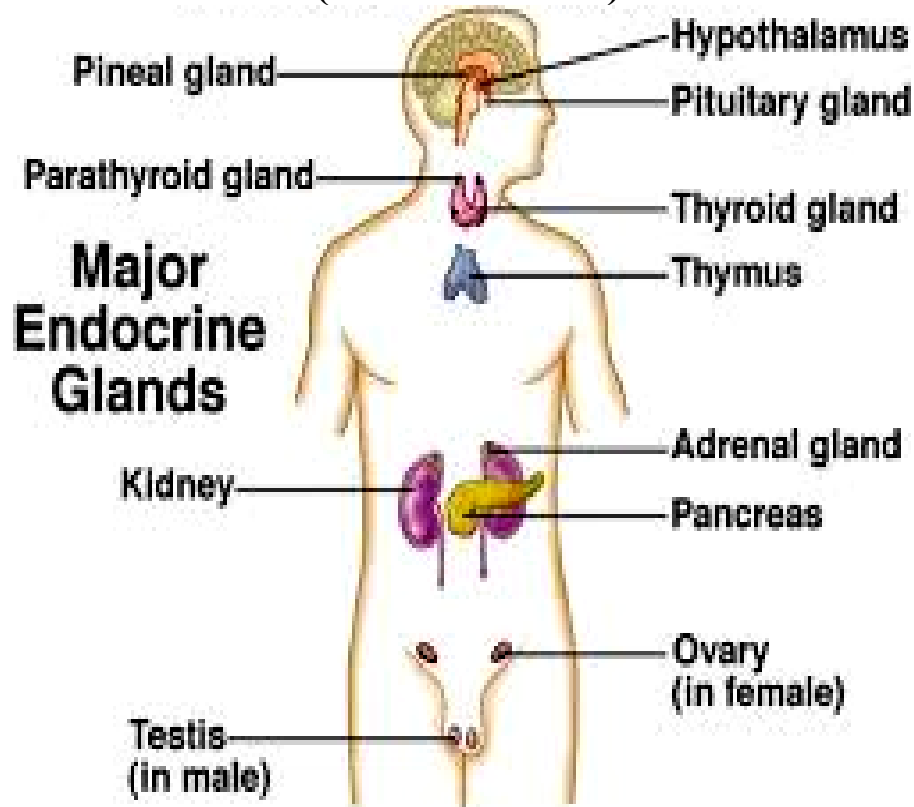


# AJK Medical College

## Muzaffarabad

### STUDY GUIDE

## Endocrine Module (0316) Module (5<sup>th</sup> Year MBBS)



**Module Duration:** 2 weeks

Starting From:

**Pre-Requisites:** FM, CVS-IV & RES-IV Modules

## Department of Medical Education

## Module Team

1- Dr. Abdul Khalid Awan	<b>Module planner</b>
2- Dr. Ziyad Afzal Kiayni	Member
3- Dr. Sarmad Lateef Awan	Member
4- Dr. Kh. Tahir Aziz	Member
5- Dr. Shafaq Hanif	Member

**BACKGROUND:** The Final year students are actively engaged in clinical clerkships. These students have frequent interaction with patients suffering from endocrine disorders. Most of our students have basic knowledge and skills in history taking and physical examination. Now they have opportunity to apply their knowledge and skills on real patients suffering from endocrine disorders.

### **RATIONALE:**

Based on their existing knowledge and skills this course will help final year students to build sound foundation of their knowledge and skills in the domain of internal medicine.

### **GOAL:**

To impart essential medical knowledge and skills for prevention and management of common medical conditions to reduce the burden of endocrine diseases and to improve the quality of health in the country.

### **Curricular Philosophy:**

The predominant curricular philosophy will be constructivist.

### **COMPETENCIES:**

The focus of this module will be on the following competencies of students.

Patient care

Medical knowledge

Communication skills

Professionalism

### **Targeted Skills**

Focused History taking in patients with endocrine disorders

General and focused systemic Physical Examination of patients with endocrine disorders

### **Outcomes:**

By the end of the course the participants will be proficient in the evaluation and management of common medical conditions in patients suffering from endocrine disorders.

### **Course structure:**

In this course maximum emphasis will be on history taking and physical examinations. The students will start with general aspects of history taking and will be provided opportunities to proceed with focused history taking of endocrine system. Simultaneously they will be practicing physical examination skills. A didactic session comprising of lectures will guide them and provide essential information about different important condition of endocrine system. The instructors will employ different modes of instruction, briefly described below. Major emphasis will be on discussion, analysis, history taking and performance of physical examinations and deductions to reach a provisional diagnosis. All students will have opportunity to work individually as well as in small groups and will be guided by the faculty.

There will be some flexibility in schedule depending upon the availability of a patient with the disease during ambulatory and bed side teaching.

### **Teaching Strategies/Methods:**

The content of this module will be delivered by a combination of different teaching strategies. These include LIGS, SGD, Bed side and ambulatory teaching. There will be CPCs as well in the departments in teaching hospitals and students presentations in grand rounds.

### **Assessment:**

In this 2 weeks course there will be surprise clinical tests.

A full-fledged summative assessment will be taken after two weeks at the end of the course. Marks obtained in these examinations will contribute 30% (internal assessment) towards end of year Professional University Examination.

Quality assurance of assessment will be ensured by taking essential measures before, during and after assessment. The important measures will be blueprinting, standard setting, editing of MCQs, post-hoc analysis and conducting exams strictly according to the institution policy.

**Table of Specifications**

Sr. No	Theme	Percentage
1	Hypopituitarism	5
2	Diabetes insipidus	5
3	Acromegaly and Gigantism	5
4	Hypothyroidism and Myxedema	10
5	Hypoparathyroidism	5
6	Thyroid nodules and MNG	5
7	Thyroid neoplasia	5
8	Parathyroids and hypo parathyroidism	5
9	Hyperparathyroidism	5
10	Osteoporosis	5
11	Osteomalacia	5
12	Addison disease	5
13	Cushing's syndrome	5
14	Pheochromocytoma	5
15	Primary and secondary amenorrhea	10
16	Diabetes Mellitus	10
17	Hirsutism	5

**Assessment:**

There will be written assessment and OSCE for this module.

The written assessment will comprise of 50 MCQs and 10 EMQs.

The distribution of these written assessment tools will be according to the TOS.

There will be 14 OSCE stations for the assessment of psychomotor skills.

**LOs for Endocrine Module**

**By the end of this module students will be able to:**

**1- Anterior Hypopituitarism**

**Cognitive**

- 1- List deficiency of hormones due to dysfunction of anterior pituitary gland.
- 2- List causes of anterior pituitary and hypothalamic dysfunction.
- 3- Describe signs and symptoms of Gonadotropin deficiency
- 4- Describe signs and symptoms of TSH deficiency
- 5- Describe signs and symptoms ACTH deficiency
- 6- Describe signs and symptoms Growth Hormone deficiency
- 7- Describe signs and symptoms Combined pituitary hormone deficiency and panhypopituitarism.
- 8- Discuss laboratory findings in hypopituitarism
- 9- Discuss differential diagnosis of hypopituitarism
- 10- Discuss complications of hypopituitarism
- 11- Discuss treatment and hormone replacement therapies in hypopituitarism

**Psychomotor**

- 1- Take focused history of patient suffering from hypopituitarism
- 2- Perform physical examination of patient with hypopituitarism
- 3- Prepare plan of investigations for a patient with hypopituitarism

**Affective**

- 1- Demonstrate politeness while communicating with patient.
- 2- Respond to patient queries in a gentle manner.

**2- Diabetes Insipidus**

**Cognitive**

- 1- List 2 essential features for diagnosis of diabetes insipidus.
- 2- Describe symptoms and signs of diabetes insipidus.
- 3- Discuss laboratory findings in diabetes insipidus.
- 4- Discuss laboratory findings in diabetes insipidus.
- 5- Discuss differential diagnosis of diabetes insipidus
- 6- List complications of diabetes insipidus

- 7- Discuss treatment of diabetes insipidus.

**Psychomotor**

- 1- Collect 24-Hour urine sample from a patient with polyuria.

**Affective**

- 1- Demonstrate politeness while communicating with patients.
- 2- Respond to patient queries in a gentle manner.

**3- Acromegaly & Gigantism**

**Cognitive**

- 1- List 5 essential features for diagnosis of Acromegaly & Gigantism.
- 2- Describe symptoms and signs of Acromegaly & Gigantism.
- 3- Discuss laboratory findings in Acromegaly & Gigantism.
- 4- Discuss laboratory findings in Acromegaly & Gigantism.
- 5- Discuss differential diagnosis of Acromegaly & Gigantism.
- 6- List complications of Acromegaly & Gigantism
- 7- Discuss treatment medical, surgical and radiation modalities of treatment in Acromegaly & Gigantism.
- 8- Explain prognosis of Acromegaly & Gigantism.

**Psychomotor**

- 1- Take focused history of patient suffering from Acromegaly & Gigantism
- 2- Perform physical examination of patient with Acromegaly & Gigantism

**Affective**

- 1- Demonstrate sympathy with patient while explaining prognosis and different modalities of treatment in Acromegaly & Gigantism

**4-Hypothyroidism & Myxedema**

**Cognitive**

- 1- List essentials of diagnosis of Hypothyroidism & Myxedema
- 2- List causes of Hypothyroidism & Myxedema
- 3- Describe symptoms and signs of Hypothyroidism & Myxedema
- 4- Discuss laboratory findings in Hypothyroidism & Myxedema.
- 5- Discuss differential diagnosis of Hypothyroidism & Myxedema.
- 6- Discuss complications of Hypothyroidism & Myxedema.
- 7- Discuss treatment of Hypothyroidism & Myxedema.
- 8- Explain how to monitor treatment of Hypothyroidism & Myxedema.
- 9- Describe prognosis of Hypothyroidism & Myxedema

**Psychomotor**

- 1- Take focused history of patient suffering from Hypothyroidism & Myxedema.
- 2- Perform physical examination of patient with Hypothyroidism & Myxedema

**Affective**

- 1- Demonstrate sympathy with patient while counseling in cases of Hypothyroidism & Myxedema.

**5- Hyperthyroidism (Thyrotoxicosis)**

**Cognitive**

- 1- List essentials of diagnosis of Hyperthyroidism.
- 2- Describe causes of Hyperthyroidism
- 3- Describe symptoms and signs of Hyperthyroidism
- 4- Discuss cardiopulmonary manifestations of Hyperthyroidism.
- 5- Describe Graves eye manifestations
- 6- Discuss Graves's dermopathy.
- 7- Discuss laboratory findings in Hyperthyroidism.
- 8- Discuss role of imaging in diagnosis of Hyperthyroidism
- 9- Discuss differential diagnosis of Hyperthyroidism.
- 10- Discuss complications of Hyperthyroidism.
- 11- Discuss treatment of Hyperthyroidism.
- 12- Discuss management of Hyperthyroidism in pregnancy and lactation.
- 13- Discuss treatment of complications of Hyperthyroidism
- 14- Discuss prognosis of Hyperthyroidism

**Psychomotor**

- 1- Take focused history of patient suffering from Hyperthyroidism.

- 2- Perform physical examination of patient with Hyperthyroidism

#### **Affective**

- 1- Demonstrate sympathy with patient while explaining prognosis and different modalities of treatment in patients with Hyperthyroidism

#### **6- Thyroid Nodules & Multinodular Goiter**

##### **Cognitive**

- 1- List essentials of diagnosis of Multinodular Goiter.
- 2- Describe causes of Multinodular Goiter
- 3- Describe symptoms and signs of Multinodular Goiter
- 4- Enumerate the steps involved in the evaluation of thyroid disorders.
- 5- Discuss role of FNAC in diagnosis of Multinodular Goiter
- 6- Draw a flow chat to show the plane for the diagnosis and management of thyroid nodule.
- 7- Discuss different modalities of treatment in MNG.
- 8- Enlist the post operative complications and their management after thyroidectomy.
- 9- Discuss prognosis of MNG

#### **7-Thyroid Cancer**

- 1- List essential of diagnosis of thyroid cancer.
- 2- Describe different types of thyroid neoplasms.
- 3- Describe common symptoms of different types of thyroid neoplasms.
- 4- Discuss laboratory in different types of thyroid cancer.
- 5- Explain role of imaging in different types of thyroid neoplasms.
- 6- Discuss differential diagnosis of thyroid neoplasms.
- 7- Discuss surgical treatment of thyroid cancer.
- 8- Discuss role of thyroxin suppression and chemotherapy in thyroid cancer.
- 9- Discuss role of I<sup>131</sup> ablation therapy in thyroid cancer.
- 10- Discuss treatment and prognosis of different types of thyroid cancer.

##### **Psychomotor**

- 1- Take focused history of patient suffering from thyroid cancer.
- 2- Perform physical examination of patient with thyroid cancer.
- 3- Observe thyroid ultrasound.
- 4- Observe and assist FNAC of thyroid

##### **Affective**

- 1- Demonstrate sympathy with patient of thyroid cancer while counseling.

#### **8-Diseases of the Parathyroids**

##### **a-Hypoparathyroidism & Pseudohypoparathyroidism**

##### **Cognitive**

- 1- List essentials of diagnosis for Hypoparathyroidism & Pseudohypoparathyroidism
- 2- Describe different etiologies of Hypoparathyroidism & Pseudohypoparathyroidism
- 3- List common symptoms of Hypoparathyroidism & Pseudohypoparathyroidism
- 4- Discuss laboratory findings in Hypoparathyroidism & Pseudohypoparathyroidism
- 5- Discuss differential diagnosis Hypoparathyroidism & Pseudohypoparathyroidism
- 6- Discuss treatment of Hypoparathyroidism & Pseudohypoparathyroidism

##### **Psychomotor**

- 1- Take focused history of patient suffering from Hypoparathyroidism & Pseudohypoparathyroidism
- 2- Perform physical examination suffering from Hypoparathyroidism & Pseudohypoparathyroidism

##### **Affective**

- 1- Take consent for per rectal examination
- 2- Demonstrate respect while performing examination of patient with tetany.

##### **b- Hyperparathyroidism**

##### **Cognitive**

1. List essentials of diagnosis for Hyperparathyroidism
2. Describe different etiologies of Hyperparathyroidism
3. List common symptoms of Hyperparathyroidism
4. Discuss laboratory findings in Hyperparathyroidism
5. Discuss role of imaging in diagnosis of Hyperparathyroidism

6. Discuss differential diagnosis Hyperparathyroidism
7. Discuss treatment of asymptomatic primary Hyperparathyroidism
8. Discuss surgical treatment of Hyperparathyroidism
9. Discuss medical measures in treatment of Hyperparathyroidism
10. Discuss prognosis of Hyperparathyroidism

**Psychomotor**

- I. Take focused history of patient suffering from Hyperparathyroidism
- II. Perform physical examination suffering from Hyperparathyroidism

**Affective**

- 1- Demonstrate respect while performing examination of patient with Hyperparathyroidism.

**9-Osteoporosis**

**Cognitive**

11. List essentials of diagnosis for osteoporosis
12. Describe different etiologies of osteoporosis
13. List common sign and symptoms of osteoporosis
14. Discuss laboratory findings in Hyperparathyroidism
15. Describe role of bone densitometry in diagnosis of osteoporosis
16. Discuss differential diagnosis Hyperparathyroidism
17. Discuss general measures for treatment of osteoporosis
18. Describe medical treatment of osteoporosis
19. Discuss role of bi-phosphonates in treatment of osteoporosis.

**Psychomotor**

1. Take focused history of patient suffering from osteoporosis
2. Perform physical examination suffering from osteoporosis

**Affective**

- 2- Demonstrate respect while performing examination of patient with osteoporosis

**10-Osteomalacia**

**Cognitive**

20. List essentials of diagnosis for Osteomalacia
21. Describe different etiologies of Osteomalacia
22. Describe common clinical features of Osteomalacia
23. Discuss diagnostic tests in Osteomalacia
24. Discuss differential diagnosis Osteomalacia
25. Describe prevention and medical treatment of Osteomalacia

**Psychomotor**

3. Take focused history of patient suffering from Osteomalacia
4. Perform physical examination suffering from Osteomalacia

**Affective**

- 3- Demonstrate respect while performing examination of patient with Osteomalacia

**11-Chronic Adrenocortical Insufficiency (Addison Disease)**

**Cognitive**

- 1- List essentials of diagnosis for Addison Disease
- 2- Describe different etiologies of Addison Disease
- 3- Describe common clinical features of Addison Disease
- 4- Discuss laboratory findings in Addison Disease
- 5- Discuss differential diagnosis of Addison Disease
- 6- Describe treatment of Addison Disease

**Psychomotor**

- 1- Take focused history of patient suffering from Addison Disease
- 2- Perform physical examination suffering from Addison Disease

**Affective**

- 1- Demonstrate respect while performing examination of patient with Addison Disease

**12-Cushing Syndrome (Hypercortisolism)**

**Cognitive**

- 1- List essentials of diagnosis for Cushing Syndrome

- 2- Describe different etiologies of Cushing Syndrome
- 3- Describe common clinical features of Cushing Syndrome
- 4- Discuss laboratory findings in Cushing Syndrome
- 5- Describe different techniques to localize the lesions in Cushing Syndrome
- 6- Discuss differential diagnosis of Addison Disease
- 7- Describe treatment of Addison Disease
- 8- Discuss prognosis of Cushing Syndrome

**Psychomotor**

- 1- Take focused history of patient suffering from Cushing Syndrome
- 2- Perform physical examination suffering from Cushing Syndrome

**Affective**

- 1- Demonstrate respect while performing examination of patient with Cushing Syndrome

**13-Pheochromocytoma**

**Cognitive**

- 1- List essentials of diagnosis for Pheochromocytoma
- 2- Describe common clinical manifestations of Pheochromocytoma
- 3- Discuss laboratory findings in Pheochromocytoma
- 4- Discuss differential diagnosis of Pheochromocytoma
- 5- Describe medical treatment of Pheochromocytoma
- 6- Discuss surgical treatment of Pheochromocytoma

**Psychomotor**

- 3- Take focused history of patient suffering from HTN
- 4- Perform physical examination suffering from HTN

**Affective**

- 1-Demonstrate respect while performing examination of patient with HTN

**14-Primary and secondary Amenorrhea**

**Cognitive**

- 1- Describe etiology of primary amenorrhea
- 2- Describe symptoms and signs of primary amenorrhea
- 3- Discuss laboratory and radiological findings in primary amenorrhea
- 4- Describe treatment of primary amenorrhea
- 5- Describe etiology of secondary amenorrhea
- 6- Describe symptoms and signs of secondary amenorrhea
- 7- Discuss laboratory and radiological findings in secondary amenorrhea
- 8- Describe treatment of secondary amenorrhea
- 9- Discuss hormone replacement therapy (HRT) in post menopausal women.

**Psychomotor**

- 1- Take focused history from post menopausal women.
- 2- Perform physical examination of a post menopausal woman.

**Affective**

- 1-Demonstrate respect while counseling post menopausal women.

**15-Breast and Nipple discharge**

- 1- Describe different types of nipple discharges and their management
- 2- List differential diagnoses of Breast lump.
- 3- Describe management of Breast lump

**Cognitive**

- 1- List essentials of diagnosis for Hirsutism & Virilization
- 2- Describe etiology of Hirsutism & Virilization
- 3- Describe symptoms and signs of Hirsutism
- 4- Discuss laboratory and imaging findings in Hirsutism & Virilization
- 5- Describe treatment of Hirsutism & Virilization

**Psychomotor**

- 6- Take focused history from a patient with Hirsutism & Virilization.
- 7- Perform physical examination of a patient Hirsutism & Virilization.

**Affective**

1-Demonstrate respect while counseling with Hirsutism & Virilization.

## **16-Diabetes Mellitus**

### **Cognitive**

- 1- List essentials of diagnosis for Diabetes Mellitus
- 2- Describe classification Diabetes Mellitus
- 3- Describe pathogenesis of Type-1 Diabetes Mellitus
- 4- Describe pathogenesis of Type-2 Diabetes Mellitus
- 5- Describe other specific types of Diabetes Mellitus
- 6- Describe symptoms and signs of Diabetes Mellitus
- 7- Discuss laboratory findings in Diabetes Mellitus
- 8- Describe different treatment regimens of Diabetes Mellitus
- 9- Describe dietary management in Diabetes Mellitus
- 10- Describe different treatment options for management of Diabetes Mellitus
- 11- Discuss different types of insulin and use in treatment of Diabetes Mellitus
- 12- Discuss complications of insulin therapy.
- 13- List chronic complications of Diabetes Mellitus
- 14- Describe ocular complications of Diabetes Mellitus
- 15- Discuss different types of neuropathies in Diabetes Mellitus.
- 16- Describe cardiovascular complications of Diabetes Mellitus
- 17- Discuss management of diabetes in pregnancy.
- 18- Discuss management of diabetes during surgery.
- 19- Discuss clinical features of diabetic ketoacidosis
- 20- Describe laboratory findings in ketoacidosis
- 21- Discuss management of ketoacidosis
- 22- Discuss clinical features of hyperglycemic hyperosmolar coma
- 23- Describe laboratory findings in hyperglycemic hyperosmolar coma
- 24- Discuss management of hyperglycemic hyperosmolar coma

### **Psychomotor**

- 1- Take focused history of a patient suffering from diabetes mellitus.
- 2- Perform physical examination of patient suffering from diabetes mellitus.
- 3- Perform funduscopy of a patient with diabetic retinopathy

### **Affective**

- 1-Demonstrate respect while counseling patients patient suffering from diabetes mellitus.



**Schedule week-1**

Date and day →					
Time ↓					
8-8.40 am	<p align="center"><b><u>LGIS</u></b></p> <p>Hypopituitarism</p> <p>Dr. Javad Rathore</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Acromegaly and Gigatism</p> <p>Army doc</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Hypothyroidism and Myxedema</p> <p>Dr. Khalid</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Thyroid nodules and MNG</p> <p>Prof Adnan</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Hyperparathyroidism</p> <p>Dr.Sarmad</p>
8.45-9.25 am	<p align="center"><b><u>LGIS</u></b></p> <p>Diabetes insipidus</p> <p>Dr. Mateen</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Hypoparathyroidism</p> <p>Dr.Tahir</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Thyrotoxicosis</p> <p>Dr.Ali Arshad</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Thyroid neoplasms</p> <p>Dr.Ziyad</p>	<p align="center"><b><u>LGIS</u></b></p> <p>Osteoprosis</p> <p>Dr.Shaukat Hayat</p>
<b>Clinical rotations</b>					

## Schedule Week-2

Date and day					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
8-9 am	<b>LGIS</b> Osteomalacia Dr.Mateen	<b>LGIS</b> Cushing's syndrome Dr.Naeem	<b>LGIS</b> Nipple Discharge Dr.Farzana	<b>LGIS</b> DM Classification and diagnosis Dr. Bashir Tarunbu	<b>LGIS</b> DM Complications Dr.Ashfaq
9-30-10-30 am	<b>LGIS</b> Addison disease  Dr.Imtiaz	<b>LGIS</b> Pheochromocytoma Army sur	<b>LGIS</b> Lump breast Dr.Naheed	<b>LGIS</b> DM Management Dr.Rubina	<b>LGIS</b> Updates and Diabetes Dr.Marium
<b>Clinical rotations</b>					
12.30-2.00pm					



Inquires & trouble shooting

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