

**DUBAI MEDICAL COLLEGE FOR GIRLS
DUBAI HEALTH AUTHORITY**

ACADEMIC DEPARTMENT OF PEDIATRICS



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PAEDIATRIC COURSE CURICULUM

Introduction

- The Paediatric Academic Teaching year lasts 10 months . It is linked with Obstetric &Gynecology rotation ,i.e both together lasts 10 months
- The paediatric Teaching program consists of lectures/seminars sessions in the afternoon and clinical bed side teaching sessions in the morning in Paediatric Department at Dubai and Latiffa hospitals.
- The clinical training of pediatric Course lasts for 16 weeks .It consist of introductory course for two weeks , junior rotation for 6 weeks and senior rotation for 8 weeks. After finishing 8 weeks of paediatric training ,the students join the Obstetric and gynecology for 8 weeks then return back to the paediatric department for senior rotation.
- The morning teaching is from 0815 -1200 hrs consisting of clinical sessions, tutorials, bed side teachings, attending ward round and outpatient clinics , case presentation and discussions by students students which continues for 5 days per week.
- The afternoon lectures/seminars sessions are on Mondays and Tuesdays every week for the whole batch from 1300 hrs – 1515 hrs which is scheduled for the whole academic year.
- Clinical Scenarios sessions are on Thursdays for the Pediatric group from 1300 hrs – 1515 hrs.
- Problem solving method of teaching are adopted in the academy of paediatric Department. Self teaching and case presentation and discussion by the students is encouraged during the clinical activity.

Component of Teaching Methods

The morning clinical sessions The students are distributed in groups. Each group will attend the morning clinical sessions (0800 – 1200 hrs) in the Pediatric Department either in Dubai Hospital or in Latifa Hospital.

The session starts with distribution of the cases by the teaching staff to the students at 0815 hrs. The students will take the history from the mother/ parent, perform clinical examination and will do case clerking, then prepare themselves for discussion by reading about the cases. The Coffee Break is at 10:00 – 10:15 hrs. The teacher will then start the clinical teaching & case discussion between 10:15 hrs – 12:00 hrs.

The lectures: are held in the afternoon at Dubai Hospital and Latiffa Hospital between 1300 – 15:15 hrs on Mondays and Tuesdays. Two lectures every afternoon. First lecture at 1300 -1400 hrs. and the Second lecture at 14:15 – 15:15 hrs.

The Clinical Scenario Sessions are on every Thursday between 1300 – 15:30. Two clinical scenarios are presented and discussed in an interactive manner between the medical students and the teacher.

The students are encouraged to adopt the self teaching system and get the guidance and appropriate advice from the teaching staff. Problem solving method of teaching are adopted in the academy of paediatric Department.

IMAGING, SLIDE AND LABORATORY SESSION:

Imaging ,slide and laboratory data interpretation have been included in the morning clinical sessions, the teaching will cover the Pediatric X-rays ,slides pictures of common paediatric diseases . laboratory investigations and its interpretations in various pediatric disorders in Respiratory, Cardiology, Neurology, Gastroenterology , Hematology, Nephrology Systems and Neonatology.

Cases Presentation&Discussion During the senior training period , students prepare clinical cases from the paediatric ward guided by teacher , each group of students will be allocated to present clinical case . meet the parents ,take history , do case clerking and clinical examination plan the investigation and the primary first line management . The students DISTRIBUTE above elements of case presentation among themselves in the group and they present and discuss the case with other students and the teacher during the session allocated for case presentation all the students are encouraged to actively participate in the discussion during the seminar . the session for the case presentation are regularly once or twice weekly during the senior training .

Topic presentation by students :

Each group of 4 students are assigned to present a common paediatric diseases to all students in the batch The presentation is powerpoint presentation in presence of teacher who observe discuss and evaluate the students . the session is one hour , two sessions on the Mondays and Tuesdays afternoon during the last 4 weeks of the paediatric academic programe after completion of the lectures schedule .

Introductory course

During the first 2 weeks the student is oriented about clinical pediatrics. The teaching is focused on detailed history taking, clinical examination methods and communication skills to approach the child and the family.

JUNIOR PAEDIATRIC ROTATION

The teaching period is 6 weeks following the 2 weeks of Introductory Course.

COURSE OBJECTIVES:

By the end of this rotation the student would be expected to be able to:

- Take a full pediatric case history
- Carry out a full pediatric clinical examination including developmental assessment
- Understand the normal growth and development of children from birth until adolescence.
- Perform growth and development assessment and interpret the growth chart with appropriate correction for preterm infants.
- Be familiar with clinical examination of normal newborn
- Understand the nutritional requirement of infants and children.
- Understand the immunization in infant and children and to be familiar with vaccination schedule in UAE

SENIOR PEDIATRIC ROTATION

The teaching period is 8 weeks

The students are encouraged to adopt self teaching method. The student own reading and enquiries are essential components of learning as well as discussion with teachers in Seminars, Tutorials and morning clinical sessions.

The students are encouraged and assigned to attend the ward round, Outpatient clinic as per distributed teaching schedule with the assigned teaching staff.

COURSE OBJECTIVES:

By the end of this rotation the student would be expected:

- To be familiar with common disorders and diseases in Pediatrics
- To be familiar with clinical signs of common disease in Pediatrics
- To understand and learn Clinical approach of cases including differential diagnosis, investigations required and first line management.
- To be familiar with common disorders in Neonate.
- To recognize and get the knowledge of management of emergencies in childhood

Students should be encouraged to get chance to see common pediatric procedure. e.g. Peripheral IV canula insertion, lumbar puncture, capillary blood gas and delivery of nebulized bronchodilators in Asthmatic patient.

Introductory course

Knowledge

The student is oriented about clinical pediatrics. The teaching is focused on detailed history taking, clinical examination methods and communication skills to approach the child and the family..

Skills

- know how to take proper pediatric history including present history, past history, family history as well as systematic review, birth history, growth & development , nutrition , family and social history.
- Clinical examination of infant and child including :
 - general examination,
 - Chest examination
 - abdominal examination
 - cardiovascular examination
 - neurology examination
 - musculoskeletal examination.
 - Clinical developmental assessments
- communication skills to approach the child and the family.

Autonomy & Responsibility

Attend morning clinical teaching sessions and afternoon lectures.

Development

know how to utilize the informations together and develop communication with patients and family during history taking and know how to do clinical examination in paediatric age patient.

Role in Context

Two weeks

JUNIOR PAEDIATRIC ROTATION

Knoweldge

- Take a full pediatric case history and knows how to relate it to the patient complains and analyze it properly
- Carry out a full pediatric clinical examination including developmental assessment
- Understand the normal growth and development of children from birth until adolescence.
- Perform growth and development assessment and interpret the growth chart with appropriate correction for preterm infants.
- Be familiar with clinical examination of normal newborn
- Understand the nutritional requirement of infants and children.
- Understand the immunization in infant and children and to be familiar with vaccination schedule in UAE.
- Common paediatric diseases and newborn disorders .
- Common paediatric emergency disorders .

Skills

- Present the full case history to the teaching staff and other students
- Perform the full clinical examination of paediatric case , to be organised systematic
- Identify and illiciates the appropriate clinical signs .
- Can plot the anthropometric measures on the growth chart and interpretate it
- Assess the physical and neurodevelopment of child at different age .

Autonomy & Responsibility

- Attend the teaching sessions in the morning and afternoon .
- Attend the ward round in the paediatric wards and outpatient clinic .
- Attend the case scenario and be interactive during the presentation and discuss with the presenter all the issue regarding the scenario in order to know how to analyze the scenario properly
- Be initiative during all the components of the course including lectures, clinical rounds, case scenario as well

Development

- Know how tho gather the information from history of the case and clinical examination findings to put the differential diagnosis .
- Knows how to utilize the information from history and clinical findings together to decide for investigations to be done for the case .
- Be familiar with common paediatric diseases first line management.
- Understand the acute management of child present in emergency

Role in Context

6 weeks

SENIOR PEDIATRIC ROTATION

Knowledge

- Understand pathophysiology ,symptoms various disorders and diseases in Pediatrics
- Be familiar with clinical signs of various disease in Pediatrics
- Understand and learn Clinical approach of cases including differential diagnosis, investigations required and first line management.
- Be familiar with common disorders in Neonate.
- Recognize and get the knowledge of management of emergencies in childhood
- Understand the various pediatric investigations including blood gases,full blood count,creatinine, electrolytes ...etc
- Understand the x-ray of neonate and pediatric specially common conditions eg pneumonia, pleuraleffusion, lung collapse, respiratory distress syndrome, pneumothorax, abdomen Xray etc
- Understand and knows how to read pediatric ECG
- Observe common pediatric procedure. e.g Peripheral IV canula insertion, lumbar puncture, capillary blood gas and delivery of nebulized bronchodilators in Asthmatic patient.

Skills

- Knows how to utilize the information from history and clinical findings together to analyse and discuss the case to reach the differential diagnosis decide the appropriate investigations and first line management . .
- Knows resuscitation of the neonate and child as well.
- The student will be able to interpret various laboratory investigations that are common in pediatrics including :Blood gases, Electrolytes, Full blood count various biochemical investigations including serum calcium , phosphorus...etc
- The students will be able to interpret various pediatric x-rays including chest, abdomen...etc
- The student will be able to read and comment on pediatric ECG as well.

Autonomy & Responsibility

- Attend the lecture, Clinical rounds , Case scenarios and afternoon lectures
- The student will prepare and discuss case including case presentation discussion about investigation and management .
- The student will make powerpoint presentation of one of the common pediatric topics.

Development

Know well how to interpret different pediatric data and knowledge including history ,clinical examination ,laboratory data,and x- ray and have more mature analysis of the case and reach proper differential diagnosis and management.

Role in Context

8 weeks

Introductory Course

The first 2 weeks of the teaching programme the student is oriented about clinical pediatrics. The teaching is focused on detailed history taking, clinical examination methods.

During the morning clinical sessions (0800 – 1200 hrs) the teaching staff explain abnormal symptoms and presentation of the system diseases (assigned system as per schedule e. g cvs, abdomen) , details of system clinical examination in the seminar room before clinical demonstration. Teaching staff shall show and perform detailed clinical examination and then give chance for the student to practice .

History taking session

Objectives : by the end of this session the medical student knows:

- Analysis of the complaint related to the symptoms,
- All components of pediatric history including :
present history, past history Birth history, developmental history, vaccination , nutritional history. and family history

General examination

Objectives : by the end of this session the medical student knows:

- General child condition,
- colour.r(jaundice, pallor ,cyanosis)-
- vital signs – signs of poor perfusion ,
- dysmorphic features -peripheral edema.

Growth &Development assessment

Objectives : by the end of this session the medical student knows:

- Assessment of physical growth
- Growth chart .
- Anthropometric measurements
- Developmental assessments at different ages
Gross motors , fine Motor.
Social , hearing and vision .

Chest examination

Objectives : by the end of this session the medical student knows:

General examination related to respiratory system

- Details of Respiratory and chest examination including :
inspection ,palaption pecussion and auscultation
- Breath sounds and its characters
- Added sounds (crepitation , wheeze) and its characters

CVS Examination

Objectives : by the end of this session the medical student knows

- General examination related to cardiovascular system.
- Details of cardiovascular examination including :
inspection ,palaption and auscultation
heat sounds types of murmures and its characters
- systematic and organised clinical examination.

Abdomen Examination

Objectives : by the end of this session the medical student knows

- General examination related to Gastrointestinal system
- Clinical method of Abdomen examination Including:
inspection ,palpation (superficial and deep palpation)
percussion and ausultation
- Palpation of liver and spleen Kidney .
- Clinical examination for Ascitis shifting dullness and thrill

Neuromuscular Examination

Teaching staff explain details of CNS examination in the seminar room before clinical demonstration. Teaching staff shall show detailed neurological examination mainly the motor and sensory system and give the chance for the student to practice

Objectives : by the end of the two session the medical student knows

- General examination related to neuology system
- Assessment of muscle tone and power .
- assessment of tedon reflexes and babinski sign
- Differentiate between upper and lower motor neurone lesion clinically .
- Clincal examination of cranial nerves

Introductory Course (2 weeks)

Type of session	Duration of session in minutes	Number of session	Time /unit	Teaching unit
History taking / method of clinical examination	90	10	60	15
Clinical & bedside teaching	120	10	60	20
Tutorial	60	4	60	4
Lectures	60	8	60	8
Total				47

Junior training (6 weeks)

Type of teaching session	Duration of session in minutes	Number of session /week	Time duration /Unit	Teaching unit /week	Teaching unit in the course
Clinical (bed side) teaching	200	5	60	17	102
Tutorial	60	1	60	1	6
Clinical Scenario	60	2	60	2	12
Lectures	60	4	60	4	24
Total					144

Senior rotation (8 WEEKS)

Type of teaching session	Duration of session in minutes	Number of session /week	Time duration /Unit	Teaching unit /week	Teaching unit in the course
Clinical (bed side) teaching	200	5	60	17	136
Tutorial / case discussion	60	1	60	1	8
Clinical Scenario	60	2	60	2	16
Lectures / Student presentation	60	4	60	4	32
Total					192

The paediatric Teaching Programme

Type of session	Teaching unit in the course
Clinical (bed side) teaching	273
Tutorial / case disscussion	18
Clinical Scenario	28
Lectures / Student presentation	128
Total	447

Lectures & student presentations held in the afternoon during the whole paediatric teaching programme during 32 Weels based on 4 lectures (sessions) per week are 128 . The lectures are 90 lectures the remaining are student presentations , case discussion and revision lectures .

LECTURES

General Paediatric:

- GROWTH & DEVELOPMENT
- IMMUNIZATION
- NUTRITION IN INFANCY & CHILDHOOD
- NUTRITIONAL DISORDERS
- FLUID , ELECTROLYTES & ACID, BASE BALANCE
- SUDDEN INFANT DISEASE & CHILD ABUSE
- ENURESIS AND ENCOPRESIS

Paediatric Haematology

- Anemia in children & Iron deficiency anemia
- Hemolytic Anemia ,Enzyme deficiency (g6PD) &
- membrane defect (spherocytosis).
- Platelets Disorders &Thrombocytopenia
- Hemorrhagic disease & Coagulation disorders
- Thalassemia Syndromes
- Sickle Cell Anemia

Respiratory Diseases :

- URTI & Stridor
- ACUTE BRONCHIOLITIS
- PNEUMONIA
- BRONCHIAL ASTHMA
- CYSTIC FIBROSIS
- DISEASES OF PLEURA
(Pleural effusion & Pneumothorax)

Cardiology :

- ANATOMY & PHYSIOLOGY OF CVS
- ACYANOTIC CHD
- CYANOTIC CHD
- HEART FAILURE & ARRHYTHMIA
- INFECTIVE ENDOCARDITIS
- RHEUMATIC FEVER

Paediatric Emergency:

- SHOCK
- IRON & LEAD POISONING & SALICYLATES
- DROWNING, NEAR DROWNING & KEROSENE INGESTION

Infectious Diseases

- CHILDHOOD EXANTHEM
(MEASLES, GERMAN MEASLES, SCARLET FEVER,
ROSCALA SUBITUM, ROSEOLA INFECTIONSUM)
- MUMPS & VARICELLA , HERPES INFECTION
- INFECTIOUS MONONUCLEOSIS & CMV INFECTION
- WHOOPING COUGH & DIPHTHERIA, TETANUS
- ENTERIC FEVER
- MALARIA
- T.B.& T.B MENINGITIS
- HIV

Gastroenterology&Hepatology:

- INFANTILE DIARRHEA & DEHYDRATION
- CHRONIC DIARRHEA
- MALABSORPTION DISORDERS
- CONGENITAL G.I.OBSTRUCTION
- ACUTE ABDOMEN
- ANATOMY OF LIVER, VIRAL HEPATITIS
- CHOLESTASIS in infancy
- GASTRO ESOPHAGEAL REFLUX

Endocrinology :

- HYPOTHALAMUS & PITUITARY DISORDERS
- THYROID DISORDERS
- PARATHYROID DISORDERS
- ADRENAL Disorders
- PUBERTY & ITS DISORDERS
- DIABETES MELLITUS

Oncology :

- LEUKAEMIAS
- NEOPLASTIC DIS. IN CHILDREN
- CNS TUMOUR IN CHILDREN
- CNS INFECTION (MENINGITIS ENCEPHALITIS)

Nephrology :

- ANATOMY & PHYSIOLOGY OF THE RENAL TRACT
- Nephritis Disease & Glomerulonephritis
- NEPHROTIC SYNDROMES
- TUBULAR DISORDERS OF KIDNEYS
- RENAL FAILURE, ACUTE & CHRONIC
- CONGENITAL MALFORMATION OF URINARY TRACT

Neonatology:

- **PREMATURITY + HMD**
- **NEONATAL JAUNDICE**
- **NEONATAL NUTRITION & BREAST FEEDING**
- **BLOOD DISORDERS IN NEWBORN**
- **NEONATAL SEPSIS + NEC**
- **RESPIRATORY DISEASES & MECONIUM ASPIRATION**
- **CONGENITAL INFECTION**
- **NEONATAL CONVULSIONS**
- **BIRTH INJURIES**
- **INFANT OF DIABETIC MOTHER**

Neurology:

- **POLIOMYELITIS & GUILLIAN BARRIE SYNDROME**
- **CEREBRAL PASLY**
- **EPILEPSY**
- **MUSCULAR DYSTROPHY**
- **MENTAL RETARDATION**
- **CHILD PSYCHIATRY & AUTISM**
- **LEARNING & BEHAVIOURAL PROBLEMS**

Genetics & Chromosomal disorders :

- **CHROMOSOMAL STRUCTURE, FUNCTION & ABNORMALITIE**
- **CLINICAL CHROMOSOMAL DISORDERS**
- **INHERITANCE pattern & GENETIC COUNSELLING**
- **GENE STRUCTURE AND FUNCTION**
- **Molecular basis of Diseases**
- **Sex determination & Sex Chromosome abnormalities**

Miscellaneous

- **CONNECTIVE TISSUE DISORDERS (JCA , SLE)**
- **KAWASAKI DISEASE & OTHER Vasculitis**
- **INBORN ERROR OF METABOLISM (presentation , investigatins & management)**
- **DIABETTUS INSIPIDUS & SIADH**
- **IMMUNITY**
- **IMMUNODEFICIENCY DISORDERS**

Clinical Sessions Topics

The clinical sessions are conducted at bedside by clerking the case taking history and clinical examination of the patient then discussion. The teaching staff demonstrate and show the students clinical findings, signs and then discuss with them the clinical topic and disease.

Respiratory

Brochiolitis, Croup

Objectives : by the end of this session the medical student knows:

- Common presentation of respiratory diseases in infancy
- Normal respiratory rate of different age group
- clinical examination methods & skills of respiratory system.
- The clinical features of acute respiratory diseases including stridor, wheezing, abnormal breath sounds and crepitation
- Interpretation & read normal CXR

Pneumonia – Bronchopneumonia

Objectives : by the end of this session the medical student knows :

- the clinical signs of acute versus the chronic respiratory diseases.
- the clinical features of pneumonia and its complication
- CXRs of pneumonia, bronchopneumonia.
- Interpretation of blood gas test

Bronchial Asthma

Objectives :

- Review History taking in bronchial asthma including the precipitating factors.
- Clinical assessment of uncontrolled Chronic asthma (barrel chest, Harrison's sulcus) .
- Presentation and management of status asthmaticus.
- Indication & Interpretation of CXR and blood gas in severe asthma.
- Demonstrate the devices used in management of asthma (peak flow meter, nebulizer, inhalers and spacers).

Aspiration pneumonia / recurrent pneumonia

Objectives :

- Relevant history and family history
- Review clinical chest examination
- Differential diagnosis of recurrent pneumonia including Cystic fibrosis, Bronchiectasis, immunodeficiency diseases .
- Investigations indicated in recurrent pneumonia
- CXR of cystic fibrosis

pleural effusion

Objectives :

- Clinical signs of pleural effusion ,
- Differential diagnosis.
- investigation and management pleural effusion
- intercostal drainage indication and procedure
- analysis of pleural fluid (exudates/ transudate)
- CXR: pleural effusion.
- Mantoux test explanation and interpretation of the result.

Respiratory failure

Objectives :

- Type of respiratory failure
- Blood gas data in respiratory failure
- Causes and management
- Acute respiratory distress syndrome (causes, presentation and management)

Cardiology

Heart disease/ innocent murmur

Objectives : by the end of this session the medical student knows:

- Common symptoms of cardiovascular disease in infancy &
- General Clinical examination findings in patient with heart disease including pulse (rate, rhythm, volume and character).
- How to take the Blood pressure in young infants & older children. 4 Limbs BP and its clinical implementation
- Demonstration of clinical method of CVS examination .
- CXR (normal , cardiomegaly)

Acyanotic heart disease (ASD/VSD/ Coarctation of Aorta)

Objectives : by the end of this session the medical student knows:

- Presentation symptoms of acyanotic heart diseases .
- clinical finding of the acyanotic heart disease (ASD,VSD, and coarctation)
- Patient follows up in the clinic and parents information in ASD and VSD.
- Eisenmenger's syndrome.

Cyanotic heart disease

Objectives : by the end of this session ,the medical student knows:

- Presentation and clinical finding of the cyanotic heart disease (TOF, TGA)
- Symptoms and signs of cyanotic spells and management.
- CXR (normal CXR, cardiomegaly, TOF, TGA and other cyanotic heart disease)
- Blood gas in cyanotic heart disease

Rheumatic fever / Subacute bacterial endocarditis.

Objectives :

- Presentation and clinical finding of the rheumatic fever and subacute bacterial endocarditis.
- Symptoms and signs rheumatic heart disease & assessment for diagnosis.
- Symptoms and signs subacute bacterial endocarditis.
- Investigation and Managements including SBE prophylaxis

Congestive heart failure

Objectives :

- Clinical Presenting symptoms
- Clinical Signs
- Causes of heart failure in different age groups.
- Relevant investigation including CXR
- Management of heart failure

Gastroenterology & Hepatology

Gastroenteritis

Objectives : by the end of this session the medical student knows:

- Common Presentation of gastroenteritis
- Clinical Assessment of Hydration Status, signs of Dehydration.
- Clinical Assessment of Nutritional status including growth chart.
- Clinical methods of Abdomen examination.
- Mngement of Dehydration
- Abdomen X-ray.
- Interpretation of blood Urea & Electrolytes.

Recurrent vomiting

Objectives : by the end of this session the medical student knows:

- Causes of recurrent vomiting in different age group.
- Common Presentation and management of Gastroesophageal reflux, congenital hypertrophic pyloric stenosis.
- Investgation in GER including isotope study & esophageal PH monitoring
- Investigation in Pyloric stenosis including U&E and blood gas readings.

Hepatitis

Objectives :

- Common Presentation of liver Diseases.
- Clinical Assessment of jaundice & diferential diagnosis .
- Clinical findings of abdomen examination .
- Fulminant Hepatitis & management .
- Interpretation of liver function test and Hepatitis B markers

Cholestasis in infancy

Objectives :

- Relevant history taking
- Clinical signs of cholestasis
- Differential diagnosis including extrahepatic biliary atresia
- Approach and investigation including USS, Isotop biliary study
- LFT interpretation ,liver synthetic function test (Albumin, PT)
- Management and follow up

Chronic liver disease / liver cirrhosis.

Objectives :

- Common presentation symptoms.
- Clinical signs including (splenomegaly, ascitis)
- Portal hypertension : presentation symptoms , causes and investigatins.
- Mangement of patient with liver cirrhosis .

Hematology:

Child with anemia.

Objectives : by the end of this session the medical student knows:

- Approach to a case with anemia
- To differentiate between iron deficiency anemia and Hemolytic Anemia in children
- Clinical hemodynamic assessment and heart failure, indication of transfusion.
- Management and follow up of a child with iron deficiency anemia.
- RBCs indices and Blood film interpretation

Thalassaemia / sickle cell anemia

Objectives : by the end of this session the medical student knows:

- History taking for hemoglobinopathies, the relevant information from the family history, age of presentation of hemoglobinopathies
- Common Presentation, difference between thalassaemia major and minor.
- Clinical findings in patient with thalasemia major
- Clinical presentation and management of sickle cell crisis
- side effect of recurrent transfusion, Iron Chelation therapy.
- Investigation :
 - Hgb electrophoresis and blood film reading
 - skull X ray finding in hemoglobinopathies

Purpura/ thrombocytopenia

Objectives :

- History taking in patient with purpuric rash
- Clinical presentation of thrombocytopenia/ITP/HSP
- Identification and difference between erythema and petichae (purpura, peticeal , ecchymosis)
- Management of ITP/ HSP

Pancytopenia

Objectives :

- Clinical presentation
- Laboratory data
- Causes and D/D including (viral infection , leukemia , aplastic anemia)
- Investigation including Bone marrow aspiration

Haemolytic anemia -G6PD deficiency

Objectives :

- Differential diagnosis of haemolytic anemia
- Presentation of haemolytic anemia in neonatal period and childhood
- Investigation of haemolytic anaemia
- Clinical assessment of acute haemolytic anemia
- Management of acute haemolytic anemia

Nephrology

Urinary tract infection (UTI)

Objectives : by the end of this session the medical student knows:

- Common Presentation symptoms of UTI.
- The difference between upper and lower UTI at different age group
- Sepsis and febrile convulsion in UTI as initial presentation .
- Clinical methods of Abdomen examination.
- Interpretation of Urea & Electrolytes.
- Investigation in UTI and renal imaging studies .
- Management and follow up of the patient with UTI .

Hematuria

Objectives : by the end of this session the medical student knows:

- Evaluation of red urine.
- Differentiation between hematuria and hemoglobinuria
- Clinical methods of Abdomen examination.
- Macroscopic vs. microscopic hematuria
- The difference between upper and lower renal blood loss.
- Interpretation of Urea & Electrolytes, coagulation profile
- Investigation and management .

Glomerular diseases – nephrotic/ nephritis

Objectives:

- Presentation of nephritic syndrome, glomerulonephritis, post streptococcal nephritis
- Different between nephrotic and nephritis.
- Clinical assessment of oedematous child.
- The importance of BP in Glomerular diseases
- Assessment of turbid urine. Proteinuria. Cast in the urine.
- Investigation of Glomerular diseases
- Indication of renal biopsy
- Management nephrotic/ nephritis

Acute renal failure

Objectives :

- Causes of acute renal failure
- Classification and D/D and renal, pre-renal and post renal failure
- Hemolytic uremic syndrome
- Laboratory data
- Management of renal failure
- Electrolyte imbalance: hyperkalemia
- Dialysis

General Paediatric /Endocrino;ogy

Neurodevelopment delay / Failure to thrive

Objectives : by the end of this session the medical student knows:

- Anthropometric Measurement clinical training : how to take the weight, height, length and head circumference..
- Developmental assessment of physical growth and Milestones in different age group in infants, children.
- Interpretation of growth chart

Short stature

Objectives : by the end of this session the medical student knows:

- Anthropometric Measurement and growth chart interpretations (Short stature/tall stature.
- Clinical assessment of short stature and differential diagnosis.
- Investigations including bone age, hormonal assay.
- Follow up and management.

rickets / renal osteodystrophy

Objectives :

- History taking for rickets (Renal, hepatic, nutritional , other causes)
- Types of rickets , Vitamin D Resistant rickets
- Clinical presentation. Signs of rickets, developmental delay, hypocalcaemic tetany
- Investigation (blood and X.rays)
- Treatment : nutritional advise, vitamin D, calcium and phosphate supplements

Down Syndrome / Turner syndrome / Edward syndrome

Objectives :

- Dysmorphic features of above syndromes.
- Relevant maternal history
- Discussion about Karyotype and associated congenital anomalies.
- Communication with parents on breaking the news..
- Physical growth and Neurodevelopmental status.
- Multidisciplinary patient care and follow up for early detection of complications

Diabetes Mellitus (DM)

Objectives :

- Presentation symptoms
- Relevant history information
- Clinical examination of diabetic child
- Differential diagnosis of polyuria and polydipsia
- Investigation
- Management and follow up of Patient with DM

Neurology

Febrile convulsion/ Meningitis / Encephalitis

Objectives : by the end of this session the medical student knows:

- Clinical presentation of common paediatric neurological diseases.
- Demonstration of signs of increased intracranial pressure and meningitis
- Clinical methods of CNS exam in paediatric patients.
- Level of consciousness with Glasgow coma scale assessment
- LP and interpretation of CSF findings.

Cerebral Palsy

Objectives : by the end of this session the medical student knows:

- Review the history taking with attention to perinatal history.
- Demonstrate muscle tone ,power,tendon reflexes,babinski.
- Review the delayed developmental milestones .
- To differentiate between upper motor neurone lesion (UML) and LML.
- Measure head circumference , microcephaly
- Multidisciplinary care management of CP child.

Delayed milestones/ floppy infant

Objectives :

- Review the history taking with attention to perinatal history.
- Assessment of developmental milestones at different age of infancy and childhood.
- D/D of floppy infant.
- Primary investigation of floppy infant

Epilepsy

Objectives :

- Presenting symptoms of different types of epilepsy .
- Difference between partial and generalized epilepsy .
- Relevant history information ,
- Laboratory tests including EEG and Brain CT scan
- Communication with parents and information regarding important precautions to be taken during the child's daily activities.
- Management of epileptic attack and status epilepticus.
- Common antiepileptic drugs and its important side effects

Microcephaly and macrocephaly

Objectives :

- Different skull shapes abnormalities.
- Causes of microcephaly and macrocephaly
- Clinical signs of hydrocephalus
- Clinical signs of meningocele
- Association between myelomeningocele and hydrocephalus.
- Neurological exam. of lower limbs with correlated nerve root involvement.
- Care and surgical management of meningocele and hydrocephalus.
- Complication of VP Shunt and its management .

Neonatology

Introduction to Neonatology:-

Objectives : by the end of this session the medical student knows:

- Definition & terminologies (neonate , preterm , SGA , etc..)
- Signs of prematurity
- Neonatal growth charts.
- Brief information about Perinatal statistics.
- Brief information common equipments used in NICU.(pulse oximeter, vital sign monitors, blood gas machine, bilirubinometers, incubators, ventilators.) Visit to the unit
- brief information about Neonatal Resuscitation and the equipments(Visit to the delivery suite)

Normal neonate examination

Objectives : by the end of this session the medical student knows:

- History taking and the Neonatal case clerking.
- Examination of Neonates (Normal):-
- Demonstration of Neonatal Reflexes.
- Demonstration of common cutaneous signs.
Erythema toxicum, naevus, Mongolian spots, Haemangioma – (Capillary, strawberry)
Hyperpigmented patches, café-au lait spot.
- Detail birth history taking and assessing Apgar score.

Birth trauma

Objectives :

- Demonstration of Birth trauma – Erb’s palsy (demonstration of asymmetrical Moro reflex), clavicular fracture cephalhematoma, subaponeuritic hematoma (DID).
- Exam of congenital anomalies and discussion
 - cleft lip – palate: discussion on management
 - Hydrocephalus, macrocephaly and Microcephalus.
 - meningocele

Neonatal jaundice

Objectives :

- Discussion of history taking
- Examination of jaundiced neonates and relevant investigations.
- Risk assessment and prediction chart. Phototherapy and the use of phototherapy and exchange transfusion guideline charts.
- Side effect of phototherapy.

Hyaline Membrane disease (HMD)

Objectives : by the end of this session the medical student knows:

- relevant antenatal history taking
- Examination of premature infant with respiratory distress.
- Management of HMD and the oxygen therapy and CPAP
- Complications of Prematurity with HMD (pneumothorax, PIE, BPD and IVH)
- CXR finding in HMD and D/D

Sepsis / neonatal meningitis

Objectives :

- relevant antenatal history taking
- clinical signs of neonates with sepsis.
- Most common Clinical signs in sepsis/ meningitis → mottling, lethargy, hyperirritability/ seizure. Fontanelle examination. Respiratory distress and apnoea
- Interpretation of lab result e.g. neutropenia, ANC/ and I/T ratio , CRP, hypo or hyperglycaemia. CSF, blood and urine Cultures.
- Pneumonia and NEC associated with sepsis.
- Antibiotics policies in neonatal sepsis

Apnea & Grunting at Birth

Objectives :

- Apgar scoring and its interpretation.
- Care of normal baby at birth
- Types of apnea & its management
- Demonstration of Signs of respiratory distress in the newborn.
- Causes and D.D of grunting in the newborn .
- Neonatal resuscitation.
- Interpretation of Blood gas Results

Neonatal Radiology

Objectives : by the end of this session the medical students see & knows :

- Normal Neonate X-RAYS: CXR , abdomen
Large Thymus, Cardio thoracic ratio measurements.
- Typical x-rays of HMD, ,Pneumonia , Diaphragmatic hernia ,
Oesophageal atresia , Duodenal atresia, NEC and perforation.
- X ray pneumothorax, pneumomediastinum, collapse lung ,pleural effusion. Radiology findings difference in each of these conditions.
- Intracranial calcifications in cong. Infections
- Typical x-rays of TGA & Fallot Tetralogy .
- X-RAY of fracture Bones

Communication skill session : breaking bad news

Objectives : by the end of this session the medical student knows:

- communication skills with parents of baby with congenital disease
- communication skill of breaking bad news.
- Down syndrome /Hypothyroidism- typical clinical feature demonstration and information about karyotyping.
- Genital exam and show features of congenital adrenal hyperplasia.
- Cleft lip and palate clinical features and management and nutrition problems.
- communication skill with the parents of babies with above conditions.

Respiratory distress in full term baby

Objectives :

- Demonstration of signs of respiratory distress.
- D/D and investigations
- Meconium Aspiration case discussion, its complications and management.
- Transient Tachypnea of newborn and typical x-ray findings.
- Infant of diabetic mother and blood sugar monitoring interpretation of hypoglycemia

Baby with cyanosis

Objectives :

- Demonstrate clinical cyanosis
- to differentiate central and peripheral cyanosis ,acrocyanosis
- D/D of central cyanosis, emphasis on congenital cyanotic heart disease
- Investigations and emergency management of congenital cyanotic heart disease
- Discuss use of Prostaglandin infusion and its potential complications.

TOPICS FOR TUTORIALS

- ◆ Infant Nutrition
- ◆ Anaemia and its Investigations
- ◆ Diarrhea & Dehydration
- ◆ Child with a murmur
- ◆ Febrile convulsion
- ◆ Hematuria
- ◆ Lymphadenopathy
- ◆ Floppy Infant
- ◆ Arthritis
- ◆ Edema
- ◆ Rickets
- ◆ PUO
- ◆ Hypertention
- ◆ Diabetic Ketoacidosis

CLINICAL SCENARIO TOPICS

Failure to thrive infants

Objective: by the end of this session the medical student knows:

- Definition of failure of thrive and growth chart interpretation.
- Causes (nutritional, GIT diseases, endocrine, genetic and syndromes, chronic diseases)
- clinical finding in failure to thrive
- FTT in preterm (SGA, nutritional, short bowel due to NEC, Chronic Lung disease.
- Nutritional assessment.
- primary investigation e.g.(bone age, Thyroid function test, Albumin, chromosomal study in turner syndrome)
- Nutritional support

Developmental delay in 2years old child

Objective: by the end of this session the student should be able to

- Comment on the growth chart; plot the parameter in proper chart.
- Assess clinically the developmental age.
- Differentiate between mental retardation and developmental delay.
- differentiate between cerebral palsy and neurodegenerative disorder

Child with recurrent respiratory infection

Objective:

- Difference between recurrent upper respiratory tract infection and recurrent pneumonia
- When to investigate child with recurrent chest infection
- Causes and management of recurrent pneumonia
- Interpretation of CXR, Blood gas, Lung function test (obstructive VS restrictive), peak flow meter, use of bronchodilator devices (nebulizer, MDI, Spacer, Terbohaler)
- Bronchiectasis causes and management including physiotherapy.

3mo old Down's syndrome baby , admitted 3times because of recurrent chest infection.

Objective: by the end of this session the medical student should be :

- List the features of Down's syndrome.
- Discuss the causes of recurrent chest infection in Down's syndrome.
- Innumerate the cardiac defect and the mode of presentation in Down's syndrome.
- What is the GI complication in Down syndrome.
- list the late complication/ association in Down's syndrome(thyroiditis, celiac, leukemia, axial instability)
- Discuss the risk of getting another child with Down's syndrome next pregnancy.

Prolonged neonatal jaundice

Objective: student should be able to

- Differentiate between direct and indirect hyperbilirubinaemia.
- Causes of direct and indirect hyperbilirubinaemia.
- kernecturus presentation and prevention
- Investigation and interpretation of the result (FBC, hemolytic anemia, cong infection, LFT.
- Exclude biliary atresia in case of direct hyperbilirubinaemia
- Congenital causes of jaundice

Abnormal movement in children

Objective:

- Difference between epilepsy and febrile convulsion
- Ataxia in children: presentation and differential diagnosis of ataxia.
- managements of epilepsy and what advise to be given for the parent in case of febrile convulsion/ epilepsy.
- analysis of CSF fluid (septic and aseptic meningitis, encephalitis, TB)
- investigation (EEG, CT scan)

Recurrent urinary tract infection

Objective: by the end of this session the medical student knows:

- Difference between upper and lower UTI
- Cause of recurrent UTI (upper and lower UTI)
- Investigation of pyelonephritis (urine analysis, X ray, renal USS, nuclear study DMCG, DTPA)
- Types of Urine collection and interpretation of urinalysis.
- Management of UTI.

4years old child , known case of bronchial asthma came with silent chest , drowsy ,

Objectives:

- ☆ Definition of status asthmaticus
- ☆ Discuss the management of status asthmaticus
- ☆ Doses of medication used in acute emergency should be known to all student
- ☆ List the investigation according to priority
- ☆ Family education in common pediatric diseases (asthma

Pyrexia of unknown origin

Objective: by the end of this session the medical student knows:

- Definition of PUO
- D/D of Pyrexia of unknown origin
- Investigation and interpretation of result.
- examples of the case scenario Typhoid fever, malaria,

Child with Abdominal pain

Objective: by the end of this session the medical student knows:

- Difference between acute and chronic abdominal pain
- Intestinal obstruction (présentation, investigation, management)
- investigation of acute and chronic abdominal pain.
- Lab (electrolyte disturbance, dehydration,
- abd X ray interpretation (perforation, intestinal obstruction, constipation)
- Difference between organic and non organic abdominal pain.

Acyanotic heart disease

Objective: by the end of this session the medical student knows:

- Causes of acyanotic heart disease
- Sign of heart failure in baby and infant
- heart failure management.
- Lab and investigation interpretation (CXR, blood gas, ECG)
- Coarctation of aorta and hypertension
- Taking blood pressure
- endocarditis prophylactic
- innocent murmur.

Polyuria in children (IDDM – Diabetes Insipidus)

Objective: by the end of this session the medical student knows:

- Causes of Polyuria (psychological, IDDM, DI)
- Presentation and managements of DKA
- Treatment and follow up of IDDM
- Interpretation of the investigation (urea and electrolyte disturbance, Blood gas)
- Parent education and advice

7days old baby female referred because of poor sucking, and weak cry

Objectives: : by the end of this session the student should be able to

- Review the history and exclude via your history the possibilities of sepsis, meningitis metabolic disease, endocrinal and neurological causes.
- Clinical signs of sepsis, shockin neonate
- Investigations of the following(septic workup, metabolic diseases, endocrine and CNS)

Limping child

Objective: by the end of this session the medical student knows:

- Difference between arthritis, arthralgia
- Presentation and Causes of Acute and chronic arthritis
- Differential diagnosis joint swelling (trauma, rheumatic disease, hemarthrosis, systemic diseases , HSP, Kawasaki, others)

- When and how to investigate child with arthritis and arthralgia (lab result , X rays, nuclear study)
- Analysis of Synovial fluid (exudates and transudate)

Neonate with Preterm complication

Objective: by the end of this session the medical student knows:

- To plot the corrected age on the growth chart
- developmental assessment in the infant
- PDA presentation and management.
- discuss the respiratory complication
- GIT: necrotizing enterocolitis , short bowel, nutrition in preterm.
- IVH, hydrocephalus and developmental delay
- X ray for NEC, HMD, pnemothorax, meconium aspiration
- lab result (septicemia, blood gas, septic work up)

Floppy baby

Objective : by the end of this session the medical student knows:

- Discuss the Causes and deferential diagnosis of floppy infant.
- Clinical assesment of floppy infant.
- complication (Aspiration, recurrent infection, nutritional support)
- management and care of floppy infant.

Child with chronic diarrhea

Objective: by the end of this session the medical student knows:

- Difference between acute and chronic diarrhea
- Presentation of chronic diarrhea and sign of extra intestinal manifestation.
- Clinical finding in a child with chronic diarrhea
- Differential diagnosis of chronic diarrhea
- Managements and follow up of chronic diarrhea

Blue infant

Objective: by the end of this session the medical student knows:

- Definition of central and peripheral cyanosis.
- Differentiate between respiratory and cardiac causes
- Blood gas interpretation.
- Ductus dependant cyanotic heart diseases
- Managements and Care of neonates with cyanotic heart disease
- Lab and investigation interpretation (CXR, blood gas, ECG)
- Cyanotic spell managment

A child with hypothyroidism came for follow up.

Objective: students should be able to

- List the presentation of hypothyroidism

- Discuss the investigation needed (knee X ray, screening test, thyroid function test, indication of collecting other hormonal assay)
- How to follow the patient (e.g. treatment , growth parameters).

9year old child , known case of IDDM on insulin, admitted with DKA

Objective: by the end of this session the medical student knows:

- Presentation of DKA
- Causes of recurrent DKA
- Laboratory results including (Blood gas, HbA1C, TFT, others)
- List the complication of IDDM → growth, renal, ophthalmic
- Associate disease in DM → thyroiditis, celiac,
- Management of IDDM during the infection , sickness and surgery
- Type of insulin used in DM

6 year old child complaining of recurrent epigastric pain for the past years.

Objective: by the end of this session the medical student knows:

- What other history should be obtained to direct you for the possible causes?
- What is the differential diagnosis? Functional and organic causes.
- List the required investigation according the priority and what is the indication? Stool analysis, parasitic infestation, FBC,ESR, CRP, indication of radiology and endoscopy.
- Management plan

7year old baby , had sever abdominal pain for the past 4hours (appendicitis)

Objective: by the end of this session the medical student knows:

- Causes of acute abdomen in infant
- Causes of acute abdominal pain in children
- List the differential diagnosis between appendicitis and mesenteric adenitis
- Review the history according to your differential diagnosis.
- Investigation :→ abdominal X ray for intestinal obstruction, intestinal perforation
- Medical and surgical management

10years old child came recently from Somali , he was admitted frequently in the past 4years to the hospital with chest infection.

Objective: by the end of this session the student should be able to

- Review the history to exclude the causes of recurrent chest infection
- Clinical evaluation → sign of chronic lung disease, failure to thrive,
- Discuss diseases associated with bronchiectasis → CF, kartigner , immotile cilia syndrome, schwach mann syndrome.
- Difference between bilateral and unilateral bronchiectasis
- Investigation : blood gas in chronic hypoxia, sweat chloride, immune difficiency,

2years old boy had Bleeding from the gum.

Objectives:

- List the causes according to age group
- Review the history and learn how to ask the question to exclude the (trauma, bleeding disorder, liver diseases, acute infections, systemic disease and DIC, malignancies, side effect of medications).
- First line investigation: what is the indication of each test?
- Interpretation of coagulation profile. And assess the common factors deficiencies

1year old child came with palpitation. He was sick looking with tachycardia.

Objectives:

- List the Causes of tachycardia in children.
- Identify the manifestations of heart failure.
- Discuss the SVT presentation and first line management.
- ECG reading: normal ECG, SVT, left ventricular hypertrophy.
- Clinical finding in heart failure
- Causes and presentation of dilated cardiomyopathy

10 year old complain of recurrent abdominal pain for the past 4months

Objectives: : by the end of this session the student should be able to

- List the causes of chronic abdominal pain according to age group.
- Discuss the presentation of nonspecific abdominal pain
- Review the history to exclude inflammatory bowel disease, gastritis,GER, pancreatitis, migraine, psychological causes
- Clinical evaluation and what is the important negative history to be mentioned in the clinical examination.
- Investigation: what is the indication of each test?
- Management of gastritis , gastroesophageal reflux

15-month-old child referred to you because of recurrent wheezing.

Objectives:

- List the causes of recurrent wheezing in young infants
- History review to exclude the other causes (e.g. history of atopy, Gastro esophageal reflux, Asthma, cong. Heart disease, wheezing related to prematurely complications, cystic fibrosis
- Clinical examination to be focused on the growth (chronic disease), CVS, Chest, GIT and nutrition.
- Discuss the Management of recurrent wheezing. And the use of prophylactic treatment indication
- Interpretation: CXR bronchiolitis, blood gas in respiratory failure, RAST and IgE.

5y old child presented status epilepticus

Objectives:

- ☆ Definition of status epilepticus
- ☆ Discuss the management of status a epilepticus
- ☆ Doses of medication used in acute emergency should be known to all student
- ☆ List the investigation according to priority
- ☆ Family education in common pediatric diseases (epilepsy)

1y old child known case of sever cow milk allergy, during a neighbor visit , received small amount of milk, within seconds he become restless, rash appeared allover the body, with sever respiratory distress

Objectives:

- ☆ List the sign of shock.
- ☆ What is the difference between anaphylactic shock, food allergy
- ☆ Discuss the management of anaphylactic shock
- ☆ Doses of medication used in acute emergency should be known to all student
- ☆ Family education in common pediatric diseases (anaphylactic shock), prevention of anaphylactic shock and the use of epipen

8year old girl brought to the hospital as she was seen submersed in the see for 5minuts

Objectives:

- ☆ List the difference between drowning and near drowning
- ☆ Discuss the initial management?
- ☆ List the indicated investigation in the first 4hours
- ☆ Doses of medication used in acute emergency should be known to all student.
- ☆ Family education and prevention

Child with neck swelling.

Objectives:

- ☆ Anatomy of cervical lymph nodes
- ☆ To differentiate between the enlarged thyroid, parotid swelling and other neck masses
- ☆ D/D of neck swelling including (cystic hygroma, TB lymphadenopathy, EBV and lymphoma)
- ☆ To differentiate between localized and generalized lymphadenopathy
- ☆ Investigation (blood film, mantoux test and other relevant investigation)

7years old boy brought to the emergency department due to unsteady walk (Child with abnormal gait)

Objectives:

- ☆ Differential diagnosis of unsteady gait
- ☆ Causes of ataxia
- ☆ clinical evaluation and investigation

3y old child presented with sudden attack of loss of consciousness

Objectives:

- ☆ The difference between Syncope attack & coma
- ☆ Causes of coma
- ☆ Causes of syncope
- ☆ Clinical examination & Glasgow coma scale
- ☆ Emergency management and investigation of coma

Child with headache

Objectives: Objectives: : by the end of this session the student should know:

- ☆ Causes of headache : vision refractory error – chronic sinusitis, hypertension, migraine, space occupying lesion and intracranial hemorrhage
- ☆ Causes of Fever& headache
- ☆ Related investigations.
- ☆ Approach & management