Department of Medicine

Abbottabad International Medical College. Abbottabad. Pakistan

Karakoram Highway, Abbottabad

Faculty, Curriculum and Study guide

FACULTY: Medicine and Allied Specialties

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Department of Medicine, AIMC: Introduction

Departments of medicine are the biggest departments in virtually every medical college. They are indeed the "linchpins" of the institution.

DESCRIPTION: Department of medicine incorporates the core discipline of internal medicine, the major specialties (Psychiatry, Dermatology and now Cardiology, Pulmonology, Nephrology and Gastroenterology) and subspecialties. In bigger institutions, the specialties are departments in their own right leaving the department of medicine only as an administrative unit.

HISTORY OF DEPARTMENT OF MEDICINE, AIMC. AIMC was established in 2008 with a skeleton staff, an inadequate building and a remote ill equipped hospital. The same could be said of the medical department. It started under the able leadership of Prof. Khurshid (Retd. HOD Ayub medical College) His efforts however were restrained by the unavailability of a hospital for clinical teaching. The hospital was at Haripur and clinical teaching had to be delegated to less enthusiastic District Specialists. This arrangement did not meet expectations.

Now, we are lucky to have a brand new modern and well equipped teaching hospital next to the college. It boasts all the facilities a modern teaching hospital should have. The faculty (in medicine) has swelled up to beyond PMDC requirements with many subspecialties and is still growing.

MISSION: Ours is simply *"to impart the best training in available resources, to encourage honesty, punctuality and dedication to the art of Medicine".* More importantly *to encourage students to "take every patient as a first degree relative"* The ultimate objective is training of students and junior doctors to meet and indeed exceed the prevailing standards of national institutes of excellence.

CHALLENGES:

Specialties vs. Gen Med. A patient with life threatening arrhythmia and unstable diabetes in a cardiology ward may be better co-managed by a cardiologist and an internist. Many patients require treatment by a *team* of physicians of different specialties (e.g., pulmonologist, medical oncologist, a chest physician and a radiation therapist for a patient with lung cancer). The general feeling developing is that we need to keep things together; internal medicine being the binding force. A subspecialty head may ask is if he would be better off on his own? "We must all hang together, or certainly we shall all be hanged separately." This said, problems arise each specialty demanding space and funds.

Size of the department. What is the right size for the department? To determine how many divisions a department of medicine will have, the department will decide when to create a new division, when to consolidate existing divisions, and when to bud off a division to create another department, are all problems with no easy solutions. Competing interests make decisions more difficult and unpopular

Research. We frequently joke 'let the west do research and us reap the benefit" Nothing can be far from reality. Research is food for the brain. It promotes "out of the box" thinking and gets one out of the rut. Though its importance is undisputed, in the backdrop of economic hardships getting funds for research is a tall order. Nevertheless it is something we all should passionately strive for.

Continuing Medical Education for teachers. This is a much neglected area. Many of us last studied for our specialist exams. Since then the knowledge is inadequately refreshed by teaching students/postgraduates. A proper system is not in place and it all depends on our personal appetite for improvement. A serious effort is needed in this respect.

Developing teaching and clinical management protocols. Individuals bring their own breath of fresh air to a professional group. However too much diversity in approach is confusing for students and the junior doctors. The department needs to develop its own teaching and clinical management guidelines through thorough discussions and research. These obviously would be according to locally available facilities.

CHAIRS RESPONSIBILITY

The overall responsibilities of the chair are to assure that the department has the best possible faculty and trainees (who will produce quality research, education, and service), that the department has adequate resources and that they are used well, and that the department relates effectively to other stakeholders. My ideal would be the Warren Buffet style of "servant leadership". Put plainly, this is to help every individual, finding what they do best and how can they improve further without too much interference in their work.

Lastly, the economic factors: Institutions discreetly steer towards profitability with the core objective of education gently eased into the back seat. The departmental leadership should help the managers strike a fair balance between the two

M. Javed. MRCP FRCPI FRCP
Professor of Medicine
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Research

1. Correlation between glycosylated Hb and hypertriglyceridemia in diabetic patients
2. Emerging patterns of antibiotic resistance in patients with Urinary tract infections
3. Correlation between plasma D-dimer levels and lesion volume in acute ischemic stroke (submitted to JAMC)

Syllabus (and curriculum) in Medicine

*"**Syllabus** implies the subjects & the topics covered; **curriculum** is a broader term and **i**mplies the chapters and academic content indicating the knowledge, skills and competencies students should learn during study"*

3rd year MBBS

HOURS IN GENERAL MEDICINE & ALLIED
In time table 99 hours
1 lecture per week X 33 = 33 hours
2 Clinical sessions per week (4 X 33) divided by 2 = 66 hours
Total 33 + 66 = 99 hrs
PMDC Requirement: 100 hours

SYLLABUS 3rd year MBBS

Class lectures and ward teaching

Class lectures are designed to introduce the students to the common symptoms (themes) in medicine, and starting from the basics (anatomy and physiology), work them up through pathology to the final clinical manifestations of disease. For example in a patient presenting with cough, the systems most likely to be involved and the clinical illnesses that can cause cough. Discussing the differential diagnoses possible on the basis of history and a focused clinical examination.

Class lectures

TOPICS FOR 3rd YEAR MBBS CLASS LECTURES

General

1. PUO: definition, approach to patient. Differential diagnosis and investigations. Managing this patient
2. Approach to a patient with fever with rash
3. Identifying the cause in a patient with generalized edema. Clinical examination and investigations
4. Medical causes of generalized pruritus. Dermatological manifestations of systemic disease
5. A 50 year old male presenting with asthenia, weakness. Differential diagnosis and investigations
6. Causes of aches and pains in the elderly
7. Managing obesity

GI and abdomen

8. Differential diagnosis of Dysphagia. Investigations and management.
9. Common causes of nausea, vomiting & constipation
10. Diagnostic approach to a patient with upper abdominal pain
11. Differential diagnosis of a patient with Jaundice
12. Diagnosis and therapeutics in upper and lower GI bleed
13. Medical causes of Abdominal distension

Neurological

14. Differential diagnosis and investigation of Headaches
15. Difference between Vertigo & Dizziness.
16. Confusion & Coma
17. Paraparesis & Hemiparesis: Aetiology, investigations and management

Endocrine and metabolic

18. Polyuria polydipsia: differential diagnosis and investigations
19. Generalized aches and pains in a young female. Differential diagnoses, investigation and management
20. A patient with goiter; the clinical syndromes associated with an enlarged thyroid and how to investigate such a patient
21. Vit. Deficiency disorders. Rickets and Osteomalacia
22. Dyslipidemias. Clinical syndromes associated with hyperlipdemias. Investigation and management

Urogenital

23. Incontinence urine
24. Dysuria, hematuria
25. Impotence & sterility in male patients

Cardio-respiratory

26. Approach to a middle aged patient with Chest pain
27. Differential diagnosis of Cough in a 40 year old man
28. Emergency evaluation of a patient with acute Dyspnea
29. Diseases causing Hemoptysis
30. Differential diagnosis of a patient with generalized edema

Rheumatology and bone disease

31. A patient presenting with widespread joint pains
32. A patient with a swollen knee joint
33. A young female with severe myalgias
34. Gout and pseudogout
35. The role of corticosteroids and immunosuppressive therapy in connective tissue disorders

Ward Teaching

Teaching in small groups is gradually gaining favor compared to the didactic techniques of large class lectures. Students coming to the wards are received by the concerned teacher. The first few days are spent on instructions about history tasking and the technique of examination. Later they are encouraged to take their own histories and prepare the cases for discussion on ward rounds.

Besides, they are also encouraged to:

- Observe and (participate if possible) in the admission process
- Observe history taking by the house officers and medical officers
- Analyze symptoms and to arrive at differential diagnoses with a most likely diagnosis.
- Take histories independently and then present them to seniors
- Witness patient counseling sessions and observe making discharge slips
- Witness procedures like setting up an IV infusion, oxygen administration, NG tube insertion, insertion of a Foley's catheter etc. etc.
- Observe and discuss the prescription charts for the patients.

4th Year

HOURS IN GENERAL MEDICINE
3 lecture per week X 33 = 99 hours
3 morning clinical sessions per week (8 X 33) divided by 8 = 33 hours
4 (2 hourly) evening sessions X 4 weeks = 32
Total 99 + 33 + 32 = 131
Available hours in our time table = 164 hours
(Medical input in CPC 10 hours
PMDC Requirement: 150 hours

Class lectures

GI and Liver

1. Causes of epigastric pain with emphasis on peptic ulcer disease and its management
2. Diagnosis and therapeutics in upper and lower GI bleed
3. Agents causing acute diarrhea, food poisoning. Management of acute gastroenteritis
4. Diagnostic approach to a patient with chronic diarrhea. Discuss TB, celiac and inflammatory bowel disease
5. Causes, investigations and management of a patient with chronic constipation
6. The Malabsorbtion syndromes; differential diagnosis and investigations
7. Inflammatory bowel disease
8. Causes and management of chronic liver disease

Rheumatology and bone disease

9. A young female patient with Rheumatoid Arthritis.
10. The SLE syndromes
11. Pathology, presentation and clinical features of acute gout
12. Fibromyalgia, polymyalgia rheumatica and the Chronic Fatigue Syndrome
13. NSAIDs, corticosteroids and other immunosuppressives in rheumatology practice. Cautions

Infections

14. Common viral diseases - 1

15. Common viral diseases – 2
16. The Enteric fevers
17. Brucellosis
18. The infectious diarrheas
19. Lower respiratory tract infections
20. Pulmonary Tuberculosis
21. Urinary tract infections
22. Meningitis and encephalitis

Cardiovascular

23. Rheumatic fever and its sequelae
24. Cardiomyopathies and Pericarditis
25. Ischemic heart disease. Angina pectoris and its treatment
26. Ischemic heart disease: Myocardial infarction, investigations and management
27. Congestive cardiac failure: management
28. Common arrhythmias. ECG Interpretation and management

Respiratory system

29. Asthma & COPD
30. Pneumonias
31. Pleural effusion and pneumothorax
32. Carcinoma bronchus

Renal disease

33. Glomerulonephritis
34. Urinary tract infections
35. Acute renal failure
36. Chronic renal failure.
37. Dialysis and transplantation

Oncology

38. Leukemias: Current protocols of treatment
39. Hodgkin's and Non-Hodgkin's lymphomas
40. Prostatic cancer
41. Tumours of the female genital tract
42. Caring for a patient with widespread metastatic disease

Endocrine and Metabolic

43. Diabetes Mellitus. Diagnosis
44. Diabetes Mellitus Management
45. Hyperthyroidism: Clinical features investigations and management
46. Goitre: Hypothyroidism
47. Cushing's syndrome: Idiopathic and iatrogenic
48. Addison's disease. Adrenal failure
49. Prolactinomas, acromegaly
50. Disorders of calcium metabolism
51. Gynecomastia, hirsuitism
52. Investigating female infertility

Neurology

53. CVAs
54. Parkinson's disease

55. Dementia
56. Epilepsy
57. Multiple sclerosis
58. Motor neuron disease
59. Myasthenia Gravis.
60. Muscular dystrophies

Ward teaching in 4th year MBBS

In 4th year emphasis is again laid on history taking and examination. By the end of the 4th year clinicals the students are expected to be able to take a detailed history and do a comprehensive and systematic clinical examination. They should be able to offer a list of differential diagnosis and suggest relevant and appropriate investigations to arrive at a final diagnosis. They should have by now witnessed (and performed) IV cannulation, passing NG tubes and Foley's catheters.

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5th year MBBS

HOURS IN GENERAL MEDICINE
5 lecture per week X 33 = 165 hours
6 morning clinical sessions per week (8 X 33) divided by 5 = 53 hours
6 (2 hourly) evening sessions X 6 weeks = 72
Total 165 + 53 + 72 = 290
Available hours in our time table = 290 hours
(Medical input in CPC 10 hours)
PMDC Requirement: 300 hours

Class Lecture TOPICS

Diabetes and metabolic disorders (5)

1. Pathophysiology. Investigations
2. Management
3. Acute complications
4. Chronic complications
5. Hyperlipidemias and their management

Endocrinology (7)

6. The Pituitary gland (anterior pituitary and diabetes Insipidus)
7. The Thyroid Gland: Hypo and hyperthyroidism
8. The Adrenal gland; Addison's disease and Cushing's syndrome
9. The Parathyroid gland and Calcium metabolism
10. Hirsuitism and PCOS
11. Male infertility and impotence
12. Endocrinological tests and their interpretation

Liver & pancreatic disease (6)

13. The liver; Introduction and LFTs

14. Acute viral hepatitis
15. Hepatitis B & C
16. Chronic liver disease; Cirrhosis
17. Hepatic tumours (Hepatoma and metastatic liver disease)
18. Acute and chronic pancreatitis. Pancreatic cancer

GI (9)

19. Oesophageal disease (GERD and Ca esophagus)
20. Peptic ulcer disease
21. Irritable bowel syndrome
22. Coeliac disease and abdominal TB
23. Inflammatory bowel disease
24. Gut cancers
25. Gut infections
26. A patient with chronic Ascites
27. Investigating a patient with chronic diarrhea

Rheumatology (8)

28. Joint structure: Osteoarthritis
29. Rheumatoid Arthritis
30. SLE and systemic sclerosis
31. The vasculitic syndromes
32. Fibromyalgia syndromes
33. Gout
34. Approach and management of a patient with idiopathic pain

Respiratory disease (8)

35. Interpretation of Respiratory function tests and ABG results
36. Respiratory tract infections; Pneumonia
37. Asthma and COPD
38. Pulmonary TB and tuberculous pleural effusions
39. Pleural effusions and Pneumothorax
40. Fibrotic lung disease
41. Ca bronchus and other chest neoplasms
42. Approach to a patient with chronic cough

Cardiovascular disease (11)

43. Hypertension
44. Ischemic heart disease
45. Cardiomyopathies
46. Arrhythmias

47. Rheumatic fever and rheumatic heart disease
48. Valvular heart disease 1 : Mitral stenosis and incompetence
49. Valvular heart disease 2 : Aortic stenosis and incompetence
50. Congestive Cardiac failure and Cor-Pulmonale
51. Bacterial endocarditis
52. DVT and Pulmonary embolism
53. Investigating a patient with dyspnoea

Hematology (8)

54. Investigations in hematology and their interpretation
55. Anemias 1
56. Anemias 2
57. Acute leukemias
58. Chronic leukemias
59. ITP and platelet disorders
60. Other hemorrhagic disorders

Kidney (7)

61. Introduction to Renal disease and Renal investigations
62. Clinical features of renal disease
63. Glomerulonephritis
64. The nephritic and Nephrotic syndromes
65. Urinary tract infections
66. Acute renal failure
67. Chronic renal failure, Dialysis and transplantation

Diseases of the Nervous system and Muscle (11)

68. Headaches
69. Epilepsy
70. CNS infections: Meningitis and encephalitis
71. Multiple sclerosis
72. Parkinsonism
73. CVA
74. Coma: Investigations and management
75. Dementia
76. Peripheral neuropathy
77. Motor neuron disease
78. Myasthenia gravis & Muscular dystrophies

Infectious disease (12)

79. Typhoid fever

80. Malaria
81. Tuberculosis
82. Brucellosis
83. Tetanus
84. HIV infection
85. Fungal infections
86. Worm infestations
87. Common viral infections (Chicken pox, mumps……)
88. The flu syndromes: Avian and swine flu
89. Congo fever, Dengue
90. Managing a patient with PUO

Nutritional diseases (5)

91. Adult protein Calorie malnutrition
92. Vitamin A & D deficiencies: Osteomalacia
93. Vitamin C & B deficiency syndromes
94. NG feeding and Parenteral nutrition

Psychiatry (6)

95. Anxiety disorders
96. Personality disorders
97. Mood disorders: Depression & mania
98. Psychotic disorders
99. Addiction
100. Dementia

Dermatology and VD (6)

101. Psoriasis
102. Eczema, urticaria
103. Scabies and other common dermatologic infections/infestations
104. Fungal infections of the skin
105. An overview of skin rashes
106. Overview of STDs

Poisoning and physical agents (6)

107. Paracetamol and salicylate poisoning
108. Benzodiazepine and other hypnotics overdose
109. Organophosphorus and kerosene poisoning
110. Heat stroke and heat exhaustion
111. Snake and scorpion biters
112. Hypothermia

Oncology (9)

113. Carcinoma breast
114. Carcinoma Prostate
115. Ovarian and uterine cancer
116. Carcinoma Esophagus and stomach
117. Carcinoma colon
118. Overview of leukemias
119. Non Hodgkin and Hodgkin lymphomas
120. Managing metastatic disease
121. Managing a patient with terminal cancer

Teachers: Final year lectures

Subjects	Lectures	Class	Teacher
Cardio	11	Final year	Prof. Shakeel Ahmad
GI (minus liver and pancreas)	9	Final year	Dr. Sultan zeb
Liver & pancreas	6	Final year	Prof. M. Javed
Endocrines (minus diabetes)	7	Final year	Prof. Inayatullah
Diabetes & metabolic	5	Final year	Prof. M. Javed
Nephrology	7	Final year	Prof. M. Javed
Hematology	8	Final year	Dr. Affan
Neurology & muscle disease	9	Final year	Prof. Jahangir Khan
Chest	8	Final year	Dr. Munir Abbassi
Rheumatology & CT disease	8	Final year	Dr. Sumera kazmi
Infections	12	Final year	Prof. Inayatullah
Oncology	9	Final year	Dr. Nadeem Abbasi
Poisoning	6	Final year	Dr. Amina Noor
Dermatology	10	Final Year	Prof. Jahangir khan
Psychiatry	12	Final year	Prof. Yunus Khwaja

Assessment:

Internal assessment carries a total of 50 marks towards the final year MBBS exam. 20 marks in theory and 30 marks in clinicals

THEORY INTERNAL ASSESSMENT

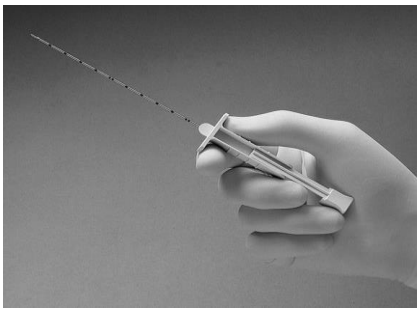
All teachers will carry an MCQ (one correct format)/ SEQ assessment at the end of the subject they teach
There will be a Mid-term and Pre-Prof exam. Dates to be notified well in advance
All the marks will be added up towards the final theory scores.

CLINICAL EXAM (INTERNAL ASSESSMENT)

- 12 OSCE stations (3 or 4 may be interactive (i.e. an examiner sitting on the station)
- 4 out of 5 possible short cases. (GPE, Nervous system, Abdomen, Cardiovascular and respiratory systems. Technique of examination)
- 1 long case

MODEL OSCE STATIONS

1.Instrument (Static/Interactive)



Questions

1. What is the name of this instrument?
2. What is it used for?

2. ECG (Static)

Questions

1. What is the abnormality in the ECG strip shown above
2. Name the drug of used in this condition
3. Name 2 diseases which predispose to the abnormality shown

3. Emergency (Interactive)

A 32 year old asthmatic comes with a history of progressive difficulty in breathing over the past 2 days. She has been using her inhalers but her condition is deteriorating. This followed a 3 days of productive cough and fever. You are the casualty officer on duty. How will you manage this patient?

4. Scenario (Static)

A 63-year-old man presents with a history of intermittent pain in the right hypochondrium. This has been present for the past 5 months. There is a history of anorexia, a weight loss of 5 kg and pruritus. On examination he is jaundiced. The liver is palpable and slightly tender. His LFTs are as follows

Total Bilirubin	12.2	(NR 0.1-1.2 mg / dl)
ALT	89	(NR 5-35 IU/L)
Alkaline Phosphatase	1256	(NR 44-147 IU/L
Gamma GT	221	(NR 9-48 U/l)
PT	18 seconds	
Serum Albumin	37	

5. Data (Static)

A 34 year old woman presented with irregular periods and infertility. Her investigations were as follows
Cholesterol 240 mg /dl (desirable (<200 mg/dl) high
TSH 38 mU/L (0.5-5 mU/L)
Prolactin 50 mcg/L (NR <20 mcg/L)

Questions

1. What is the diagnosis?
2. What single drug will correct all three abnormalities

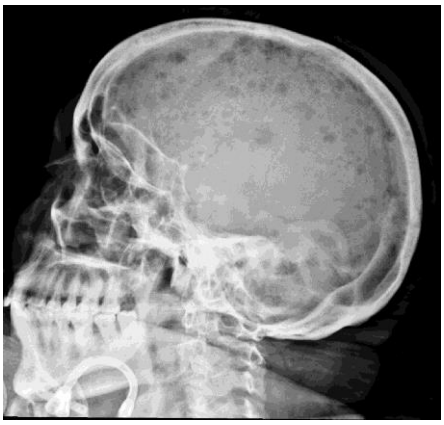
6. SPOT DIAGNOSIS (Static)

Questions:

This man was asked to close his eyes

1. What disease is present?
2. What is the side of the abnormality?
3. What treatment may be offered if he presents early in the illness?

7. X-Ray (Static)



Questions:

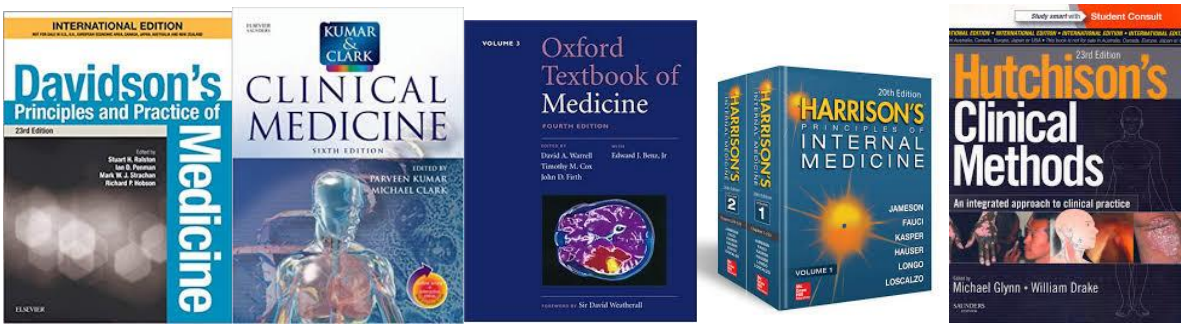
1. What radiological sign is visible on this x-ray
2. What is the underlying diagnosis
3. Name two investigations that would confirm the diagnosis

Recommended books for Internal Medicine

Routine read
Principles and practice of Medicine: Davidson
Textbook of Medicine: Kumar and Clark

Clinical methods
Hutchison

Reference books
Harrisons Principles of Internal Medicine
Oxford textbook of Medicine



Suggestions

3rd and 4th year tests in Medicine and surgery