

NIRMALA COLLEGE OF PHARMACY



NIRMALA COLLEGE OF PHARMACY MUVATTUPUZHA

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FIRST CYCLE NAAC ACCREDITATION 2023

CRITERION 1



CURRICULAR ASPECTS

**1.3.2. Percentage of students undertaking project work/field work/ internships
(Data for the latest completed academic year)**

Submitted to



THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



1.3.2. Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year:2022-2023)

III PHARM D FIELD WORK

OBJECTIVES

- To provide pharmaceutical care.
- To provide upto date unbiased drug information to patients and other health care providers.

COURSE OUTCOMES

Students will be able to provide pharmaceutical care intervention's by analysing the drug chart, lab reports and clinical conditions of patient.

CONTENTS

- PERMISSION LETTER FOR FIELD WORK FROM THE COMPETENT AUTHORITY.
- REPORT OF FIELD WORK
- SAMPLE PHOTOGRAPHS OF THE FIELD WORK



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NIRMALA MEDICAL CENTRE
(A unit of Nirmala Society for Medical Care, Reg. No ER-503/01)
Muvattupuzha – 686 661, Kerala , India
E-mail: nirmalamedical@gmail.com Ph: 04852835151
Web: www.nirmalamedicalcentre.com



Date:14/12/2022

LETTER OF PERMISSION

The following students of Third year Pharm D, Nirmala College of Pharmacy, Muvattupuzha are permitted to undergo fieldwork/hospital training for a period of Four months (19/12/2022-20/04/2023), as a part of their academic requirement specified by Pharmacy Council of India.

Sl. No	Name of Student
1	Aboobakkar Sidhik Sanil
2	Anas Muhammed Azad
3	Anjana Raj
4	Aparna S Biju
5	Ashly Mary Mathew
6	Ayona Elezabeth
7	Edwin Sam
8	Eveena Sara Binny
9	Freddy Alappattu
10	Gouri Ganesh
11	Hanna Mathew
12	Hila A D
13	Jannath Parwin K I
14	Jeevan Joseph Jaison
15	Mabel Augustine
16	Megha Shaji
17	Nadheem Muhammed Shajeef
18	Nancy Joseph
19	Nandhana Shibu
20	Naveen K Biju
21	Sama Fathima
22	Sandra Baby
23	Sneha Susan Samuel
24	Tania Sibi
25	Teresa Mary Sobi



It is understood that the students will abide by the rules and regulations of Nirmala Medical Center and will be monitored by the faculty members of Nirmala College of Pharmacy.


Medical Superintendent
Nirmala Medical Center
Reg.No: 48295
Muvattupuzha
Medical Superintend Centre
Nirmala Medical Centre
Muvattupuzha - 686661



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK REPORT III PHARM D

Submitted by

Aboobakkar Sidhik Sanil

Anas Muhammed Azad

Anjana Raj

Aparna S Biju

Ashly Mary Mathew



SUBJECTIVE

A 81 year old man was admitted in general medicine ward with chief complaints of tiredness, increased thirst.

PATIENT DETAILS

Name :- Mr. X
Age :- 81 years
Gender :- ~~Male~~ Male
Department :- General Medicine
IP no:- :- 21125
OP no:- :- 2533801
DOA :- 13/12/2022
DOD :- 16/12/2022

PAST MEDICAL HISTORY

Diabetes Mellitus - 10 yrs
Dyslipidemia

PAST MEDICATION HISTORY

T. Metformin 500mg 1-1-1
T. Januvia 100mg 1-0-0
T. Atorva Abz 40mg 0-0-1
T. Cholecalciferol 20000 IU

HISTORY OF PRESENT ILLNESS

Tiredness
Increased thirst.



CASEA CASE PRESENTATION ON UNCONTROLLEDDIABETES MELLITUSDIABETES MELLITUS

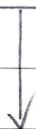
DM is defined as a heterogeneous metabolic disorder characterized by common features of chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism.

ETIOLOGY

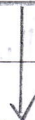
Obesity, family history of type 2 DM, habitual physical inactivity, hypertension, dyslipidemia, history of vascular disease, Age, polycystic ovary disease.

PATHOPHYSIOLOGYGenetic factors

-) Concordance in identical twins - 80%.
-) Both parents diabetic - 50% risk to the child.

Constitutional Factors

-) Obesity
-) Hypertension
-) low physical activity.



OBJECTIVE

General Examination

Date	14/12	15/12	16/12
BP	130/80	140/90	130/90
Pulse	86	74	80
RR	22	20	22

LAB INVESTIGATION

Parameter	Normal Value	13/12	14/12	15/12	16/12
Blood					
HB	13-15 gm%.	13.7	-	-	-
RFT					
Na ⁺	135-145 MEq/L	137	-	-	-
K ⁺	3.5-5.5 mmol/dL	4.1	-	-	-
Creatinine	0.6-1.4 mg/dL	12	-	-	-
Blood Urea	7-20 mg %.	30	-	-	-
Blood Sugar					
RBS	80-160 mg/dL	430	154	165	-
FBS	<100	-	177	214	110

LAB INVESTIGATION ON 13/12

Urine result

Albumin - Nil
Sugar - Yellow

Pm cells :- 1-3/hpf
Urine ketone - Negative



Decreased insulin secretion

- .) Amylin
- .) Glucose toxicity of islets
- .) Hepatotoxicity

Insulin resistance

- .) Receptor & post receptor effects.
- .) Impaired glucose utilization.

Increased hepatic glucose synthesis

Hypoglycemia

Uncontrolled DM

RISK FACTORS

Age >45, First degree relative with DM, Obesity, Hypertension, history of CVD, Impaired fasting glucose, HDL-Cholesterol <35 mg/dL, Alcohol, Smoking, physical inactivity, neuropathy, retinopathy.

TREATMENT

HbA1c < 8.0% or
FBS < 180 mg/dL

HbA1c ≥ 8.0% or FBS ≥ 180 mg/dL

Lifestyle & Metformin (unless contraindicated)



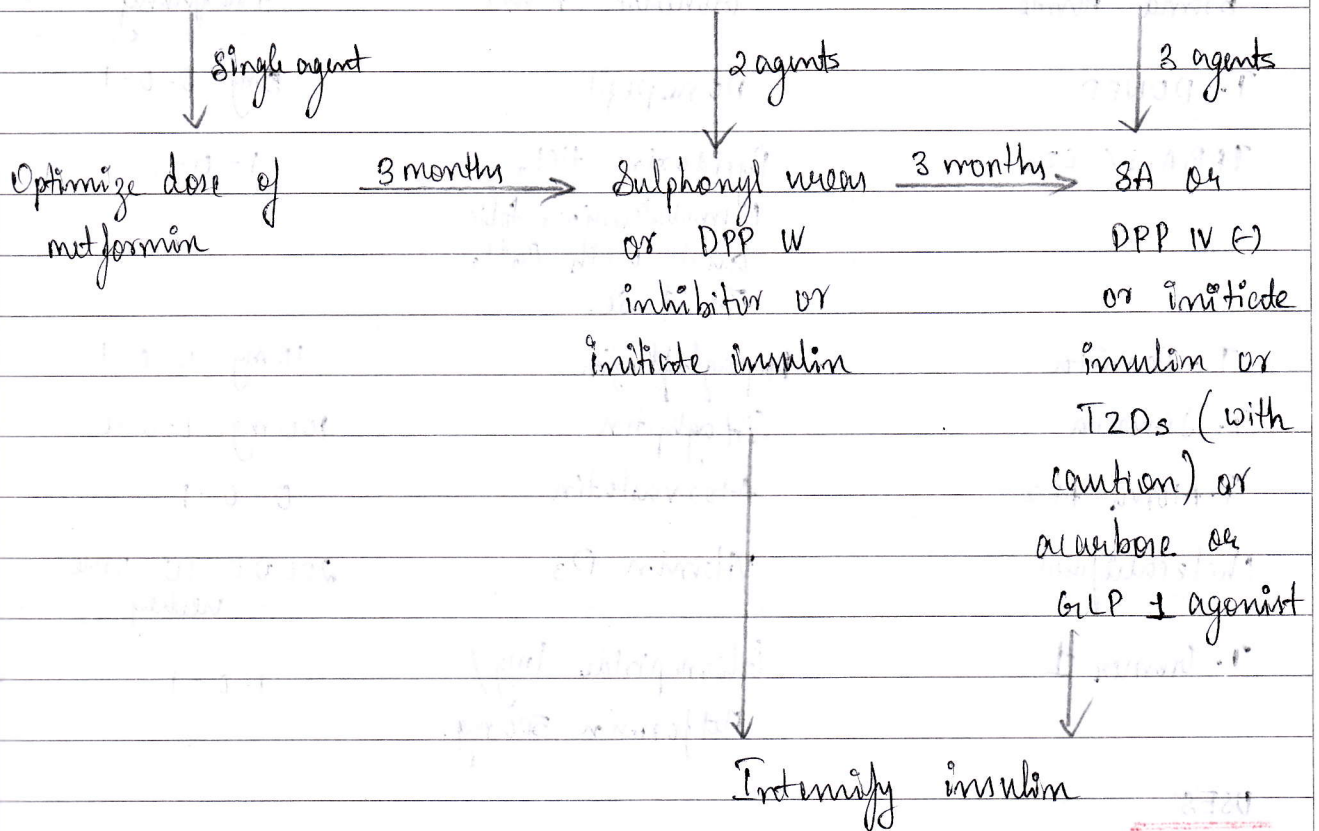
ASSESSMENT

Final diagnosis :- Uncontrolled Diabetes Mellitus.

TREATMENT PLAN

BRAND NAME / GENERIC NAME	DOSE & FREQUENCY	13/12	14/12	15/12	16/12
H. Actrapid (Human insulin)	10, 15, 6 U half hr before food	✓	✓	✓	✓
H. Insulatard (Isophane insulin)	60 U	✓	✓	✓	—
DONEP (DONEPEZIL)	5mg, 0-0-1	✓	✓	✓	✓
T. COBADEX LZS (Pyridoxine hydro- chloride, Cyanocobalamin, Folic acid with Chromium, Zinc, Selenium)	1-0-1	✓	✓	✓	+
T. DAMITA (Dapagliflozin)	10 mg 0-0-1	✓	—	—	—





PHARMALIST INTERVENTION

- Concurrent use of Sitagliptin & insulin secretagogues result in increased risk of hypoglycemia.
- Dapagliflozin, insulin isophane, insulin regular humanis either increases effect of other by pharmacodynamic synergism. Use caution/monitor.

PATIENT COUNSELLING

Based on Disease

- Frequent BG check up.



DISCHARGE MEDICATION

Brand name	Generic name	Frequency
T. DONEP	Donepezil	5mg 0-0-1
COBADEX CZS	Pyridoxine HCl, Cyanobalamin, folic acid with Ca ⁺⁺ , Zn & Se.	1-0-1
T. Damiata	Dapagliflozin	10mg 0-0-1
T. Januvia	Sitagliptin	100mg 1-0-0
T. Atorva ABZ	Atorvastatin	0-0-1
cholecalciferol	Vitamin D ₃	20000 IU once weekly
T. Gremex 1	Glimepiride 1mg/ Metformin 500mg.	1-0-1

USES

H. Actapid :- Used to lower the blood glucose level for the type I & II DM.

H. Insulatard :- " "

Donep :- Used for mild to moderate dementia

Cobadex CZS :- treating of alzheimer's, anemia due to folic acid deficiency.

T. Damiata :- is a SGLT-2 inhibitor for treating type II DM.

T. Januvia :- is a DPP IV inhibitor for type II DM

T. Gremex 1 :- Treatment of DM

cholecalciferol :- For osteoporosis, osteomalacia, Vit D deficiency.



SUBJECTIVE

A 61 year old female was admitted in GM ward with complaints of cough, breathlessness, fever for 3 days.

PATIENT DETAILS

Name :- Ms. M

Age :- 61 years

Gender :- Female

OP no :- 2575162

Department :- General Medicine

DOA :- 17/01/23

DOD :- 22/01/23

History of Present illness - Cough, breathlessness, fever, tiredness from 3 days.

GENERAL MEDICINES

Date	17/01	18/01	19/01	20/01	21/01	22/01
Temp	98.6	98.6	98.6	98.6	98.6	98.6
BP		150/70	130/70	160/80	130/90	130/70
Pulse	78	72	76	80	78	78

LAB INVESTIGATIONS ON 17/01

;) Serum

RBS - 92 mg %.

Creatinine - 1.0 mg %.

SGPT - 29 U/L



CASEA CASE PRESENTATION ON PNEUMONIAPNEUMONIA

Lung inflammation caused by bacterial or viral infection, in which the air sacs fill with pus and may become solid. Inflammation may affect both lungs. This may cause a decrease in the amount of oxygen that blood can absorb from air breathed into the lung.

ETIOLOGY

Pneumonia is mainly caused due to bacterial and viral infections.

- 1) Bacteria:- Streptococcus pneumoniae, Staphylococcus aureus, Group A streptococcus, Klebsiella pneumoniae, H. influenzae.
- 2) Virus:- Influenza virus, Respiratory syncytial virus (RSV), SARS-COV2.

PATHOPHYSIOLOGY

Aspiration of gastric content or infection of the lungs.

Inflammatory response initiated.

Alveolar edema & Exudate formation.



PARAMETERS	OBSERVED VALUE	NORMAL VALUE
CBC :		
Hb	13.8	12-16gm/dL
Tc	10500 cells/mm	
Dc :-		
N	57%	40-80%
E	5%	1-6%
L	38%	20-40%
Platelet count	220000	150000-400000/mm
ESR	16mm/hr	

URINE ANALYSIS

Urine albumin - Nil

Urine sugar - Nil

URINE MICROSCOPY

Rm cells :- 0-1

Epi cells :- Occ

LAB INVESTIGATIONS ON 18/01

CRP :- 5.96 mg/dL

Trop I (TNHs) :- < 1.5 mg/dL

OTHER TESTS ON 17/01

X-Ray, ECG, Covid Antigen Test

FINAL DIAGNOSIS

Pneumonia, HTN



Decreased production
of sputum



Times
mucolyse

↓
Alveoli and respiratory
bronchioles fill with
serous exudate, blood
cells, fibrin.

Purulent
sputum

→ Pneumonia

RISK FACTORS

- 1) Cigarette Smoking
- 2) Upper respiratory tract infections
- 3) Alcohol
- 4) Corticosteroid therapy
- 5) Old age
- 6) Recent influenza infection
- 7) Pre existing lung disease.



TREATMENT

- > Early pneumonia < 5 days - β -lactam, amoxicillin/clavulanic acid or 3rd gen cephalosporin, Cefotaxime

In case of allergy to β -lactam - levofloxacin

- > Late pneumonia ≥ 5 days - β -lactam, Ceftriaxime or cefepime or piperacillin - Tazobactam or meropenem + amikacin.

- > Any presentation, presence of MRSA risk factors - Vancomycin or

DRUGS	FREQUENCY	17/01	18/01	19/01	20/01	21/01	22/01
IV Dexamethasone	1 amp	++	+++	+++	+++	+++	
IV Eszom - 3 (cyproheptadine & salbutamol)	1.5 mg BD	++					
MUCINAC 600 (Acytylcysteine)	BD	++	++	++	++	++	+
Antiflu (oseltamivir)	75 mg BD	++	++	++	++	++	
IV UV Cort (hydrocortisone sodium)	100 mg BD	++	++	++	++	+	
Asth alim Neb		++	+++	+++	+++	+++	+
Ipratropium Neb. (Ipratropium bromide)	BD	++	++	++	+		
IV Tagomac (piperacillin & Tobramycin)	4.5 mg TID	+++	+++	+++	+++	+++	+
T. T-SART 40 (Telmisartan & Chlorthalidone)	OD	+	+	+	+	+	+
T. Inupred (Methyl prednisolone)	8 mg BD				+	++	+
Pantop 40 (pantoprazole)	BD				++	++	+
T. Dexamethasone R (Etophyllin & Theophylline)	150 mg BD				+	+	+
O ₂ Inhale.							



linezolid.

PHARMACIST INTERVENTION

- 1) IV ESZON-S (cefoperazone & sulbactam) an antibiotic has been missed as it was given only a single day (17/01).
- 2) Concurrent use of Salbutamol and potassium - depleting diuretics (TSART - chlorthalidone) may result in ECG changes due to hypokalaemia.



PATIENT COUNSELLING

About Drug:-

- 1) T. Dimiphydon R - Take drug the same way every dose. Choose to take drug always with food or always without food, as this influences the drug.
- 2) T. Proxi CV - Report signs / symptoms severe sickness like reactions (rash, urticaria, fever etc.)
- 3) T. Mucinae - Warn patient that drug has disagreeable odour. Oral form may also cause other GI symptoms.
- 4) T. Inepred - Drug may cause thinning of skin, impaired wound healing, fluid retention, peptic ulcer, euphoria etc.

ANTIBIOTIC SENSITIVITY TEST

Organism :- E. coli

Sensitive :-

Gentamycin, Amikacin, Norfloxacin, Ceftriaxone, chloramphenicol, Cefuroxime, cefepime, piperacillin, Azithromycin, Cefoperazone, Moxifloxacin.

Resistant :-

Cefran, Ampicillin, Levofloxacin, Amoxicillin, cephalexin, Cefotaxime, Ofloxacin, Linezolid

DISCHARGE MEDICATION

Drug	Frequency / Duration
T. Proxi CV (Cyclopodoxime proxetil & lansulonic acid)	1-0-1 after food x 5 days
T. Duspiphyllin R	150mg 1-0-1 x 10 days after food
T. Mucinex	600mg 1-0-0 x 10 days.
T. Ivermect	4mg 1-0-1 x 10 days.
T. TSART	40 mg 1-0-0 x 10 days.
Asthalin MDI	1 puff 1-1-1

Follow up :- Review after 10 days.



A 5 year old child was admitted in Paediatric ward with complaints of fever, cough, cold and abdominal pain.

SUBJECTIVE

Patient Details

Name :- Ms. M

Age :- 5 yrs

Gender :- Female

Weight :- 18 kg

OP no :- 2576536

Department :- Department of Paediatrics

DOA :- 11/02/2023

DOD :- 17/02/2023

HISTORY OF PRESENT ILLNESS

Fever, cough, cold and abdominal pain

PAST MEDICATION HISTORY :- Nil

FAMILY HISTORY :- Nil

PAST MEDICAL HISTORY :- Nil



CASEA CASE PRESENTATION ON ACUTE BRONCHITISWITH UTIACUTE BRONCHITIS

Acute bronchitis is an inflammation of the large airways of the lung. Acute bronchitis is caused by infection of the large airways commonly due to viruses and is usually self limiting. Bacterial infection is uncommon. It can sometimes be caused by allergens, irritants and bacteria. Irritants include smoke inhalation, polluted air inhalation, dust, among others.

ETIOLOGY

Virus, Bacteria, Pollution, Smoking, Exposed to second hand smoke, Elderly and infants, Asthma, COPD, GERD

PATHOPHYSIOLOGY

Etiologic agents irritates airways

Hyperscretion of mucus and inflammation

Bronchial walls become thickened, mucus plugs airways

Bronchitis



OBJECTIVE

General Examinations

Date	15/02	16/02	17/02
Temperature	98.6 °F	N	N
Pulse	82 b/m	102 b/m	100 b/m
RR	20 b/m	20 b/m	20 b/m

LAB INVESTIGATIONS ON 11/02/23

Parameter	Normal level	Observed value
Blood		
Hb	13-15 gm/1.	12.3
TC	4000-11000 (/mm)	8100
N	55-70 %	64 %
L	20-40 %	35 %
E	1-6 %	1 %
Platelets	1.5-4 lkh	160,000
ESR	0-20 mm/hr	25 mm/hr

OTHER INVESTIGATIONS ON 11/02/23

CRP : 11.81 mg/L

Culture +nt

X-Ray (chest PA)



SIGNS & SYMPTOMS

- 1) Shortness of breath
- 2) Wheezing
- 3) Fatigue
- 4) Fever and chills.
- 5) Runny nose
- 6) Chest discomfort and cough.

STANDARD TREATMENT

Patient with cough & chest symptoms
consistent with acute bronchitis



Is the bronchitis uncomplicated

Yes

History & physical examination
to rule out causes of cough

Acute bronchitis → No → Treat
cause
of cough.

Yes

Treat with protinives, antitussives,
bronchodilators

Symptoms persist for two weeks / more despite appropriate
treatment of symptoms.

No

History and physical
examination, consider
chest radiography,
PFT, Sputum
culture & antibiotic
therapy.

LAB INVESTIGATIONS ON 11/02/23

Parameters	Observed value
<u>Urine</u>	
Urine albumin	Trace
Urine Sugar	Nil
<u>Urine Microscopy</u>	
PM cells	8-10
RBC	0-2
EPi cells	Occ
Bacteria	Present

ASSESSMENT

Final Diagnosis :- Acute bronchitis with UTI

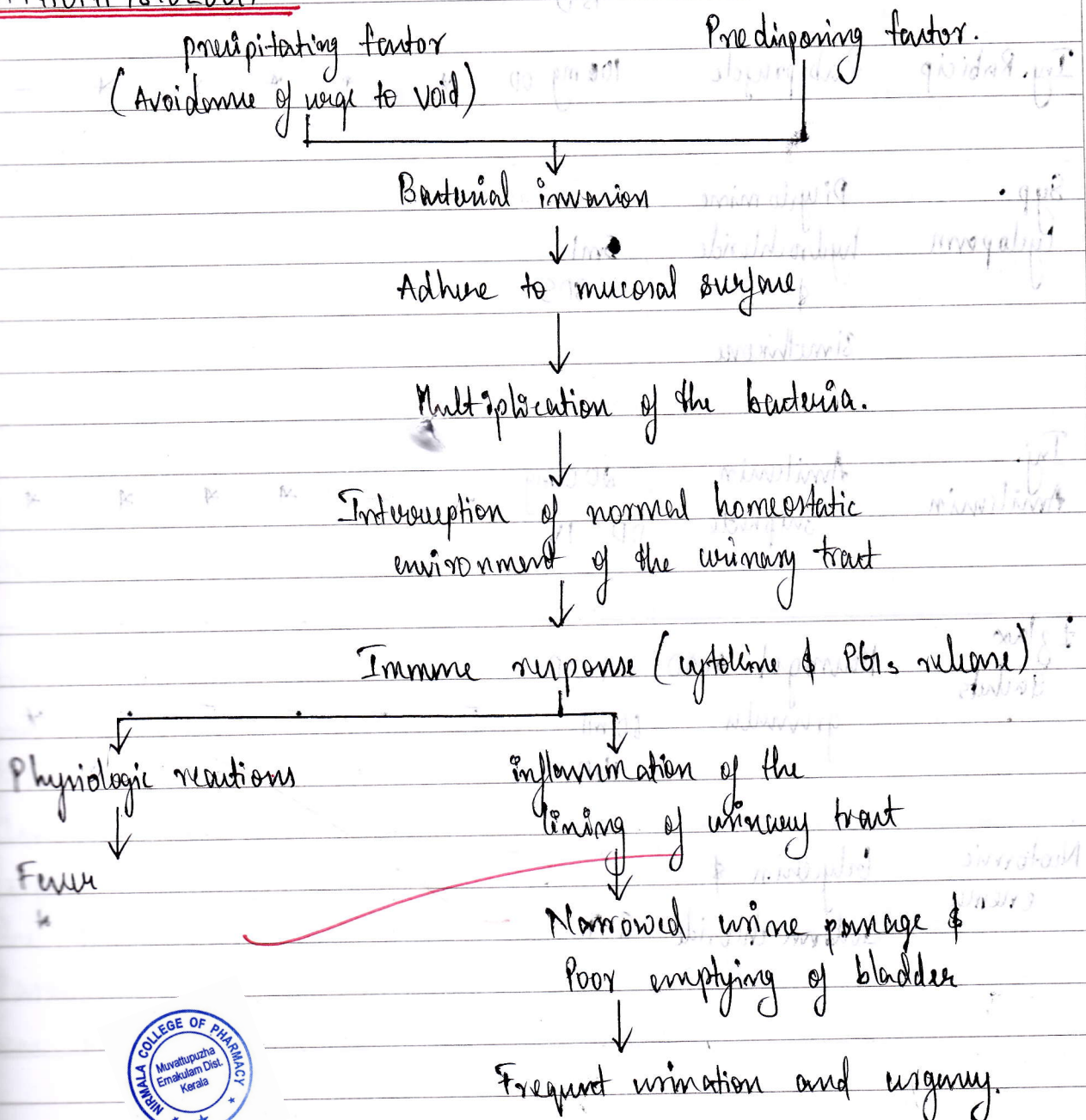
PLAN

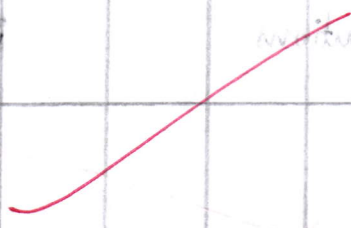
Drug	Generic name	Dose & Frequency	11/02	12/02	13/02	14/02	15/02
IV Pmol	Paracetamol	1.5g, IV, SOS	*	/			
Fepamol 250	Paracetamol oral suspension	5ml	*	*	*		
Syp. Moxing	Montelukast sod & levocetirizine HCl	5ml	*	*	*	*	*
DuoLine Neb	Ipratropium bromide & levosalbutamol	1/2 BD	*	*	*	*	*

URINARY TRACT INFECTION

UTI is an infection in any part of the urinary system. The most infections involve the lower urinary tract - the bladder and the urethra. Women are at greater risk of developing UTI than men.

PATHOPHYSIOLOGY



Oxelon PD	Oxymetazoline	3 drops BD	*	*	*	*	*	-
Inj. Clavam	Amoxycillin (500mg) + clavulanic acid (100mg)	600mg BD	*	*	*	*	*	*
C. Antithu	Osetamivir	75mg $\frac{1}{2}$ BD	*	*	*	*	*	-
Inj. Rabicip	Rabeprazole	10mg OD	*	*	*	*	*	-
Syp. Cylaporm	Piylomine hydrochloride & Simethicone	5ml SDS						
Inj. Amikacin	Amikacin sulphate	200mg OD IV	-	-	*	*	*	*
Eglox Sachets	Humogol 4000 granules	1 OP 60ml H ₂ O	-	-	-	-	-	*
Neotomic enema	Glycerin & Sodium chloride	8.7						*

STANDARD TREATMENT

Children > 3 yrs of age.

Perform Urine dipstick test

↓
+ve for leukocyte
esterase & nitrate

↓
Diagnose UTI

↓
initiate antibiotic
treatment.

↓
-ve for leukocyte
esterase & +ve for
nitrate

↓
initiate antibiotic
treatment & send
sample for culture

↓
Treatment depends on
culture results.

↓
+ve for leukocyte
esterase & nit -ve
for nitrate.

↓
Send urine sample
for microscopy &
culture

↓
Treat depending
on culture results.

PHARMACIST INTERVENTION

- Amikacin - amoxicillin/clavulanic acid :- Concurrent use of aminoglycosides & penicillins may result in loss of aminoglycoside efficiency.
- Concurrent use of grapefruit and montelukast increases montelukast exposure.
- The frequency of Zepnil 250 & syp Mizing was not given.
- Paracetamol IV and suspension was given same day which was not required.

DISCHARGE MEDICATION

Drugs	Generic name	Dose & Frequency
Syp. Bantolan	Amoxycillin & Potassium clavulanate	4ml BD x 4 days
Syp. Mazing	Montelukast Sodium & Levocetirizine HCl	5ml HS x 1 week
Eglox Sachet	Paracetamol 4000	100 x 5 days
Syp. Ambrodil S	Ambroxol hydrochloride	2.5ml BD x 5 days
Syp. Zimovit	Multivitamin	5ml OD

FOLLOW UP :- Review after 5 days

USES

- 1) Syp. Bantolan :- Antibiotic
- 2) Syp. Mazing :- Leukotriene antagonists
- 3) Eglox sachet :- Treat constipation.
- 4) Syp. Ambrodil :- Bronchodilator
- 5) Syp. Zimovit :- Multivitamin
- 6) Inj. Amikacin :- Antibiotic
- 7) C. Antithu :- Antiviral
- 8) IV. Pmol :- Antipyretic & analgesic



SUBJECTIVE

A one year old baby was admitted on pediatric department on 6th February and discharged on 13th Feb 2023.

PATIENT DETAILS

Name :- XYZ

IP no :- 212579

OP no :- 2547314

Sex :- F

Age :- 1

Weight :- 7.5 kg

DOA :- 06/02/23

DOD :- 13/02/23



History of present illness :- Recurrent fever for past 1 month with rhinitis.

OBJECTIVE

Date	6/2	7/2	8/2	9/2	10/2	11/2	12/2
Temp	98°F	98°F	98°F	98°F	98°F	98°F	98°F

LAB INVESTIGATION

Parameters	Normal Value	Observed value
Hb	9.5 - 14g/dL	12.5
Tc	5000 - 19000/mm ³	13,900
DC : N	40 - 60 %	65 %
L	20 - 40 %	29 %
E	1 - 4 %	6 %
ESR	3 - 13 mm/hr	37

CASEA CASE PRESENTATION ON BRONCHOPNEUMONIA WITH UTIBRONCHOPNEUMONIA

An inflammation of the lung parenchyma the respiratory bronchioles and the alveoli is called pneumonia.

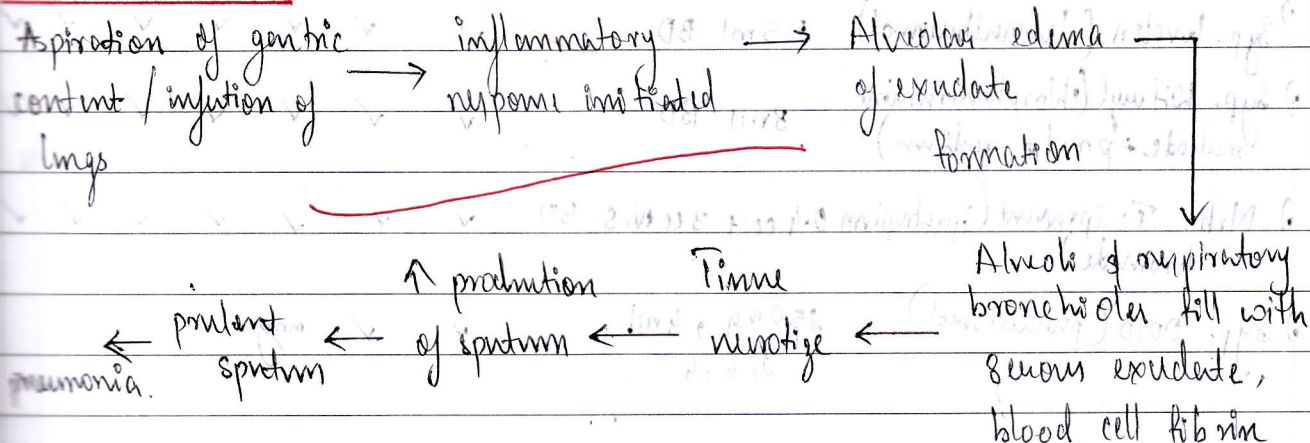
UTI

An infection in any part of urinary system, the kidneys, bladder or urethra.

ETIOLOGY

Virus, Bacteria, weakened immune system, asthma, COPD
uncomplicated UTI pathogens - E. coli, staphylococci, saprophyticus
Klebsiella spp.

Complicated UTI pathogens:- E. coli, Klebsiella sp, Enterobacter
cloacae, Proteus mirabilis.

PATHOPHYSIOLOGY

<u>SERUM</u>		
CRP	20.9 mg/dL < 10 in child at 1 year age is considered normal	14.7

Urine Analysis.

Urine C/E	
Urine Albumin	Nil
Urine Sugar	Nil
PBS cells (0-5 hpf)	14-16
Urine culture done on 10/2/23	No growth after 48 hrs of incubation
Routine culture.	

ASSESSMENT:- Bronchopneumonia with UTI

PLAN

Generic name	Dose & Frequency	6/2	7/2	8/2	9/2	10/2	11/2	12/2
1) IV clavam (Amoxicillin + potassium clavulanate)	300mg BD	✓	✓	✓	✓	✓	✓	✓
2) Syp. Involon (levosalbutamol)	2.5ml BD	✓	✓	✓	✓	✓	✓	✓
3) Syp. Lofetyl (chlorpheniramine maleate + pmol + fradolin)	3ml BD	✓	✓	✓	✓	✓	✓	✓
4) Neb. T. ipravent (ipratropium bromide)	0.4 cc + 3 cc N.S BD	✓	✓	✓	✓	✓	✓	✓
5) Syp. Dolo (paracetamol)	250mg, 4ml 2, 6, 4	✓	✓	mmg				

UTI

Acute kidney injury

Pyelonephritis

Asymptomatic

Uroepithelium penetration

Colonization

SIGNS and SYMPTOMS

Shortness of breath

Rhinitis

Fever and chills

Abdominal pain

Chest discomfort

STANDARD TREATMENT

→ For UTI

Children 3 months to 3 years of age



Specific urinary symptoms



Initiate antibiotic treatment,
and send urine sample for
urgent microscopy & culture

Symptoms non specific for UTI



High risk of
serious illness



Initiate antibiotic
treatment send urine
sample for urgent
microscopy & culture



Intermediate/low
risk of illness



Urine sample
sent for
microscopy &
culture



1) Oxy drops (Pd)	2 drops TDS	✓	✓	✓	-	-	-	-	-
2) Cyclopam drops (dicyclomine & simethicone)	1ml BD	-	-	-	✓	✓	-	-	-
3) Symp. Zentel (Albendazole)	5ml. HS x 2 days	-	-	-	✓	✓	-	-	-
4) Clop. - G - ointment (clobutol 0.05% + micronazole 2% + neomycin 0.5% w/w)	BD	-	-	-	-	-	✓	✓	✓
5) Symp. Butozyme (amylase + papain syrup)	5ml BD	-	-	-	-	-	✓	✓	✓

DISCHARGE MEDICATION

Syp. Levohim 2.5ml BD

Syp. Azithral 200mg - 5ml OD x 3 days.

Syp. Butozyme 5ml BD

Syp. Munkali LC 4ml HS x 2 weeks.

Condition on Discharge :- improved

Follow up :- Review after 2 weeks

Uses :-

- 1) Clopam :- Antibiotic
- 2) Levohim :- treat cough with mucus.
- 3) Azithral :- Antibiotic
- 4) Butozyme :- improve digestion in children.



initiate treatment if
the result is positive.

→ Pneumonia

Azithromycin :- 200 mg / kg / day Q 6 hr.

Clarithromycin :- 90 mg / kg / day Q 8 hr.

Erythromycin :- 150 mg / kg / day Q 8 hr.

PHARMACIST INTERVENTION

- Usage of clop-GM ointment in patient is unknown.
- IV cloxxm should be given cautiously cause the patient is under 2 years.
- Urine analysis should be done again to check the level of microorganisms.

PATIENT COUNSELLING

About Disease and lifestyle

- Have your child empty his / her bladder often.
- Wipe from front of her to back of your child's body it is to prevent germs from spreading from anus to urethra.
- Treat your child's constipation.

CONSULT THE DOCTOR

- if your child have fever of 100.4°F or higher.
- if your child getting better after 2 days of treatment.
- if your child is vomiting.



5) Monohale :- Common allergin, hay fever.

6) Dry drops :- Nasal decongestant

7) Cyclopent drops :- treatment irritable bowel syndrome & abdominal pain.

8) clop-G- ointment :- Antibiotic for skin infection.

9) S. microyl :- treat common cold.



A 54 year old female patient was admitted with chief complaints of :-

- DM - ulcer big Toe B/L
- Discoloration + ulceration of tip of big toe B/L

SUBJECTIVE

Patient Details :-

Name :- Mrs. X

Age :- 54 years

Sex :- F

Weight :- 50 kg

IP No :- 2026281

OP No :- 191132

Department :- General Medicine

DOA :- 20-05-2022

DOD :- 25-05-2022

Medical History :- Diabetes Mellitus (since 2005)

Medical History :- T. Metformin (as-1)

Social History :- Nil

Family History :- Nil

Previous Allergy :- Nil



CASEA CASE PRESENTATION ON DIABETES MELLITUS ULCERBIG TOE B/LDIABETES MELLITUS

Type 2 DM :- formerly called on non-insulin dependent or adult onset DM. It results from the body's ineffective use of insulin.

Type 2 DM consists of a heterogeneous group of disorders characterized by variable degrees of insulin resistance, impaired insulin secretion and increased glucose secretion.

A diabetic foot ulcer is an open sore or wound that occurs in approximately 15% of patients with diabetes and is commonly located on the bottom of the foot.

ETIOLOGY

- Obesity
- Increasing age
- Heredity
- Emotional stress
- Autoimmune B cell damage
- Endocrine diseases (unhings)
- Poor glycemic control
- Callus
- Foot deformities.
- Improper foot care
- Ill-fitting footwear
- Dry-skin.

PATHOPHYSIOLOGY

Diabetes Mellitus
↓
Foot deformity



OBJECTIVE

General Examination

Date	20/05	21/05	22/05	23/05	24/05
Temp	100°F	-	-	-	98.6°F
BP	120/80	-	-	-	-
Pulse	78	-	-	-	-
RR	22	-	-	-	-

LAB INVESTIGATIONS on 20-05-2022

Parameters	Observed Value	Normal Value
Hb	10.7 g/dL	13-15 g/dL
WBC total	8500	4000-11000 cells /mm ³
DC :- N	55 %	40-80 %
L	45 %	20-40 %
E	4 %	1-6 %
ESR	45 mm/hr	0-29 mm/hr
RBS	163 mg/dL	140 mg/dL
Cr	0.7 mg/dL	0.6-1.1 mg/dL

On 20/05/2022 :- Wound Debridement done

Blood Sugar

	21/05	22/05	23/05	24/05	25/05
FBS					
Normal					
<100mg/dL	155	126	171	141	164



↓
Increased pressure on plantar tissues.

Diabetes Mellitus

↓
Neuropathy

↓
Vasculopathy

↓
Impaired Wound Healing

DM

↓
Progressive deterioration of PIV

↓
Susceptibility to pressure induced
neuritis

↓
Diabetic foot ulcer formation

SIGNS AND SYMPTOMS

- Release of pus from the wound
- Foul smell and pain
- Redness around the ulcer
- Skin damage.

STANDARD TREATMENT

Diabetic foot ulcer

↓
Treatment - Apply standard care (Antibiotics & FU)

↓
~~At 4 weeks, reassess ulcer~~

~~Has the wound size decreased by ≥ 50%?~~

Yes
↓

No
↓



LIPID PROFILE ON 22-05-22

	Observed value	Normal value
Sr. cholesterol	128 mg/dL	<150 mg/dL
Triglycerides	168 mg/dL	<150 mg/dL
HDL	32 mg/dL	>50 mg/dL
VLDL	34 mg/dL	2-30 mg/dL
LDL	62 mg/dL	<100 mg/dL

OTHERS

ON 23-05-2022

* Doppler test :- Diffuse atherosclerotic changes in B/L lower limb arteries.

No evidence of thrombus or significant narrowing in the vascularized arteries.

PLAN

Brand name	Generic name	Dose	Frequency	20/5	21/5	22/5	23/5
Inj. MERD 1 amp	Meropenem		BD	+	+	+	+
T. PLETOZ	Cilostazol	100 mg	1-0-1 BD	+	+	+	+
T. RABIDOM	Rabeprazole	20 mg	1-0-0	+	-	-	-
T. P500	Acetaminophen or Paracetamol	500 mg	1-1-1	TID	TID	TID	TID



↓
continue with
standard care

↓
change care plan
consider other/advanced
technologies.

Management

- Debridement of dead or infected tissue.
- offloading of the affected foot to relieve pressure
- Control of blood glucose levels.
- Optimization of vascular circulation.
- Infection of foot managed with antibiotics if required.
- Wound dressing.

PHARMACISTS INTERVENTION

- No drugs were prescribed or continued for DM.
- Normal dose of Metoprolol is 1g every 8 hr, ie 3 times daily but given only 2 times daily.
- Rabeprazole has an ADR of swelling of feet and hence could be replaced with pantoprazole.
- Dose and frequency of some drugs was not specified in the drug chart.

PATIENT COUNSELLING

- Eat healthy diet :- Avoid food containing fat, cholesterol, salt and sugar.
- About Disease
 - Inspect your feet daily.
 - Bath feet in lukewarm, never hot water.



DISCHARGE MEDICATION

- 1) T. FARONAC :- Famoprium :- 200mg 1-0-1 x 5 days.
- 2) T. PLETOZ :- Cilostazol - 1-0-1 x 5 days.
- 3) T. RABUM :- Rabeprazole - 20mg 1-0-0 x 5 days.
- 4) T. ZIN LOFER - Cyanocobalamin +
Fe + folic acid +
Folic acid +
Zinc sulphate - 1-1-1 x 5 days.

USES

- Meropenem :- β -lactams antibiotic
- Cilostazol :- Anti platelet drug
- Rabeprazole :- Gastric proton pump inhibitor
- Acetaminophen :- Analgesic or antipyretic



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK REPORT III PHARM D

Submitted by

Ayona Elezabeth

Eveena Sara Binny

Freddy Alappattu

Gouri Ganesh

Hanna Mathew



SUBJECTIVE

A 11 year old boy was admitted to Pediatric ward on 28/12/2022 due to fever, headache and vomiting.

PATIENT DETAILS

Name : Mr. ABC

Age : 11 yrs

Sex : Male

Weight : 25 kg

Dept. : pediatrics

IP No : 211517

DOA : 28/12/2022

DOD : 07/01/2023

Past Medication History : Nil

Past Medication History : Nil

History of present illness : Fever - 3 days

Headache - 2 days

Vomiting - 1 day

OBJECTIVE

General Examination

Date	28/12	29/12	30/12	31/12	1/1	2/1	3/1	4/1	5/1	6/1	7/1
Temp.	100°F	98.5°F	100°F	99°F	98°F	98.5°F	98.5°F	98°F	98°F	98°F	98°F



CASEA CASE PRESENTATION ON MENINGITISMENINGITIS

Meningitis is an infection and inflammation of the fluid and membranes surrounding the brain and the spinal cord. The membranes that are affected are known as meninges.

ETIOLOGY

Meningitis can be caused due to bacterial, viral, fungi or parasitic infection of the fluid surrounding the brain and spinal cord. It can also be drug-induced, as an adverse reaction to certain medications.

PATHOPHYSIOLOGY

The causative organism enters the blood stream



crosses the blood brain barrier



proliferates in the CSF



Release of cell wall fragments and lipopolysaccharides of microorganisms



Inflammation of subarachnoid & piameter



As CSF circulates through the subarachnoid space, the



LAB INVESTIGATION - 28/12/2022

Parameters	Normal Value	Observed Value
Blood		
Hb	11 - 13.5 gm %	12.9
TC	4000 - 10000 cells/ μ l	11200
DC		
N	55 - 70 %	77
E	1 - 4 %	3
lymphocyte	20 - 40 %	20
platelet	150000 - 450000 cells/ μ l	260000
Serum		
Bilirubin (T)	0.2 - 1.2 mg %	0.4
Bilirubin (D)	0.1 - 0.25 mg %	0.1
CSF Protein	16 - 31 mg/dL	19.3
CSF sugar	50 - 80 mg/100 mL	69



LAB - INVESTIGATION - 29/12/2022

RBS		
-----	--	--

Other Test : Smear Report

- Source of specimen - CSF
- Investigation - Routine culture
- Date Received - 29/12/2022
- Date Reported - 31/12/2022
- Report : No growth after 48 hrs incubation

inflammatory cellular materials from the affected meningeal tissue enter and accumulate

RISK FACTORS

- Skipping vaccinations
- weakened immune system

TREATMENT

Viral Meningitis

Antibiotics can't cure viral meningitis and most cases improve on their own in several weeks. Treatment of mild cases of viral meningitis usually include

- Bed rest
- Plenty of fluids
- Pain medicines to relieve body aches and reduce fever.

PHARMACIST'S INTERVENTION

- Tablet Fusys can be given to the patient at 150 mg, as the dose is 6mg/kg and the patient weighs 25 kg. But only half the tablet 75 mg was given.
- The reason for the usage of ceftriaxone (Cephalosporin 3rd generation antibiotic) is unknown as the smear report didnot show growth of any bacteria.



ASSESSMENT

Final Diagnosis - Meningitis



TREATMENT PLAN

Brand Name (Generic Name)	Dose Frequency	28/12	29/12	30/12	31/12	1/1	2/1	3/1	4/1	5/1	6/1	7/1
Inj. Ofotomax 1g (Ceftriaxone)	BD (100mg/kg / day)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T.P 650 (1/2) Paracetamol	QOH	✓	✓	✓	✓	✓	✓	-	-	-	-	-
Refresh Tears 1° (Carboxymethyl cellulose)	6 times a day	-	✓	✓	✓	✓	✓	✓	✓	✓	-	✓
Inj. Mannitol IV (Mannitol)	50ml BD	-	-	✓	✓	-	-	-	-	-	-	-
IV Pexiset (Condanetron)	1mg SOS	-	-	-	-	-	-	-	-	-	-	-
IV Paracetamol	SOS	-	-	✓	-	-	-	-	-	-	-	-
Syp. Bilasuzo (Bilastine)	5ml HS	-	-	-	-	-	✓	✓	✓	✓	-	-
T. Fusys (Fluconazole)	100mg 1/2 O.D	-	-	-	-	-	-	-	✓	✓	✓	✓

PATIENT COUNSELLING

About drug

- Report if you've severe diarrhea and check for super-infection signs and symptoms while using ceftriaxone.
- while taking Fluconazole avoid activities requiring mental alertness or coordination until drug effects are realized, as drug may cause dizziness or seizures.
- Immediately report symptoms of bronchospasm while using mannitol.

About Disease

- Utensils should not be shared, the child's mouth should be covered during a cough.
- wash hands regularly and maintain hygiene

About lifestyle modification



- Enhance immune system by
 > eating a well balanced diet, rich in vegetables and fruits.

DISCHARGE MEDICATION

Syrup . Zincovit 5ml OD - 1month

Uses

- Ceftriaxone - Treat infection caused by bacteria
- Paracetamol - Analgesic , Antipyretic
- Mannitol - Osmotic Agent
- Ondansetron - Treat nausea, vomiting
- Bilastine - Antihistaminic, treat symptoms of allergy
- Fluconazole - Treat infection caused by fungus



SUBJECTIVE

A 81 year old man was admitted in general medicine ward with chief complaints of tiredness, increased thirst.

PATIENT DETAILS

Name : Mr. X
Age : 81 years
Sex : Male
Department : General Medicine
IP No : 21125
OP No : 2533801
DOA : 13/12/2022
DOD : 16/12/2022

PAST MEDICAL HISTORY : Diabetes Mellitus - 10 Yrs
Dyslipidemia

PAST MEDICATION HISTORY : T. Metformin 500 mg 1-1-1
T. Januvia 100 mg 1-0-0
T. Atorva Abz 40 mg 0-0-1
T. cholecalciferol 20000IU

HISTORY OF PRESENT ILLNESS : Tiredness
Increased thirst



CASE

A CASE PRESENTATION ON UNCONTROLLED DIABETES MELLITUS

Diabetes Mellitus (DM)

DM is defined as a heterogeneous metabolic disorder characterized by common feature of chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism.

Etiology

Obesity, Family history of type 2 DM, habitual physical inactivity, hypertension, dyslipidaemia, history of vascular disease, age, polycystic ovary disease

PATHOPHYSIOLOGY

Genetic Factor

- Concordance in identical twins 80%.
- Both parents diabetic 50% risk to child



↓ insulin secretion, amylin, glucose toxicity of islets, hypo toxicity

Constitutional Factor

- Obesity
- Hypertension
- Low physical activity



Insulin Resistance

- Receptor and post receptor defect.
- Impaired glucose utilisation



OBJECTIVE

General Examination

Date	14/12	15/12	16/12
BP	130/80	140/90	130/90
Pulse	86	74	80
RR	22	20	22

LAB INVESTIGATION

Parameter	Normal value	13/12	14/12	15/12	16/12
Blood HB	13-15 gm %	13.7	-	-	-
RFT					
Na ⁺	135-145 mEq/L	137	-	-	-
K ⁺	3.5-5.5 mmol/dl	4.1	-	-	-
Creatinine	0.6-1.4 mg/dl	1.2	-	-	-
Blood Urea	7-20 mg %	30	-	-	-
Blood Sugar					
RBS	80-160 mg/dl	430	154	165	-
FBS	<100	-	177	214	110

Urine Result - 13/12

Albumin - Nil

Sugar - Yellow

Pus cells - 1-3/hpf

Urine acetone - negative



OBJECTIVE

General Examination

Date	14/12	15/12	16/12
BP	130/80	140/90	130/90
Pulse	86	74	80
RR	22	20	22

LAB INVESTIGATION

Parameter	Normal value	13/12	14/12	15/12	16/12
Blood					
HB	13-15 gm %	13.7	-	-	-
RFT					
Na ⁺	135-145 mEq/L	137	-	-	-
K ⁺	3.5-5.5 mmol/dL	4.1	-	-	-
Creatinine	0.6-1.4 mg/dL	1.2	-	-	-
Blood Urea	7-20 mg %	30	-	-	-
Blood Sugar					
RBS	80-160 mg/dL	130	154	165	-
FBS	<100	-	177	214	110

Urine Result - 13/12

Albumin - Nil

Sugar - Yellow

Pus cells - 1-3 /hpf

Urine acetone - negative



↙ ↘
Increased hepatic glucose synthesis

↓
Hyperglycemia

↓
Uncontrolled DM

RISK FACTORS

Age > 45, first degree relative with DM, obesity, hypertension, history of CVD, impaired fasting glucose, HDL cholesterol < 35 mg/dL, Alcohol, smoking, physical inactivity, neuropathy, nephropathy, retinopathy.

TREATMENT

HbA1c < 8.0% or
FBS < 180 mg/dL

OR HbA1c ≥ 8.0% or FBS ≥ 180 mg/dL

↓
Life style & metformin (unless contraindicated)

↓ SINGLE AGENTS

optimise dose of metformin

→ 3 months

↓ 2 AGENTS

Sulphonyl ureas /
DPP IV inhibitor /
initiate insulin

↓

↓ 3 AGENTS

→ SA / DPP IV inhibitor /
3 months initiate insulin /
T2Ds (with caution)

acarbose / GLP1
agonist

←
INTENSIFY INSULIN



ASSESSMENT

Final Diagnosis: Uncontrolled DM

Treatment PLAN

Brand Name Generic Name	Dose Frequency	13/12	14/12	15/12	16/12
H. Actrapid	10, 15, 6 u half hour before food	✓	✓	✓	✓
H. Insulatard	60 u	✓	✓	✓	-
Donep (Donepezil)	5mg, 0-0-1	✓	✓	✓	✓
T. Cobadex czs Cpyradoxine HCl, cyanocobalamin, Folic acid τ Cr, Zn, Se	1-0-1	✓	✓	✓	-
T. Damita Cdepaglitflozin	10 mg 0-0-1	✓	-	-	-



PHARMACIST INTERVENTION

Concurrent use of sitagliptin + Insulin + excretagogues result in increased risk of hypoglycemia

Dapagliflozin, insulin isophane, insulin regular human either increases effect of other by pharmacodynamic synergism. use caution (monitor)

PATIENT COUNSELLING

- 1) Based on disease :
 - Frequent Blood glucose check up
 - Never skip drug dose
 - Maintain BP as 120/80
- 2) Based on lifestyle modification : Moderate aerobic physical activity, yoga, meditation
 - Maintain proper diet - DASH diet
 - Eat at regular intervals, don't take long gap b/w meals.
- 3) Based on drug :

T. Donep : It may cause diarrhea, vomiting, nausea, drink plenty of water to keep hydrated.

T. Cobadex czs : If experience any unusual symptoms of allergic reaction, discontinue & inform doctor



DISCHARGE MEDICATION

Brand Name	Generic Name	Frequency
T. Donep	Donepezil	5mg, 0-0-1
T. Januvia	Sitagliptin	100mg, 1-0-0
Cobadex CZS	Pyridoxine HCl, cyanocobalmin, folic acid & Cr, Zn, Se	1-0-1
T. Damita	Dapagliflozin	10mg, 0-0-1
T. Atorva ABZ	Atorvastatin	0-0-1
Cholecalciferol	Vitamin D3	20000IU once weekly
T. Gemer 1	Glimpiride 1mg / metformin 500mg	1-0-1

USES

H. Actrapid - used to lower the BG level for both type I & type II
H. Insulated

Donep - used for mild to moderate dementia

Cobadex CZS - used for treatment of anaemia's, anemia due to folic acid deficiency

T. damita - It is a SGLT-2 inhibitor for treating type II DM

T. Januvia - It is a DPP-4 inhibitor for type I DM

T. Gemer 1 - treatment of DM

cholecalciferol - For osteoporosis, osteomalacia, Vit. D deficiency



SUBJECTIVE

A 1 year old baby boy was admitted in paediatric ward with complaints of fever, cold and cough for past three days.

PATIENT DETAILS

Name : Mr. X

Age : 1 Yr

Sex : M

Weight : 10 kg

Ward : Paediatric

IP No : 211775

OP No : 2567319

DOA : 7/1/2023

DOD : 12/1/2023

Past Medical History : Nil

Past Medication History : Nil

History of present illness : Fever, Cough, Cold for past 3 days

OBJECTIVE

General Examination

Temp 07/01/2023 - 98.4°F

Systemic Examination RS : clear

Lab investigation on 7/1/23



CASE

A CASE PRESENTATION ON ACUTE BRONCHITISAcute Bronchitis

Bronchitis is an inflammation of the airways (trachea & bronchi) leading into lungs.

TYPES OF BRONCHITIS

Acute Bronchitis: Acute Bronchitis is a shorter illness that commonly follows a cold or viral infection, usually last for two days to weeks.

Chronic Bronchitis: Characterized by a persistent, mucus producing cough on most days of the month, 3 months of year for 2 successive year in absence of a secondary causes for the cough.

ETIOLOGY

Virus - Influenza, rhinovirus, adenovirus...

Bacteria - mycoplasma pneumonia...

Pollution, smoking, exposed to a lot of second hand smoke, weakened immune system, elderly and infants, Asthma, COPD.

SIGNS AND SYMPTOMS

Shortness of breath, wheezing, fatigue, fever & chills, runny nose, chest pain or discomfort, coughing.

PARAMETER	NORMAL VALUE	OBSERVED VALUE
Blood		
Hb	11-13.5 gm%	9.7 gm%
TC	4000-11000 cells/cum	14100
DC : N	55-70%	41%
E	1-4%	8%
(Blood L)	20-40%	51%
ESR	0-20 mm/hr	38 mm/hr
Platelet	1.5-4.5 L	4,60,000
CRP	0-6 mg/dL	84.5 mg/dL

LAB INVESTIGATION ON 09/01/23

URINE: Albumin: Nil
 Sugar: Nil
 Pus Cells: 1-3

ASSESSMENT

Final Diagnosis : Acute Bronchitis



PATHOPHYSIOLOGY

Etiologic agents irritate airways



Hypersecretion of mucus & inflammation



Bronchial walls become thickened, bronchial lumen is narrowed, mucus plug airways



Bronchitis

STANDARD TREATMENT

Patient with cough & chest symptoms consistent with acute bronchitis



Is the bronchitis uncomplicated (no pulmonary disease, no smoking etc)

Yes ↓

↓ No

History & physical examination to rule out consolidation / other causes of cough



History & physical examination considers chest radiography, pulmonary function testing, peak flow measurement, sputum culture, consider antibiotic therapy

Acute bronchitis ? → No → Treat cause of cough

TREATMENT PLAN

Brand Name (Generic Name)	Dose, Frequency	7/1	8/1	9/1	10/1	11/1	12/1
IV Pmol (Paracetamol)	1 ampule SOS						
Asthalin Neb (Salbutamol)	0.4 ml in 3ml NS Q 6H	✓	✓	✓	✓	✓	✓
Inj. Clavam (Amoxicillin & Potassium Clavulanate)	300mg TDS	✓	✓	✓	✓	✓	✓
Syp. Calpol (Paracetamol)	120 mg, 6ml Q 6H	✓	✓	-	-	-	-
Syp. Corimminic (phenyl ephrine HCl & chlorpheniramine maleate)	2 ml, BD	✓	✓	✓	✓	✓	-

Discharge Medication

1. Syp. Moxing (Montelukast sodium + levocetirizine) - 2.5 ml HS * 1 week
2. Syp. Clavam (250 mg Amoxicillin + potassium clavulanate) - 5 ml BD x 3 Day
3. Naseon nasal drop (Sodium chloride nasal drop) - 2 drop TDS

Indication

Paracetamol: Analgesic & antipyretic



Acute Bronchitis → No → Treat cause of cough

↓

Yes

↓

Treat with protussiveness, specific or non-specific antitussive or bronchodilators as symptoms dictate, discuss follow up

↓

Symptoms present for 2 weeks or more despite appropriate treatment of symptoms

PATIENT COUNSELLING

Based On Dose :

Naseon Nasal Drops : Keep head in a sleeping position, gently squeeze the dropper and be in position for few minutes after the administration of drug.

Shake well before use.

If you've missed any dose then give it as soon as you remember. Keep a gap of at least 4-6 hours b/w doses. If its time for next dose then skip the missed dose.

Based on disease :



Salbutamol : Relax the muscle of airways & widen airway s
 Amoxicillin & potassium clavulanate : Antibiotic ↓
 Syp. Coeminec : used as anti histaminic & decongestion
 Syp. mozing : used to treat allergic condition ↓
 Naseon nasal drops : used for blocked nose



SUBJECTIVE

A 61 year old female was admitted in GM ward with complaints of cough, Breathlessness, fever for 3 days

PATIENT DETAILS

Name : Mr. M

Age : 61 years

Gender : Female

OP No : 2575162

Dept : General Medicine

DOA : 17/01/2023

DOD : 22/01/2023

HISTORY OF PRESENT ILLNESS : cough, breathlessness, fever, tiredness from 3 days.

GENERAL EXAMINATION

	17/01	18/01	19/01	20/01	21/01	22/01
Temp	98.6	98.6	98.6	98.6	98.6	98.6
BP		150/70	130/70	160/80	130/70	130/70
Pulse	78	72	76	80	78	78

LAB INVESTIGATION ON 17/01

Serum : RBS - 92 mg/l.

Creatinine - 1.0 mgs/l.

SGPT - 29 U/L



A CASE PRESENTATION ON PNEUMONIAPNEUMONIA :

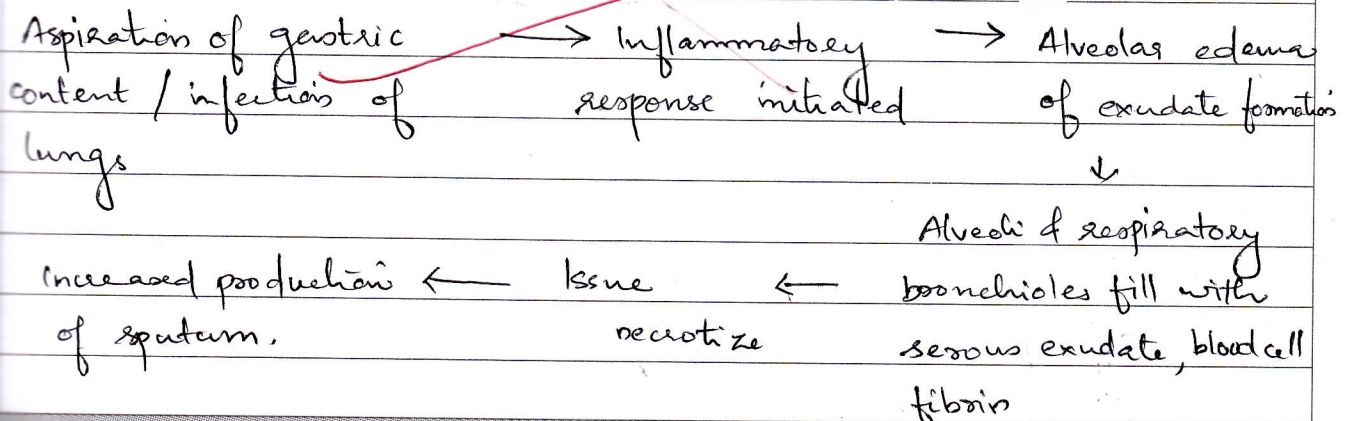
Lung inflammation caused by bacterial or viral infection, in which the air sacs fill with pus and may become solid. Inflammation may affect both lungs. This may cause a decrease in the amount of oxygen that blood can absorb from air breathed into the lungs.

ETIOLOGY :

Pneumonia is mainly caused due to bacterial and viral infections

Bacteria : *Streptococcus pneumoniae*, *Staphylococcus aureus*, Group A *Streptococcus*, *Klebsiella pneumoniae*, *H. influenza*

Virus : Influenza viruses, respiratory syncytial virus (RSV), SARS-COV 2

PATHOPHYSIOLOGY

PARAMETER	NORMAL VALUE	OBSERVED VALUE
CBC Hb	F- 13-15 gm/dL	13-8
TC	10,500 cells/cmm	10,500 cells/cmm
DC: N	40-80 %	57 %
E	1-6 %	5 %
L	20-40 %	38 %
Platelet Count	22,000	150,000
ESR	16 mm/hr	16 mm/hr

URINE ANALYSIS

urine albumin - Nil

urine sugar - Nil

URINE MICROSCOPY

Pus Cells 0-1

Epi cells - Occ

LAB INVESTIGATION ON 18/01

CRP : 5.96 mg/dL

Trop I (TNMPS) : 21.5 mg/L

OTHER TEST ON 17/01 : X-ray, ECG, COVID - antigen test

FINAL DIAGNOSIS : pneumonia , HTN



→ purulent sputum → pneumonia

RISK FACTORS

Cigarette smoking
upper respiratory tract infection
Alcohol
Corticosteroid therapy
old age
recent influenza infection
pre-existing lung disease

TREATMENT

Early pneumonia < 5 days - β lactam, amoxicillin / clavulanic acid
or 3rd generation cephalosporin,
cefotaxime

In case of allergy to β -lactams - ceftiofur

late pneumonia ≥ 5 days - β lactam, ceftazidime or cefepime
or piperacillin - tazobactam or meropenem + amikacin

Any presentation, presence of MRSA risk factor - Vancomycin
or linezolid



DRUGS	FREQUENCY	17/01	18/01	19/01	20/01	21/01	22/01
> IV Dexiphyllin	1 amp	++	+++	+++	+++	+++	
> IV Eszon -s (Cefoperazon & Salbactam)	1.5 mg BD	++					
> IV uv cort (Hydrocortisone Sodium)	100 mg BD	++	++	++	++	++	
> Mucinac 600 (Acetylcysteine)	BD	++	++	++	++	++	+
> Asthalin Neb		++	+++	+++	+++	+++	+
> Antiflu (Oseltamivir)	75 mg BD	++	++	++	++	++	
> Ipratent Neb. (Ipratropium bromide)	BD	++	++	++	++	++	
> IV Tazomac (Piperacillin + Tazobactam)	4.5 mg TID	+++	+++	+++	+++	+++	+
> Tab. T-SART 40 (Cetirizine & chlorthalidone)	OD	+	+	+	+	+	+
> Tab Inepred (Methylprednisolone)	8 mg BD				+	++	+
> Panwez 40 (Panitoprazole)	BD				++	++	+
> O ₂ inhale							
> Tab. Dexiphyllin R							
> Cetophyllin + theophylline	150 mg BD						+



PHARMACIST INTERVENTION

IV Eszen - S (Cefoperazone and salbactam) an antibiotic has been misused as it was given only a single day (17/01)

Concurrent use of salbutamol & potassium-depleting diuretics (TSART - chlorthalidone) may result in ECG changes are hypokalaemia.

PATIENT COUNSELLING



About drug:

- 1. Deriphyllin R - Take drug the same way every dose. Choose to take drug always with food or always without food, as this influences the drug.
- 2. Proxi CV - Report signs / symptoms serious - sickness-like reactions (rash, urticaria, fever...)
- 3. Mucinac - Warn patient that drug has disagreeable odour. Oral form may also cause other GI symptoms.
- 4. Inepred - Drug may cause thinning of skin, impaired wound healing, fluid retention, peptic ulcer, euphoric.
- 5. TSART - Patient should rise slowly from sitting/lying position as drug may cause orthostatic hypotension.

ANTIBIOTIC SENSITIVITY TEST

Organism : E-coli

Sensitive : Gentamycin, Amikacin, Norfloxacin, Ceftriaxone, cefepime, chloramphenicol, cefuroxime, piperacillin, azithromycin, cefoperazone, moxifloxacin

Resistant : ciprofloxacin, Ampicillin, Levofloxacin, Amoxicillin, Cephalixin, cefotaxime, Ofloxacin, Linezolid

DISCHARGE MEDICATION :

DRUG	FREQUENCY / DURATION
T. Paracetamol CV	1-0-1 after food x 5 Days
Cefepodoxime proxetil & clavulanic acid	
T. Desiphrillin R	150mg 1-0-1 x 10 Days after food
T. Mucinac	600mg 1-0-0 x 10 days
T. Inepred	4mg 1-0-1 x 10 days
T. TSART	40mg 1-0-0 x 10 days
Asthathin MDI	1 puff 1-1-1

Follow up : Review after 10 Days

INDICATIONS : Mucinac : decrease viscosity of mucus
Inepred Tab : blocks messengers causing inflammation
TSART : Relax blood vessel, stomach pain



SUBJECTIVE

A 76 year old man was admitted in the department of surgery with chief complaints of pain in the left rib after a fall 3 days back.

PATIENT DETAILS

Patient Name : Mr. X

Age : 76 Yr

Sex : Male

IP No : 2108 22

Department : surgery

DOA : 28/11/2022

DOD : 30/11/2022



Present illness : Fall 3 days back, pain in left lower rib

Provisional diagnosis : Injury in the 10th rib of left lower chest

Past medical history : DM - past 30 years

Surgeries done - amputation done 2 years back of the right leg's 3 toes.

Past medication history : Biphasic ; Injection isophane insulin

40 units (mmg)

40 unit (noon)

Allergic history : Nil

Family history : Nil

OBJECTIVE : General Physical Examination

Date	28/11/22	29/11/22	30/11/22
Temp.	98.6°F	-	a/p
Pulse Rate	82 mt	86 mt	86 mt
Respiration rate	26 mt	24 mt	22 mt
BP	190/110 mmHg	160/90 mmHg	160/90 mmHg

CASE ...A CASE PRESENTATION ON DIABETIC FOOT ULCERDIABETIC FOOT ULCER

It's the most significant and devastating complication of diabetes. It is defined as affected by ulceration i.e. associated with neuropathy and or peripheral arterial disease of the lower limb in a patient with diabetes.

ETIOLOGY

Main cause is uncontrolled diabetes.

Peripheral neuropathy - high blood glucose level damages the nerves (sensory, motor and autonomic).

Diabetic neuropathy also damage immune system.
Peripheral artery disease - damage blood vessels causing inflammation and atherosclerosis or hardening of arteries. Leads to ischemia - finally causes ulcer on diabetic foot.

PATHOPHYSIOLOGY

Elevated blood glucose level with persistent and uncontrolled diabetes

↓
Leads to neuropathy, nephropathy, retinopathy

↓
Sensory, motor, autonomic neuropathy resulting due to glycosylation of nerve cell proteins leads to ischemia

↓
Motor neuron deformity results in imbalance of foot flexures

LAB Investigation

Urine Analysis	28/11/22
Albumin	++
Sugar	Yellow
Micro pus cells	4-6 (bacterial present)
RBCs	0-1 (normal)

Blood Analysis	28/11/22
Hb (14-17.5 g/dl: M)	15.3 gm/dL
Tc (4000 - 11000 cells/microlitre)	9300 cells/cum
DC:	
N (55 - 70 %)	60 %
L (20 - 40 %)	36 %
E (1 - 4 %)	4 %
ESR (1 - 15 mm/hr)	38 mm/hr



Serum Analysis	28/11/22	29/11/22	30/11/22
RBS (80-160 mg/dL)	326 mg %	86 mg %	101 mg %
FBS (<100 mg/dL)	-	86 mg %	101 mg %
Creatinine (0.6 - 1.4 mg/dL)	0.9 mg %	-	-

X-Ray Examination on 28-11-2022

Chest X-ray AP

Other test done on 28/11/2022

ULTRASOUND - USG Abdomen and Pelvis

Suboptimal evaluation due to bowel gas and debilitating condition of the patient.

and extensiois



Autonomic nerve damage results in impaired sweat gland functioning causing decreased skin moisturisation leading to epidermal cracks and skin breakage.



Foot wounds recognised slowly due to decreased peripheral sensation due to lower blood supply causing lack of wound healing and leads to severe ulceration



vascular damage due to decreased vasodilator action and plasma thromboxene. As level elevated causing vasoconstriction and plasma hypercoagulation in peripheral arteries leading to ischemia and ulceration.



Immunity lowered reducing wound healing due to increased T-lymphocyte apoptosis.

RISK FACTORS

- Previous history of diabetes
- Anatomic foot deformity
- Peripheral vascular disease
- Smoking
- Diabetic nephropathy

STANDARD TREATMENT

Complete Holistic Assessment:

- Medical / surgical history
- Physical examination, lower leg and LA including monofilament test.



- > Liver: mild enlargement (17.6 cm) and increased parenchymal echoes.
- > Kidney: Both kidneys normal size and minimal increased cortical echo texture. A few cortical cysts in left kidney (39 x 38 mm) in upper pole. One cortical cyst (22 x 16 mm) in interpolar region has calcification. Few tiny calculi noted in the left kidney, largest in upper pole calyx (4 mm).
- > Mild hepatomegaly with grade II fatty infiltration: Correlation with liver function test.
- > Minimal increased cortical echo textures of both kidney correlation with RFT and to x/o early renal parenchymal disease.
- > Tiny left renal calculi without hydronephrosis.
- > Complex left renal cyst, correlation with CT scan.

ASSESSMENT

Final Diagnosis: Injury in 10th left lower rib due to fall 3 days back HTN, DM.

TREATMENT

Drugs	28/11/22	29/11/22	30/11/22
1. T. Ultracet (1-0-1) (Tramadol hydrochloride + acetaminophen (37.5 mg + 325 mg)	✓✓	✓✓	✓
2. T. Rabium (1-0-0) Rabeprazole 60 mg	✓	✓	

- Diabetic management (glycemic and lipid control & nutrition)
+

Determine the cause - risk factors.

- Diabetes - diabetes and sub-optimal glycemic control
- Neuropathic changes with lack of protective sensation
- Vascular flow - Hypertension, Hyperlipidemia, History of deep vein thrombosis, peripheral artery disease.

Autoimmune disorders - Gout, Vasculitis

- Wound history - foot infections or osteomyelitis, previous ulceration histories.

Obesity, amputation, Nutritional deficits, Osteoporosis:
physical limitation.

- Smoking, inadequate foot wear, lack of foot care, unsafe home environment, alcohol etc. are Socioeconomic / self-management factors

+

Confirm wound etiology and pathway by result of LLA, monofilament test, wound assessment test etc.



Treat the cause : vascular flow, wound infections, diet, glycemic and lipid control.



Optimize Medical therapy with patient : Smoking cessation, regular foot care, wound care, avoid extremes (cold / hot / tight or loose), Exercise 30 min / 3 times per week, Medications to control hyperlipidaemia, HTN, blood sugar, pain management.

3. T. Nucxia (0-1-0) Etoricoxib 90mg	✓	✓	—
4. T. Zincovit (multi vitamins and multi minerals)	✓	✓	✓
5. Injection DICCLO IV SOS (diclofenac 75 mg)	—	—	—
6. Insulin biphasic Isophane	40 u (evng)	20 u (mng) 30 u (evng)	16 u (mng) 30 u (evng)

DISCHARGE MEDICATIONS

Drugs	Duration and Frequency
T. Ultracet	1-0-1 * 1 week
T. Nucxia	90 mg 0-1-0 * 1 week
T. Rabium	20 mg 1-0-0 * 1 week
Inj. HUMAN MIXTARD	½ hr before food twice daily according to sugar level
Rest at home	

Follow up : Review after one week

uses :

T. Ultracet : Tramadol hydrochloride — opioid analgesic
Acetaminophen — non-opioid analgesic
mainly pain relief



Perfusion strategies for impaired circulation:

Endovascular perfusion, angioplasty, surgical perfusion...

PHARMACIST'S INTERVENTION

- Elevated blood pressure level and no any medications been prescribed.
- Injection Diclofenac and Etoricoxib causes increased bleeding risk.
- Urine analysis shown puscells and albumin indicating urinary infection and no any medicines been given to treat the condition.
- Renal Calculi present in left kidney and mild hepatomegaly upon ultrasound scan. Medications not been prescribed for conditions.
- Oral anti-hyper glycaemic drugs can also be prescribed but not prescribed.

PATIENT COUNSELLING



About Drugs:

T. Ultracet: Warn patients to report symptoms of respiratory depression, hepatotoxicity, constipation, dryness of mouth etc., if occurred. Also advice patients to stand slowly from sitting or lying position as the drug causes orthostatic hypotension. Not to do works with mental alertness-requirement like driving etc.

Concurrent use of acetaminophen and cabbage decrease the drug action.

T. Rabium : proton pump inhibitor by blocking H^+/K^+ ATPase pump causes inhibition of excess gastric acid secretion.

T. Necoxia : selective COX-2 inhibitor, mainly to reduce inflammation by inhibiting prostaglandins and cyclooxygenases synthesis.

T. Zincovit : Multivitamins (Vit. A, B₁, B₂, B₃, B₁₂, C, D₃, E, ...)
Multiminerals (Zn, Mg, Cu, Grape seed extract)
mainly to boost up immunity.

Injection Diclo : NSAIDs mainly acting as a potent anti-inflammatory drug also with anti-pyretic, analgesic effect.

Injection HUMAN MIXTARD & BIPHASIC ISOPHANE : Insulins
mainly to reduce the elevated blood glucose level.



T. Rabium : Instruct patients to report the symptoms of cutaneous or SLE like reactions, diarrhoea etc. Not to take self medications by the patients to treat the mild side effects has to be advised. Ask them to stop medicines and report the physician if the condition persists.

T. Nucxia : warn patients to report symptoms of cardiovascular risk like elevated blood pressure, GI effects like nausea, oral ulcers, respiratory issues etc.

Injection DICLO - warn patients to report the symptoms like nephrotoxicity, nausea, vomiting, headache etc. persists for longer.

About Disease :

- Inspect the foot daily for any injections, cuts or wounds etc.
- wash the feet with luke warm water, not with too hot water.
- Apply suitable medicated moisturizer lotion to the feet been prescribed or advised by physicians.
- wear well fitting shoes and cleans, dry socks and ensure not to tightly fitted.
- Exercise and walk regularly to improve blood circulation.
- Consult a doctor when any deep wound / calluses warts etc, if occurred in the lower limbs.

About lifestyle modification :

Check blood glucose level every month.
Keep BP and weigh under control



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK REPORT III PHARM D

Submitted by

Hila A D

Jannath Parwin K I

Jeevan Joseph Jaison

Mabel Augustine

Megha Shaji



SUBJECTIVE:

A 75 year old male patient was admitted in the General Medicine ward with the chief complaints of:

- * Severe lower abdominal pain, while passing urine - pain for 2 days.
- * No fever or nausea.

PATIENT DETAILS

Name : Mr. X
Age : 75 yrs
Sex : Male
Weight : 75 kg
IP NO : 20744
OP NO : 2414230
Department : General Medicine
DOA : 26-11-22
DOD : 29-11-22

Medical history : Nil

Medication history : Nil

Social history : Nil

Family history : Nil

Previous Allergy : Nil

Provisional Diagnosis : Urinary Tract Infection

W/E

Amr



CASEA CASE PRESENTATION ON URINARY TRACT INFECTION.Urinary Tract Infection:

A urinary tract infection is an infection in any part of your urinary tract.

The infections occurring in different sites are:

- * Bladder: It is called as 'cystitis' or 'bladder infection'
- * Kidney: One or both kidneys (pyelonephritis) or kidney infection.
- * Urethra.

ETIOLOGY

- * UTIs generally result from natural gut bacteria such as E. coli.
- * UTI mainly urethritis, can result from sexually transmitted disease as well - by a sexually transmitted from person to person.
- * Abnormalities in the urinary tract.
- * Medical conditions such as DM, multiple sclerosis, stroke etc.
- * Pregnancy.
- * Menopause.
- * Kidney stones.
- * Use of catheters.
- * Urinary surgery.

PATHOPHYSIOLOGY:

The uncomplicated UTI only involves the bladder. When the

OBJECTIVE:

General Examinations:

Date	26/11	27/11	28/11	29/11
Temp	99	100.1	97.5	97.5
BP	120/80	160/80	130/80	140/90
Pulse	82	62	66	70
RR	22	22	22	22

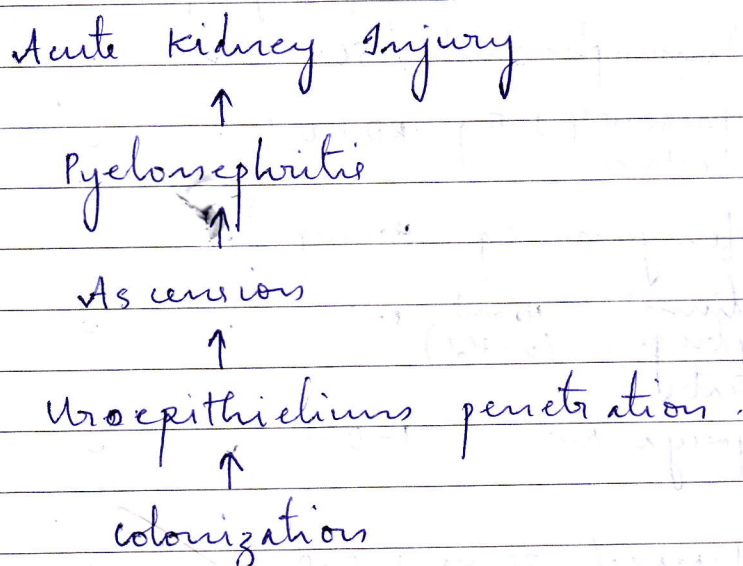


Lab investigations on 26-11-22

Parameter	observed value	Normal value
Hb	11.6 gms%	M-14-16 gms%
WBC total	11700	4000-11000 cells/mm ³
DC : N	87%	40-50%
L	10%	20-40%
E	3%	1-6%
Platelet Count	1.7 L/mm ³	1.5-4.0 L/mm ³
<u>Blood sugar</u>	<u>observed value</u>	<u>Normal value</u>
RBC	179 mg/dL	140 mg/dL
ESR	17 mm/hr	20 mm/hr
<u>LFT:</u>		
Bilirubin (T)	1.4 mg/dL	0.3-1.2 mg/dL
Bilirubin (DIR)	0.4 mg/dL	0.1-0.3 mg/dL
<u>RFT</u>		
B. Urea	28 mg/dL	8-20 mg/dL
Sr. Creatinine	0.9 mg/dL	0.7-1.5 mg/dL
Sr. Sodium	28 mg/dL	134-144 mg/dL
Sr. Potassium	135 mg/dL	35-50 mmol/L
	3.6 mmol/L	

bacteria involves the bladder; walls mucosal layer; an inflammatory reaction occurs called cystitis. The majority of the organisms causing UTI are enteric coliforms which inhabit the perineurthral vaginal introitus. These organisms ascend into the bladder from urethra and causes UTI. Sexual intercourse is a common cause for a UTI as it promotes the migration of bacteria into the bladder. People who frequently void and empty the bladder tend to have a lower risk of a UTI.

Pathogenesis.



RISK FACTORS:

- * Age (children and young people)
- * Previous UTI
- * Sexual intercourse
- * Spinal abnormalities
- * Constipation



OTHER TESTS:

26-11-22 Urine Analysis

U. Albumin : Trace

Sugar : Nil

Micro pus : Numerous

RBC : 3-5

Urine culture test on 26-11-22

Organism : E-coli

Colony Count : 100000 CFU/ml



TREATMENT PLAN

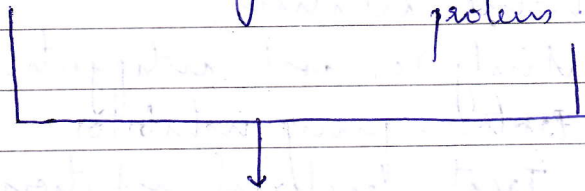
Brand Name	Generic Name	Dose	Frequency	26/11	27/11	28/11	29/11
Amj. Pmol	Acetaminophen	1ml	SOS	✓	✓	✓	✓
Amj. Magnex Forte	Cefoperazone & sulbactam	1.5 g	BD 1-0-1	✓	✓	✓	✓
T. Forfoin	Forfomyin	3 g	Hc (night)	✓			
Syp. Citralka	Sodium hydrogens citrate	10 ml (in H ₂ O)	1-1-1	✓	✓	✓	✓
T. Hyocinmax S	Hyocyanine		1-0-1	✓	✓	✓	
T. Razo	Rabepazole	20mg	1-0-0	✓	✓	✓	✓
T. oflox	Ofloxacin	200mg	BD			✓	✓
Amj. Transdol + Amj. Perict	Transdol Hcl + Ondansetron	50mg + 4mg	1-0-1	✓	✓	SOS	✓
Syp. Gensaffin plus	Sodium-picrosulfate	100ml	SOS				✓

STANDARD TREATMENT:

- Hazy or cloudy urine alone is not indicative of UTI
- local signs / symptoms of UTI : Dysuria, haematuria, increased urine frequency
- systemic signs / symptoms : fever, increased WBC ($\geq 10,800$)
flank pain, malaise or lethargy
- No catheters catheters

Urine analysis & urine culture. Presence of WBC, blood, proteins, leukocytes

Replace catheters
Urine analysis & culture. Presence of WBC, blood, proteins



if infection - local symptoms (nitrofurantoin, ciprofloxacin)
systemic symptoms (cefodoxime, ceftioxime)

No infection - Don't prescribe antibiotics but check urine culture results $\geq 100,000$ CFUs provide antimicrobial treatment

Non-pharmacological treatment : Drink plenty of water

PHARMACIST'S INTERVENTION:

- concurrent use of ofloxacin and ordaneston may result in ~~increased~~ risk of QT interval prolongation
- concurrent use of TRAMADOL and SEROTONERGIC AGENTS may result in increased risk of serotonin syndrome
- No drug therapy was given for elevated blood sugar

DISCHARGE MEDICATION:

<u>Brand</u>	<u>Generic Name</u>	<u>Frequency & Dose</u>
T. oflox	ofloxacin	200 mg 1-0-1 5 tab
T. Pantop	Pantoprazole	40 mg 1-0-0 x 2 days
T. Hyocimax S	Hyocyanine	1-0-0 * 2 days
Syp. Gernaffin plus	Sodium picosulfate	10 ml 1-0-1 HS and 80 S

INDICATIONS:

Syrup Citalka : Urine alkalizer
Aetamsinophen : Analgesic and antipyretic.
T. Razo : Proton-pump inhibitor
Inj. Magnex Forte : Treat bacterial infections.
T. Ofloxacin : Antibacterial drug for UTI.
T. Hyocimax S : Analgesic, pain relief in UTI.
T. ofloxacin : Antibiotic to treat UTI.
Syp. Gernaffin plus : Constipation.
Inj. Transadol + Inj. Periset : Cystitis-induced bladder pain.

Follow up: Review after 1 week.



SUBJECTIVE:

A 75 year old male was admitted in General Medicine ward with complaints of cough, breathlessness, fever.

PATIENT DETAILS:

Name : Mr. M

Age : 75 yrs.

Gender : Male

OP NO : 865770

Department : General Medicine

DOA : 19-1-22

DOD : 24-1-22

History of present illness : cough and breathlessness for 2 weeks, fever.

Social history:

History of:

* Smoking

* Alcohol

Past Medical History

* Diabetes Mellitus

* COPD



W/21

PROG

CASEA CASE PRESENTATION ON CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD).CHRONIC OBSTRUCTIVE PULMONARY DISEASE

A preventable and treatable pulmonary disease marked by chronic airflow limitation that is typically progressive and is not entirely reversible.

It leads to 2 different conditions:

- * Emphysema: It is a permanent enlargement of the lungs terminal to the distal bronchioles due to the destruction of air space walls.
- * Chronic Bronchitis: In which the lining of the airways is constantly irritated and inflamed. This causes the lining to swell and make mucus.

ETIOLOGY:* HOST FACTORS

- Genetic factors.
- Increased bronchial hyperresponsiveness.
- Under development of lungs.

* ENVIRONMENTAL FACTORS

- Cigarette smoking (5 pack year)
- environmental toxins.

PATHOPHYSIOLOGY:

Abnormal inflammatory response of lungs

Past Medication History

Brand Name	Generic Name
Asthalis inhaler*	Salbutamol
Glinseprid 2mg	Glinsepride

* Past 10 years - SOS

OBJECTIVE:

General Examinations

Date	19/1	20/1	21/1	22/1	23/1	24/1
Temp	101	100	100.2	99	99	98
BP	170/90	156/80	160/80	160/90	160/80	160/90
Pulse	72	74	74	74	72	74
RR	30	28	28	24	24	22

Lab investigations on 19/1 and 24/1

Parameters	Normal Value	observed value	
		19/1	24/1
CBC :			
Hb	14-16 gm/dl	13.2	12
WBC	4000-10000 cells/ μ l	14200	7200
DC :			
N	40-80%	73.6	79
E	1-6%	2	1
L	20-40%	19	16



due to toxic gases.



Response occurs in the airways, lung parenchyma and pulmonary vasculature.



Neutrophils released.



Activation of macrophages



TNF- α , IL, cytokines, together act as complementary leading to wide spread destruction of lung tissue.

→ AIRWAYS : Mucus secretion increases, causes mucus plugging.

→ LUNG PARENCHYMA : AAT decreases, collapsing of air walls leading to emphysema.

→ PULMONARY VASCULATURE : Blood vessels thicken, leads to pulmonary hypertension, lead to cor pulmonale, hence COPD.

RISK FACTORS

- * Exposure to air pollution
- * Breathing second hand smoking.
- * Working with chemicals, dust and fumes.
- * A genetic condition - α -1 - deficiency.
- * History of childhood respiratory infections.



LFT:	Normal value	observed value	
		19/11	24/11
Bilirubin (T)	0.3-1.2 mg/dl	0.97	0.84
Bilirubin (DIR)	0.1-0.3 mg/dl	0.2	0.1
SGPT	30-65 U/L	31	
SGOT	15-37 U/L	21	30
Total Protein	6.4-8.2 g/dL	6.51	6.81
Alk. Phos	50-136 U/L		
Globulin	2-3 g/dL	3	2.9
Albumin	3.5-5.2 g/dL	3.31	3.57
RFT			
BUN	7-18 mg/dL	18.6	
Creatinine	0.6-1.4 mg/dL	1.1	0.8
Sodium	134-144 mmol/L	139	
Potassium	3.5-5.0 mmol/L	3.2	

Blood sugar	Normal value	19/11	20/11	21/11	22/11	23/11
RBS	80-140 mg/dL	200	205	195	210	190

OTHER TESTS:

- * chest X-Ray.
- * Inflammation of both airways.



ASSESSMENT

Final Diagnosis: Chronic obstructive Pulmonary Disease

STANDARD TREATMENT:

The refined ABCD assessment tool

spirometrically confirmed diagnosis > Assessment of airflow limitation > Assessment of symptoms/risk of exacerbations.

Post-bronchodilator $FEV_1 / FVC < 0.7$	Grade	FEV_1 (% predicted)
	GOLD 1	≥ 80
	GOLD 2	50 - 79
	GOLD 3	30 - 49
	GOLD 4	< 30

Initial Pharmacological Treatment

≥ 2 moderate exacerbations or ≥ 1 leading to hospitalization	Group C LAMA	Group D LAMA or LAMA + LABA or ICS + LABA
0 or 1 moderate exacerbations (not leading to hospital admission)	Group A A Bronchodilator	Group B A long acting bronchodilator (LABA or LAMA)

TREATMENT PLAN

Drugs	Dose & Frequency	19/1	20/1	21/1	22/1	23/1	24/1
Salbutamol	2.5mg, 1-0-1	✓	✓	✓	✓	✓	✓
Budesonide	0.5mg, BD	✓	✓	✓	✓	✓	✓
T. Pant D (Pantoprazole)	40mg, 1-0-0	✓	✓	✓	✓	✓	✓
T. Dolo (Paracetamol)	650mg, Q6H	✓	✓	✓	✓	✓	✓
T. Lasix (Furosemide)	40mg, BD	✓	✓	✓	✓	✓	✓
Amj. Clavans (Amoxycillin and clavulanic acid)	1.2mg, OD	✓	✓	✓	✓	✓	✓
T. Ramipril	2.5mg, OD	✓	✓	✓	✓	✓	✓
O ₂ (oxygen)	2L	✓	✓	✓	✓	✓	✓
Syp. Keylyte (Potassium chloride)	10ml, BD			✓	✓		
Amj. Hydrocortisone	100mg, BD			**	**	**	*
T. Zincovit (multivitamins)	OD	✓	✓	✓	✓	✓	✓
T. Glimperide	2mg, 1-0-0	✓	✓	✓	✓	✓	✓
T. Cetirizine (cetirizine hydrochloride)	10mg, OD		✓	✓	✓	✓	✓



DISCHARGE MEDICATION

Drug	Frequency / Duration
T. Clovans	625 mg, 1-1-1 * 1 week
Ramipril	5 mg, 1-0-1 * 1 week
T. Glimepiride	2 mg, 1-0-0
Salbutamol	2 puffs, 1-0-1
Amlodipine	5 mg, 0-0-1
T. Par D	40 mg, 1-0-0 * 2 week
T. Zincovit	1-0-0 * 2 week.

Follow up Review after 2 weeks.



* RAMIPRIL: maintain adequate hydration to prevent volume depletion and symptomatic hypotension.

* Glinsepiride: take drug with breakfast or first main meal of the day.

Always carry a candy with you.

* Amlodipine:

The medicine may make you dizzy, drowsy or light headed. Stand or sit up slowly if you feel dizzy.

* T. Par D: swallow as whole. Do not crush, break or chew it. Take it 1 hour before meal.

* T. Zincovit: Avoid taking in empty stomach. Do not overdose.

LIFESTYLE MODIFICATION:

- * Avoid exposure to any lung irritants like dust, smoke, pollens to prevent inflammation of lungs.
- * Breathing exercise, short walk, aerobic exercise for a short period everyday can be practised.



ABOUT DISEASE:

- * You may experience shortness of breath, chest tightness, sometimes, so immediately use the inhaler.
- * ~~Tay bringing up the mucus and spit it out as sputum can accumulate in lungs leading to infections.~~

How to use MDI:

- * Shake the inhaler well just before each use. Sit straight

INDICATIONS:

T. Clavams → bacterial infections.

Ramipril → ACE inhibitor, used for hypertension, MI.

T. Glinsepiride → management of type 2 DM.

Salbutamol → relax the muscles of airways and widens airways.

Amlodipine → treatment of hypertension, lowers blood pressure by relaxing the blood vessels so that the heart does not have to pump as hard.

T. Pan D → proton pump inhibitor.

T. Zincovit → Multivitaminic and multimineral supplement, helps to boost up immunity.



A 17 year old man was admitted in General Medicine ward with complaints of bilateral throbbing headache, blurred vision (both eyes), and retention of urine for 1 day.

SUBJECTIVE

PATIENT DETAILS

Name : Mr. X

Age : 17

Gender : M.

IP NO : 211927

OP NO : 2547621

Department : General Medicine

DOA : 13/1/23

DOD : 16/1/23

Past Medical History : Nil

Past Medication History : Nil

Family History : Nil

OBJECTIVE

General Examination

Date	13/1	14/1	15/1	16/1
BP	110/80	110/70	100/70	100/70
Pulse	74	64	72	60
RR	22	22	22	22



A CASE PRESENTATION ON VASCULAR HEADACHE, URINE RETENTION AND DIMINUTION OF VISION.

VASCULAR HEADACHE

A group of headache conditions that occur due to changes on blood vessels in the head or neck. They often involve throbbing pain and swelling or dilation of blood vessels.

URINARY RETENTION

A condition in which urine cannot empty from the bladder. Urinary retention can be acute.

DIMINUTION OF VISION

Acute visual loss is defined as a sudden deficit in visual function in one or both eyes lasting less than 24 hrs. It is caused by a temporary vascular occlusion in the circulation to the eye or visual cortex or by neuronal depression after a seizure or migraine.

ETIOLOGY:

- Exact cause is unknown.
- Anxiety or depression.
- Stress and tiredness.
- Skipping meals.
- Too much caffeine.
- Not enough exercise.



Lab investigation on 13/1/23.

<u>Parameters</u>	<u>Normal value</u>	<u>Observed value</u>
Blood		
Hb	13-15 gm ¹⁰⁰ l.	14.4 gm ¹⁰⁰ l.
TC	4000-11000	12,900
DC : N	40-80 ¹⁰⁰ l.	73 ¹⁰⁰ l.
L	20-40 ¹⁰⁰ l.	26 ¹⁰⁰ l.
E	1-6 ¹⁰⁰ l.	1 ¹⁰⁰ l.
Platelet count	1.5-4 L/cmm	2,90,000/cmm
Serum		
CRP	80-160 mg/dL	2.16 mg/L
RBS	7-20 mg ¹⁰⁰ l.	95 mg ¹⁰⁰ l.
Urea	0.6-1.4 mg/dL	13 mg ¹⁰⁰ l.
Creatinine	0.3-2.2 mg/dL	0.6 mg ¹⁰⁰ l.
Bilirubin (T)	0.1-0.3 mg/dL	0.4 mg ¹⁰⁰ l.
Bilirubin (DIR)	7-56 U/L	0.1 mg ¹⁰⁰ l.
SGPT	7-56 U/L	14 U/L
Na ⁺	135-145 meq/L	143 meq/L
K ⁺	3.5-5.5 meq/L	3.7 meq/L
Uric acid	3.5-7.2 mg ¹⁰⁰ l.	3.4 mg ¹⁰⁰ l.

Urine Test on 13/1/23

Albumin - Nil

Sugar - Nil

Per cell - 4-6 hpf

No significant growth after 48 hrs incubation



PATHOPHYSIOLOGY:

Factors → Genetic mutation Environmental factors Hormonal factors

Mechanisms →

Hypothalamic activation
cortical hyperactivity

↓
Trigeminal ganglion activation.

↓
Brain stem activation, cortical
spreading depression.

↓
Release of substance P and CGRP.

↓
Migraine headache.

SIGNS AND SYMPTOMS:

- Pain in eyes, face and neck.
- headache.
- distorted vision.
- Nausea or vomiting.
- sensitivity to sound.
- Dizziness.
- malaise.



USG on 13/1/23

* Depression

* cystitis

* Significant post voidal residual of urine of 471 cc - s/o bladder outlet obstruction.

* Non-obstructive right renal calculus.

ASSESSMENT:

Final diagnosis → Vascular headache, urinary retention due to unknown cause and diminution of vision.

TREATMENT PLAN

Drugs	Generic Name	Frequency, Dose	13/1	14/1	15/1	16/1
T. Naxdoms	Risperidone, Naproxen	250 mg, 1-0-1	*	**	**	*
T. Sibelium	Flunarizine	5 mg, 0-0-1	*	*	*	
T. Topaz	Topiramate	25 mg, 1/2-0-1	*	**	**	*
T. Cycloans	Dicyclanise	1-1-1	*			
inj. Dexom	Dexamethazone	4 mg Qsh	*	***	***	*
T. Rabinus	Rabeprazole	20 mg 1-0-0	*	*	*	*
inj. Magnex forte	Cefepazone, salbutam	1.5 g BD	**	**	**	*
syp. Potrate	citric acid + Potassium citrate	15 ml 1-0-1	*	**	**	*
T. veltans	Tamulosis	0.2 mg 0-0-1	*	*	*	*



STANDARD TREATMENT

suspected Migraine Headache



Fever, altered mental status

Yes

workup for meningitis
or subarachnoid
hemorrhage

No

Acute onset

Yes

consider
neuro imaging

No

More serious condition
ruled out and migraine
diagnosed

Mild-moderate

Moderate-severe

Emergency

↓
combination of
acetaminophen/aspirin/
caffeine / NSAIDs

↓
Triptans

↓
Intravenous
antiemetics
with or without
IV dihydroergote-
-mine

↓
Poor response

↓
Triptans



DISCHARGE MEDICATION

T. Veltam - 0.2 mg (0-0-1) * 7 days.
T. Sibelium - 5 mg (0-0-1) * 5 days
T. Naxdom - 1 tab sos for headache

Review with neurologist on 20/1/23.

→ referred to higher centre for evaluation of diminution of vision.

USES

T. Naxdom → NSAIDs.
T. Sibelium → Migraine headache.
T. Topaz → prevent migraines.
T. cydopans → treat irritable bowel.
Inj. Dexona → Treat allergies.
T. Rabeum → proton pump inhibitor.
Inj. Magnex Forte → Antibiotic.
T. Veltam → Treatment of urination in men.



SUBJECTIVE:

A 66 year old male patient was admitted in hospital with chief complaints of severe angle pain.

PATIENT DETAILS:

Name : Mr. X

Age : 66

Sex : Male

OP NO : 23951

IP NO : 56473

Department : ortho

DOA : 27/7/22

DOD : 29/7/22

Present history : Severe angle pain and swelling.

Past medical history : dyslipidemia.

Past medication history : XR of NIACIN 1000 mg po BD
since last 2 months, omeprazole
20 mg po OD.

OBJECTIVE:

General Examination

Date	27/7	28/7	29/7
Temp	98.4	98.9°F	98.4°F
BP	150/90	150/90	120/80
RR	82	80	82
PR	18	20	20



A CASE PRESENTATION ON GOUT AND HYPERURICEMIAGOUT:

Gout is a disorder of purine metabolism resulting in hyperuricemia and deposition of urate crystals in the synovium and clinically manifesting as recurrent acute arthritis progressing to chronic deforming arthritis. Normal uric acid level vary from 2-7 mg/dL. In gout, it is above 7 mg/dL in male and 6 mg/dL in female.

Types of Gout:

- Primary or genetic

Polymorphisms in SLC22A12, SLC2A9



hyperuricemia

- Secondary

Anemia

Hypertension

Drug

PATHOPHYSIOLOGY:

↑ Uric Acid



Blood



Reacts with sodium crystals

Deposited in soft tissues and joints



Infiltration of granulocytes that phagocytose the urate crystals.



Lab investigation

Parameter	observed value	Normal value
ESR	22	3-10 mm
WBC	18,710	4000-11000 cells/mm ³
HDL	25	>40 mg/dL
Triglyceride	280	<150 mg/dL
LDL	130	<100 mg/dL
uric acid	11.6	2-7 mg/dL

OTHER TESTS: X-ray of ankle: -ve for break/damage
 Aspiration fluid from ankle joint tap: >50 WBC/hpf
 containing yellow monosodium urate crystals

ASSESSMENT:

Final diagnosis: Drug induced gout and hyperuricemia.

TREATMENT PLAN

Drug (generic name)	Dose & Frequency	27/7	28/7	29/7
Microzide (hydrochlorothiazide)	25 mg, OD	✓	✓	✓
Aspirin (acetylsalicylic acid)	325 mg OD	✓	✓	✓
Lipitor (atorvastatin)	20 mg OD	✓	✓	✓
Mobic (Meloxicam)	15 mg OD	✓	✓	✓
Uloric (Febuxostat)	90 mg OD	✓	✓	✓



↓
Generate free radicals, free radicals damage the tissue.

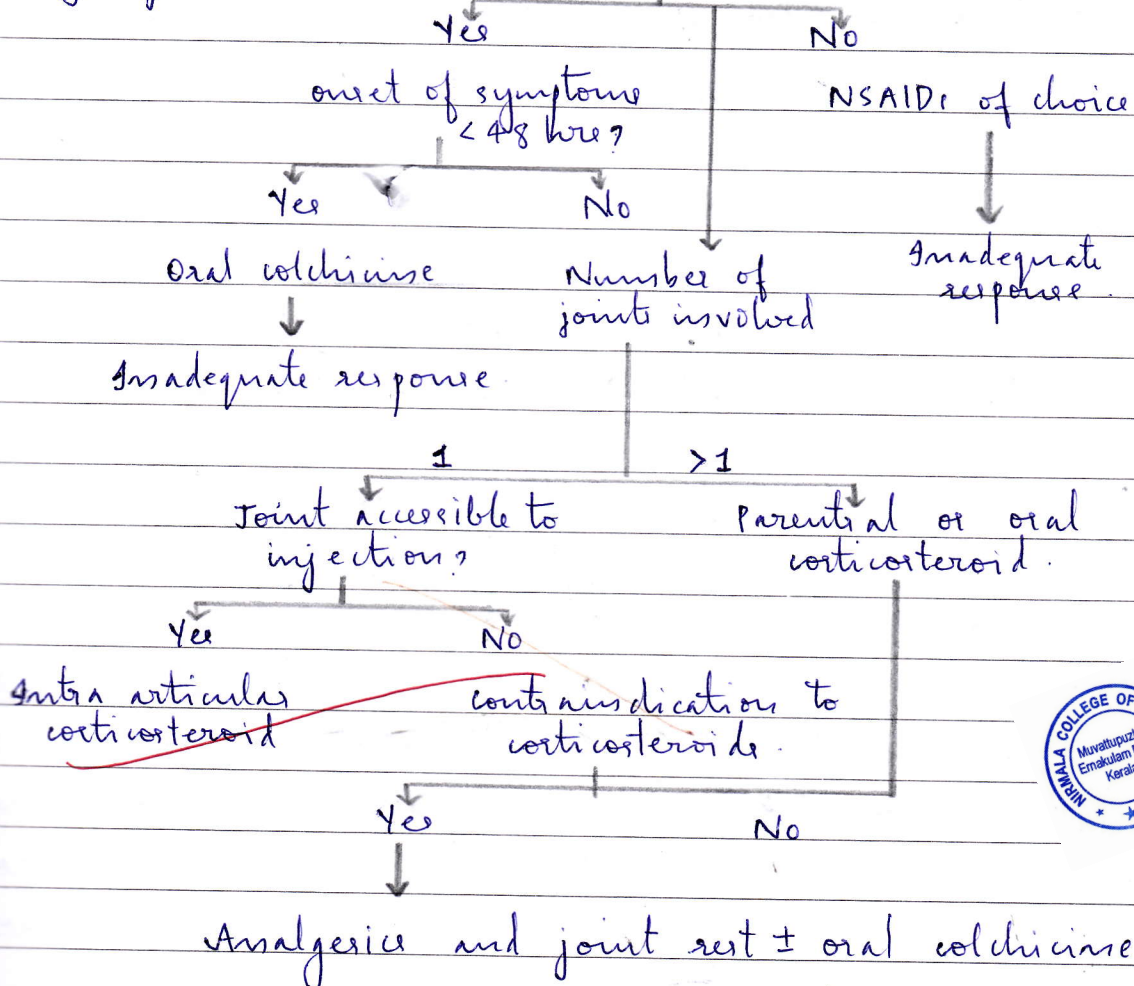
↓
Release of proteolytic enzyme glycoproteins.

↓
Release of lactic acid.

↓
More precipitation of urate crystals.

STANDARD TREATMENT:

Acute gouty arthritis → contraindication to NSAIDs



Follow up: Review after 1 week.

DISCHARGE MEDICATIONS.

Eeluxostat 40 mg - OD * 1 week

Aspirin 325 mg - OD * 1 week.

Atorvastatin 20 mg - OD * 1 week

Meloxicam 15 mg - OD * 1 week.

Indications:

Microzide : diuretic.

Aspirin : analgesic and antipyretic.

lipitor : Reduce cholesterol.

Mobic : NSAID's

uloric : to treat gout attacks.



A 5 year old child was admitted in paediatric ward with complaints of fever, cough, cold and abdominal pain.

SUBJECTIVE :

PATIENT DETAILS

Name : Mr. M

Age : 5 yrs

Sex : F

Weight : 18 Kg

OP NO : 2576536

Department : Paediatrics

DOA : 11/2/23

DOD : 19/2/23

HISTORY OF PRESENT ILLNESS: fever, cough, cold and abdominal pain.

PAST MEDICATION HISTORY : Nil

FAMILY HISTORY : Nil

PAST MEDICAL HISTORY : Nil

OBJECTIVE :

General Examination

Date	15/2	16/2	17/2
Temp	98.6°F	N	N
Pulse	82	102	100
RR	20	20	20



19/2

PMF

A CASE PRESENTATION ON ACUTE BRONCHITIS WITH UTI.ACUTE BRONCHITIS

Acute bronchitis is an inflammation of the large airways of the lung. Acute bronchitis is caused by infection of the viruses and is usually self limiting. Bacterial infection is uncommon. It can sometimes be caused by allergens, irritants and bacteria. Irritants include smoke inhalation, polluted air inhalation, dust etc.

ETIOLOGY:

Viruses, bacteria, pollution, smoking, exposure to second hand smoke, elderly and infants, asthma, COPD, GERD.

PATHOPHYSIOLOGY:

Etiologic agent irritants airways.
↓
Hypersecretion of mucus and inflammation.
↓
Bronchial wall becomes thickened, mucus plugs airways
↓
Bronchitis.

SIGNS AND SYMPTOMS:

shortness of breathe.
wheezing, fatigue.
Fever and chills.
Runny nose.



Lab investigations on 11/2/23

<u>Parameters</u>	<u>Normal level</u>	<u>observed value</u>
Blood		
Hb	13-15 gm ¹⁰⁰	12.3
TC	4000-11000 cells/mm	8100
N	55-70%	64%
L	20-40%	35%
E	1-6%	1%
Platelet	1.5-4 lakhs	1.6 L
ESR	0-20 mm/hr	25 mm/hr

on 11/2/23

CRP : 81 mg/L

culture Test

X-Ray (chest PA)

Lab investigation on 11/2/23

<u>Parameters</u>	<u>observed value</u>
<u>urine</u>	
urine albumin	Trace
urine sugar	Nil
<u>urine microscopy</u>	
pus cells	8-10
RBC	0-2
Epi. cells	occ
Bacteria	Present



STANDARD TREATMENT

Patient with cough and chest symptoms consistent with acute bronchitis.

↓

As the bronchitis uncomplicated.

Yes

↓

History & physical examination to rule out causes of cough

↓

Acute bronchitis → No → treat cause of cough

↓

Yes

↓

Treat with proventive, antitussive, bronchodilator.

↓

Symptoms persist for 2 weeks or more despite appropriate treatment of symptom.

No

History and physical examination, consider chest radiography, PET, sputum culture, and antibiotic therapy.



URINARY TRACT INFECTION

UTI is an infection in any part of the urinary tract. The most infective part involve the lower urinary tract, the bladder and the urethra. Women are at higher risk of developing UTI than men.

ASSESSMENT:

Final diagnosis: Acute bronchitis with UTI.

TREATMENT PLAN:

Drug	Generic name	Dose & Frequency	11/8	12/8	13/8	14/8	15/8	16/8
i.v Pmol	Paracetamol	1.5 g IV SOS	✓	/				
Tepamil 250	Paracetamol oral suspension	5 ml	✓	✓	✓	—	—	—
Syp. Mazing	Montelukast sod & levo cetirizine HCl	5 ml	✓	✓	✓	✓	✓	—
Buoline Neb.	Apratropium bromide & levo salbutamol	1/2 BD	✓	✓	✓	✓	✓	—
Oxion PD	Oxymethazoline	3 drops BD	✓	✓	✓	✓	✓	—
Amj. clavans	Amoxycillin (500mg) + clavulanic acid (100mg)	600 mg BD	✓	✓	✓	✓	✓	✓
C. Antiflu	Oseltamivir	75 mg 1/2 BD	✓	✓	✓	✓	✓	—
Amj. Rabeprazole	Rabeprazole	10 mg OD	✓	✓	✓	✓	✓	—
Syp. cyclosporin	Dicyclanil HCl & simethicone	6 ml SOS						
Amj. Amikacin	Amikacin sulphate	200 mg OD IV	—	—	✓	✓	✓	✓
Flaxax sachet	Flurogel 400 granules	10 P 60 ml H ₂ O	—	—	—	—	—	✓
Neotonic	Glycerin & sodium chloride	8						✓



PATHOPHYSIOLOGY:

Precipitating factor
(Avoidance of urge to void)

Predisposing factor

Bacterial invasion.



Adhere to mucosal surface.



Multiplication of the bacteria.



Interruption of normal homeostatic environment
of the urinary tract.



Immune response (cytokine & PG's release)

Physiologic reactions



Fever

Inflammation of the lining
of UT



Narrowed urine passage & poor
emptying of bladder.



Frequent micturition and urgency

STANDARD TREATMENT

~~children > 3 yr. of age~~



Perform urine dipstick test



DISCHARGE MEDICATION

Drugs	Generic Name	Dose & Frequency
syp. Bontoclar	Amoxycillin & potassium clavulanate	4 ml BD * 4 days
syp. Mozing	Montelukast sodium & levocetirizine HCl	5 ml * 1 week
tablets	Macrofol 400 D	10 P * 5 days
syp. Ambrochil	Ambroxol HCl	2.5 ml BD * 5 day
syp. Zincovit	Multivitamins	5 ml OD

Follow up: Review after 5 days.



+ve for leukocyte
esterone & nitrate

↓

diagnose UTI

↓

initiate antibiotic
treatment

-ve for leukocyte
esterone & +ve for
nitrate

↓

initiate antibiotic
treatment and send
sample for culture

↓

Treatment depends
on culture results

+ve for leukocytes
esterone & -ve
for nitrate

↓

send urine sample
for microscopy &
culture

↓

Treat depending
on culture results

PHARMACIST INTERVENTION:

- Amikacin - amoxicillin / clavulanic acid - concurrent use of aminoglycosides and penicillins may result in loss of aminoglycoside efficiency
- Concurrent use of grape fruit and montelukast increases montelukast exposure
- The frequency feparil 250 and syp. mozig was not given.
- Paracetamol IV and suspension was given same day which was not required.

PATIENT COUNSELLING

About Disease.

- Make sure your child gets ~~enough~~ fluids in small amounts often.
- You can use a cool moist vaporizer or humidifier in your child's room to help loosen mucus in the airway



USES:

- Syp. Bactoclar : Antibiotic
Syp. Moxing : Leukotriene antagonist
Ezalax sachet : constipation
Syp. Ambrodil : Bronchodilator
Syp. Zincovit : Multivitamins
Inj. Amikacin : Antibiotic
Inj. Antiflu : Antiviral
IV Pmsol : Antipyretic and analgesic



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK REPORT III PHARM D

Submitted by

Nadheem Muhammed Shajeef

N Nancy Joseph

N Nandhana Shibu

N Naveen K Biju

N Sama Fathima



CASE

A CASE PRESENTATION ON LEPTOSPIROSIS

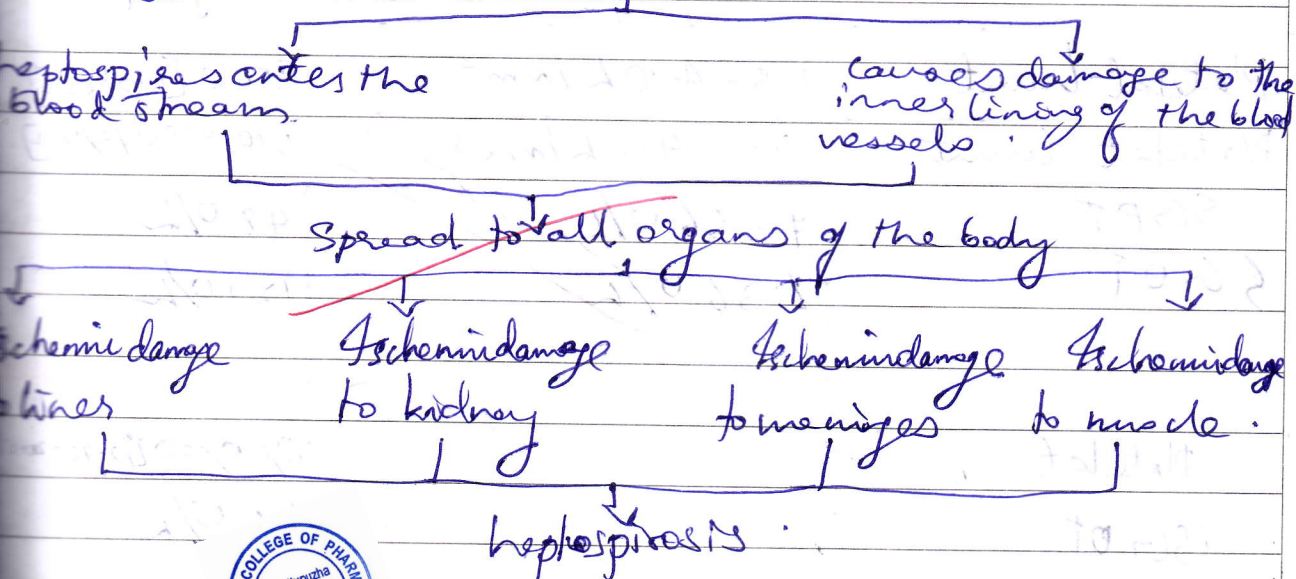
LEPTOSPIROSIS

It's a bacterial disease that affects humans and animals. It is caused by bacteria of the genus *Leptospira*. Humans can get leptospirosis through direct contact with urine from infected animals or through water, soil or food contaminated with their urine. It's most common in warm climate. Without treatment leptospirosis can lead to kidney and liver damage and even death. Antibiotics clear the infections.

PATHOPHYSIOLOGY

Causative agent [with soil, water or plants that have been contaminated animal urine]

↓
Enters human body through abraded skin / through mucous membrane



E L Platelet count	1-6% 20-40% 1.5-4 lakh/mm³	9% 26% 70,000
<u>Serum</u> Dengue IGA " IGM " NSI heptaspore IgM heptaspore Ige Creatinine Bilirubin (T) Bilirubin (dir) SGPT	-ve -ve -ve 0.7-1.3 mg/dl 2 mg/dl 0-0.3 mg/dl 7-56 U/L	1.3 mg/dl 7.4 mg/dl 5.6 mg/dl 24 U/L
<u>Urine</u> Urine Albumen Urine Sugar pus cells RBC Granular cells	<30 mg/dl 0-0.8 mmol/L 0-5 hpf <2 or equal to 4 0-2	Trace Nil 8-10 hpf 0-1 1-2
RBS	80-140 mg/dl	166 mg/dl
Platelet Count	1.5-4.0 L/mm³	8500 [10/12/2022]
Platelet Count SGPT SGOT	1.5-4.0 L/mm³ 7-56 U/L 236 U/L	1,10,000 [11/12/2022] 48 U/L 121 U/L
Platelet SGOT		2,00,000 [12-12-2022] 45 U/L



SIGNS AND SYMPTOMS

High fever, headache, Chills, Muscles aches, Vomiting, Red eyes, Abdominal pain, Jaundice, Diarrhoea, Rashes.

RISK OF EXPOSURE

Farmers, mine workers, veterinarians and animal caretakers, military personnel.

STANDARD TREATMENT

Suspected / Probable case

Doxycycline 100mg BD x 7 days

Perform rapid diagnostic test, perform biochemical test
Ask or look for Myalgia, Rigor, Anuria, Jaundice, Breathlessness

Rapid diagnostic test
+ve / -ve



Organ involvement present

Complete 7 day course injection.

Ballistic penicillin after -ve

at dose and refer to higher centre.



Rapid diagnostic test
+ve / -ve



No organ involvement



Ensure complete course
of Doxycycline for 7 days.

PHARMACIST'S INTERVENTION

C-Rabium - PSR should preferably be taken on empty stomach. There are no known interactions with food or beverage but ingestion of food can delay absorption or can cause stomach acid.

On 13/12/2022

Platelet

2,00,000

Sr OT

45 U/L

Urine Microscopy

Pro cells

0-5/hpf

4-6

RB/s

L or equal to 4

0-2

Culture Test

- No growth was found after 48hrs of incubation
- Comments: Antibiotics were started early.

ASSESSMENT

Final Diagnosis: Leptospirosis

PLAN

Drgs	Dose & Frequency	9/12	10/12	11/12	12/12	13/12
IV. Paracetamol	505					
IV. XONE	1gm, 10-1	✓	✓	✓	✓	✓
Caz. Rabbum DSR	0-0-1 (after food)	✓	✓	✓	✓	✓
T. Grolbi	300mg, 1-0-1			✓	✓	
T. Glinola	0-1-0			✓	✓	
T. P-650				✓	✓	



- 1) The use of T. Dony and T. Zadoye together should not be preferred as Donycline decreases effect of cefodrine by pharmacodynamic antagonism.
- 2) The use and cause of T. Fittis is not clear on the patient does not have any previous complaints of anxiety, mental stress.
- 3) There is no involvement of any anti-diabetic medication even if the subject is in pre-diabetic state.

PATIENT COUNSELLING

1) About disease / Lifestyle modifications.

- Avoid water source that may be contaminated by food water or animal urine.
- If you have walked through contaminated water, thoroughly wash your feet with soap and water.
- Does not walk bare foot outside.
- Make the water safe for drinking by boiling / chemically treating.
- Prevent rodent infestation.

2) About Drugs

- ~~Fig. Xone~~: It may use the no. of eosinophils, ~~an acute diarrhoea~~, rash etc. Consult Doctor, if needed.
- Vit. B₁₂ deficiency may occur with prolonged use of ~~trabazide~~.

DISCHARGE MEDICATION

- *) T. Tadolaf — Efpodone pronetil (200mg)
↳ 1-0-1 x 3 days.
- *) C. Rabi'am DSR — Domperidone (30mg) +
Rabeprazole (20mg)
↳ 1-0-0 x 1 week.
- *) T. Etizola — Etizolam (0.5mg) → 0-0-1 x 3 days.
- *) T. Dony — Donyudone (100mg) → $\frac{1}{7}$ x 4 weeks.
- *) C. Becosules2 — Vitamin Supplement → 1-0-1 x 14 days.



A 72 year old man was admitted in Urology department with pain on left side of abdomen, incomplete voiding of the bladder for past few days.

SUBJECTIVE

Patient Details

Name: Mr. X

Age: 72 yrs

Sex: M

IP NO: 51411

Department: Urology

DOA: 21/9/19

DOD: 25/9/19

PAST MEDICAL HISTORY: Hypertension, Dyslipidemia, CAD.

T. Enalapril - 20mg [Vasotec]

T. Nicardia - 5mg

T. Metoprolol - 50mg

T. Atorva - 20mg [Lipitor]

HISTORY OF PRESENT ILLNESS

Renal Calculi

OBJECTIVE



Parameters	Normal Value	Observed Value
<u>Blood</u>		
Hb	14-16 gm	14.2 gm
WBCs	4000-11000 cells/mm ³	7100 cells/mm ³
Platelet Count	1.5-4 L/mm ³	1.78 L/mm ³
<u>CFT</u>		
Bilirubin	0.3-1.2 mg/dl	0.8 mg/dl
Albumin	3.5-5.2 g/dl	3.8 g/dl

A CASE PRESENTATION ON RENAL CALCULIRENAL CALCULI

It's also known as nephrolithiasis or kidney stone, they are the hard deposits of minerals and acid salts that stick together in concentrated urine. They are painful while passing through the urinary tract.

ETIOLOGY

Nephrolithiasis is more common in male than female. Two types of stones are present - calcium oxalate containing stone, calcium phosphate, cystine, uric acid, xanthine and struvite containing stones.

Main cause — hypercalcaemia, hyperoxaluria, hyperuricaemia, hyperuricosuria, hypomagnesaemia, gouty diathesis etc.

PATHOPHYSIOLOGY

Slow urine flow, resulting in supersaturation of the urine.

Damage to the lining of urinary tract
↓
Decreased inhibitor substances in the urine
↓
that would otherwise prevent supersaturation and crystalline aggregation.

Saturation

↓
Supersaturation

↓
Nucleation

Globulin	2-3g/dl	2.5g/dl
RFT		
BUN	7-8mg/dl	10mg/dl
Creatinine	0.6-1.4mg/dl	1.8mg/dl
Sodium	134-144mmol/l	136mmol/l
Chloride	98-102mmol/l	103mmol/l

ASSESSMENT

Final Diagnosis: Renal Calculi



PLAN

Drogs	Dose and Frequency	21/19	22/19	23/19	24/19	25/19.
4. T. Razo [Rabeprazole]	20mg [1-0-1]	✓	✓	✓	✓	✓
4. T. Enalapril [Vasotec]	20mg [1-0-0]		✓	✓	✓	✓
4. T. Atorva [Lipitor]	20mg [0-0-1]		✓	✓	✓	✓
4. Sy p. Cremon [Magnesium hydroxide]	3 top. 10ml 1-1-1		✓	✓	✓	✓
4. T. Dolo [Paracetamol]	650mg [1-1-1]		✓	✓	✓	✓
4. T. Usman [Tamoxifen]	0.4mg [0-0-1]		✓	✓	✓	✓
4. T. Tazart [Piperacillin + Tazobactam sodium]	4.5mg [1-1-1]		✓	✓	✓	✓

crystal growth and aggregation →
crystal retention
↓
Stone Formation

RISK FACTORS

low fluid intake — production of concentrated urine causing supersaturation and crystallisation of stone forming compounds → crystal deposition on the ~~endothelium~~

STANDARD TREATMENT

Stone episode [Resolved]

↓
Previous episode

↓
No
↓
Conservative Management

Increase urine output to
2-1.2L (2 L) per day
avoid excess sodium intake
and low meat intake.

↓
Yes
↓
Obtain history;
number of previous
episodes;

Onset of previous episode,
bone disease, gout,
DM, family history.

↓
Serum Studies

24hr urine studies

↓
Complicated calcium
bone disease (ie, normal calcium,
bone disease, no urinary tract
infection) ↓

↓
Other stone
disease.
↓



DISCHARGE MEDICATIONS

Brand Name	Generic Name	Frequency
• T. Donet	Levodopamine Proxet (Vantin) - 200mg	1-0-1 * 5D
• T. Razo	Rabeprazole (Anipha) (20mg)	1-0-0 * 5D
• T. Urinax	Tamsulosin (0.4mg)	0-0-1 * C
• T. Dolo	Paracetamol (650mg)	1-0-1 * 3D
• T. Enalapril	Vasotec - 20mg (Enalapril)	1-0-0 * C

Uses

- *) T. Enalapril : to treat high BP.
- *) T. Vicardra : treat hypertension & angina.
- *) T. Atorva : to treat hyperlipidaemia
- *) T. Razo : treat GERD, heart & burns.
- *) T. Urinax : treat BPH
- *) Syp. Cefadifin : treat constipation (used as laxative)
- *) T. Donet :- treat bacterial infection.



* Normocalcaemia

↓
Prescribe potassium
urate

i) cysturia

↓
Prescribe furosemide
(thiazide) and
increase fluid
intake.

x) Urinary
calculi

↓
Prescribe
 K^+ citrate.

* Hypercalcaemia

↓
Treat with
Thiazide diuretics

↓
Treat
relapses with
allopurinol.

↓
Add K^+ chloride

if patient has
normal urine
urate levels.

↓
Add K^+ citrate

if patient
has low urine
urate level.

*) Hypercalcaemia

↓
Hyperparathyroid
investigation
↓
Treat based
on findings.

*) Struvite
calculi

↓
Prescribe
antibiotics

↓
Add
acetic acid solution
and for
severe
infection.

x) Hyperuricaemia
(gout)

↓
Prescribe Allopurinol.



PHARMACIST'S INTERVENTION

*) No drug is given in discharge medication for
dyslipidaemia even though patient has past
medical history of dyslipidaemia.

*) Usage of Thiazobarbarn have a chance of bleeding
disorders particularly in patients with renal impairment,
discontinue if thrombocytopenia or bleeding occurs.

*) No need of giving sup- Venosaph to the patient.

4) No abdominal scan done to the patient even though renal colic persists. So exact size of stone is unpredictable. Only by pharma it can conclude whether drug or surgery has to be done to the patient.

4) No need of giving drug Donnet to patient since surgery hasn't done.



PATIENT COUNSELLING

* Based on Drug

T. Donnet: Should be taken at morning and evening. It's an antibiotic used to treat infections caused by bacteria. Drug course should be completed.

T. Razo: should be taken early morning. It's a proton pump inhibitor used to treat heartburns.

T. Urinax: Should be taken at night time. It's an α -blocker that relaxes the muscles in prostate and bladder neck, makes easy to urinate.

T. Paracetamol: To treat pain. Used temporarily to relieve mild to moderate pain and fever.

T. Vasote: Taken early morning; Enalapril is an ACE inhibitor which is used to treat high BP. Check whether if cough is there for patient.

A 53 years old man. was admitted in General medicine ward with complaints of fever, body pain, tiredness, vomiting and pain in left eye.

SUBJECTIVE

Patient Details

Name: Mr. Y

Age: 54

Sex: M

IP No: 211556

OP No: 242690

Department: CM

DOA: 30/12/22

DOD: 4/1/23

PAST MEDICATION HISTORY: Nil

PAST MEDICAL HISTORY: Nil

FAMILY HISTORY: Nil

OBJECTIVE

General Examination

Date	30/12	31/12	1/1/23	2/1/23	3/1/23	4/1/23
Temperature	38.3	N	N	N	N	N
Bp	110/80	110/80	120/70	110/70	120/80	100/60
Pulse	76	70	68	70	74	82
RR	22	22	22	22	22	22



CASEA CASE PRESENTATION ON DENGUE FEVER WITH THROMBOCYTOPENIADENGUE FEVER

Mosquito-borne tropical disease caused by Dengue Virus. Symptoms within 3-14 days after infection → High fever, headache, vomiting, muscle & joint pains and a characteristic skin rash. Recovery from 2-7 days. In small portions of cases, the disease develops into a more severe haemorrhagic fever resulting in bleeding, low levels of blood platelets and blood plasma leakage or into dengue shock.

THROMBOCYTOPENIA

It's the condition by abnormally low levels of platelets also known as thrombopenia, in the blood. Low levels of platelets in turn lead to prolonged or excess bleeding. It is the most common coagulation disorder among intensive care patients and is seen in a fifth of medical patients and a third of surgical patients.

ETIOLOGY

- Dengue Virus (DENV)
- Transmitted through mosquito.



LAB INVESTIGATION

CASE NO. 113

	30/12	31/12	1/1/23	2/1/23	3/1/23	4/1/23
Platelet Count						
AM	88000	60000	58000	75000	90000	130000
PM	79000	60000	60000			
PCV (%)	30/12	31/12	1/1/23	2/1/23	3/1/23	4/1/23
AM	45%	43%	42%	41%	42%	42%
PM	43%	43%				

Normal range : PCV - 42 to 52%.

OPHTHALMOLOGY DEPT.

Cl/ Pain in left eye

Observations - dry eyes, mild Blepharitis.

ASSESSMENT

Final Diagnosis : Dengue fever with thrombocytopenia
mild Blepharitis.

→ Transmitted through mosquito.



Pharv

Deng	Generic Name	Frequency	30/12	31/12	1/1/23	2/1/23	3/1/23
Ultracet Semi	Tramadol (18.75mg) + Paracetamol (62.5mg)	1-0-1	✓	✓	✓	✓	✓
T. Periset m	Ondansetron 4mg	BF 1-0-1	✓	✓	✓	✓	✓
T. Carvion	Rafaya extract	1-0-1	✓	✓	✓	✓	✓

PATHOPHYSIOLOGY

Bite of Aedes mosquito

The virus penetrates to the skin

The virus infects and replicates inside langherhan cells.

Langherhan cells release interferons (to limit the spread of infection)

Infected langherhan cells go to the lymphatic system to make immune system alert.

Goes to the circulation.

Results in Viremia

Activate immune response - increase lymphocyte

Decrease neutrophils & WBCs

Release of pyrogen causes fever and increase BP in vessels - causes rashes

Dengue



SIGNS AND SYMPTOMS

High fever, headache, Rash, Throats & joint pain, Bleeding & shock, Nausea & Vomiting.

STANDARD TREATMENT

Dengue with/without warning signs

Criteria: 1) Patients has recently travelled to or lived in an endemic area has a

* Propylsali NF cream 20mg	Ulofexol + Salicylic acid				✓	
* T. Zac D	Ascorbic Acid + retinol + Cholecalciferol + Sodium ascorbate + Zinc Oxide	1-0-1	✓	✓	✓	✓
* Refresh Tear	Carbonyl Methoxy Cellulose	1-1-1	✓	✓	✓	✓
* Moniflon ointment	Monifloxacin					

DISCHARGE MEDICATION

- *) T. Zac - 1-0-1 * 7 days
- *) Moniflon eye ointment * 5 days.
- *) Refresh Tear 2 drops * 1-1-1
- *) T. Rabium 1-0-1 (B/F) * 5 days.

Follow up: Review after 7 days

USES

- *) Ultracet Semi: Pain reliever.
- *) T. Periset: Control Nausea & Vomiting
- *) T. Caricom: Papaya extract
- *) T. Zac: Vitamin supplement



fever & following symptoms.
1) Laboratory: Confirmed dengue virus infection.

Without warning signs

With warning signs
- Abdominal pain
- Persistent vomiting
- Mucosal bleeding
- Liver enlargement

Severe dengue

* Severe plasma leakage leading to dengue shock syndrome & fluid accumulation with respiratory distress.

* NSAIDs for controlling pain and fluid & IV intake.

DRUG-DRUG INTERACTIONS

Serious — Use Alternative.

1) Moxifloxacin + Ondansetron: Concurrent use of Moxifloxacin and selected QT prolonging drugs may result in increased risk of QT interval prolongation.

2) Ondansetron + Tramadol: Result in increased risk of serotonin syndrome.



*) Refresh tears : treat eye dryness.

*) P. Rabeprazole : Proton pump inhibitor.



A 64 years old man was admitted in orthopaedic ward with complaint of pain over bilateral left knee for 13 years aggregated since 2 years.

SUBJECTIVE

Patient Details :-

Patient Name : Y

Age : 64

Sex : M

OPNO : 20224024

DOA : 22/11/2022

DOD : 1/12/2022

Dept : Orthopaedic

IPNO : 385135

* Patient Social History : Nil

* Family History : Nil

* Allergic History : Nil



OBJECTIVE

LAB INVESTIGATIONS

Date	22/11	23/11	24/11	25/11	26/11	27/11	28/11	29/11	30/11	1/12
Pulse	80	82	60	76	76	78	74	74	78	72
BP	130/80	120/70	110/70	-	130/80	130/80	130/80	120/80	140/70	120/70
SpO ₂	99	98	98	98	98	98	99	95	98	98
RR	22	22	20	21	20	20	22	22	22	22
Temp	97°F	98.6°F	98.6°F	98.6°F	98.6°F	98.6°F	98.6°F	98.6°F	98.6°F	98.6°F

Hematology

Parameters	Observed Value	Normal Value
Hb	15 g/dl	14-18 g/dl

25/4/23

CASE.

A CASE PRESENTATION ON OSTEOARTHRITIS

OSTEOARTHRITIS

It is defined as a common slowly progressive disorder affecting primarily weight-bearing diarthrodial joints especially peripheral or axial skeleton. Characterized by progressive deterioration and loss of articular cartilage, resulting in osteophyte formation, pain, limitation of motion, deformity and progressive disability with or without inflammation.

ETIOLOGY

Age, Gender, Obesity, Repetitive motion or injury, Trauma, Heredity, Body weight.



PATHOGENESIS

Begins with damage to articular cartilage through injury, obesity etc.

↓
initial repair characterized by increase in metabolic activity of chondrocytes leading to increased synthesis of matrix constituents with subsequent cartilage swelling.

↓
This acts as first step in process leading to further cartilage loss.

↓
In early stage OA, increased synthesis of matrix metalloproteinases 1, 3, 13, 28 which causes collagen destruction to occur faster than synthesis.

WBC	7200 cells/mm ³	4000 - 11000 cells/mm ³
DC: N	57.3%	40-70%
L	37.6%	20-40%
E	3.0%	1-6%
Monocytes	1.1%	2-10%
Basophils	1.0%	0.0-1.0%
RBS	196 ng/dl	21 = 200 ng/dl

Lipid Profile

Parameters	Observed Value	Normal Value
Total Cholesterol	174 ng/dl	< 200 ng/dl
HDL	46 ng/dl	> 40 ng/dl
LDL	98 ng/dl	< 100 ng/dl
TCr	163 ng/dl	150-199 ng/dl

Liver Function Tests

Parameters	Observed Value	Normal Value
T. Bilirubin	1.0 ng/dl	0.1-1.0 ng/dl
D. Bilirubin	0.2 ng/dl	0.2-0.3 ng/dl
T. Protein	6.5 ng/dl	6-8.3 ng/dl
Albumin	3.5 ng/dl	3.5-5 ng/dl
Globulin	3.6 ng/dl	2.0-3.5 ng/dl
ALT	11.07 U/L	5-37 U/L
AST	36 U/L	8-40 U/L



Intermediate stage of OA is associated with failure of extracellular matrix synthesis and increase of protease extracellular matrix synthesis activity further increasing cartilage loss.



Chondrocytes also undergo apoptosis probably as a result of nitric oxide synthesis and production of toxic metabolites and this leads to fewer chondrocytes to synthesise matrix components.



In late stage OA, there is complete loss of cartilage with joint space narrowing which leads to painful deformed joint.



Bony outgrowths may appear at joint margins and may lead to deformity.

SIGNS AND SYMPTOMS

Pain on motion, Pain with motion in early disease, pain with rest late in disease, joint deformity, stiffness; limitation of motion, crepitus, joint enlargement.

STANDARD TREATMENT

~~Symptomatic knee OA~~



~~NSAID topically~~

(Low risk GI especially ≥ 75 yrs)

↓ if not sufficiently effective

~~NSAID oral~~

* Intermittent, restricted to the period of pain and inflammation.



Kidney Function Tests

Parameters	Observed Value	Normal Value
Urea	14.42 mg/dl	8-20 mg/dl
Uric acid	2.23 mg/dl	3.5-7 mg/dl
Serum Creatinine	0.66 mg/dl	0.4-1.6 mg/dl
<u>Electrolytes</u>		
Na ⁺	140 mEq/L	135-145 mEq/L
K ⁺	4.23 mEq/L	3.5-5.0 mEq/L

Physical Examination

Local: No skin scar, sinuses
 Skin intact, mild swelling (+), mild left knee-palpitation, joint line tenderness (+) crepitans (+)

Range Of Motion

i) Movement: left knee - Painful after 60°.
 Right knee - 120° Full.

ii) Flex: Right (180°)
 Left (90°)

X-Ray B/L knee: No bony injuries.

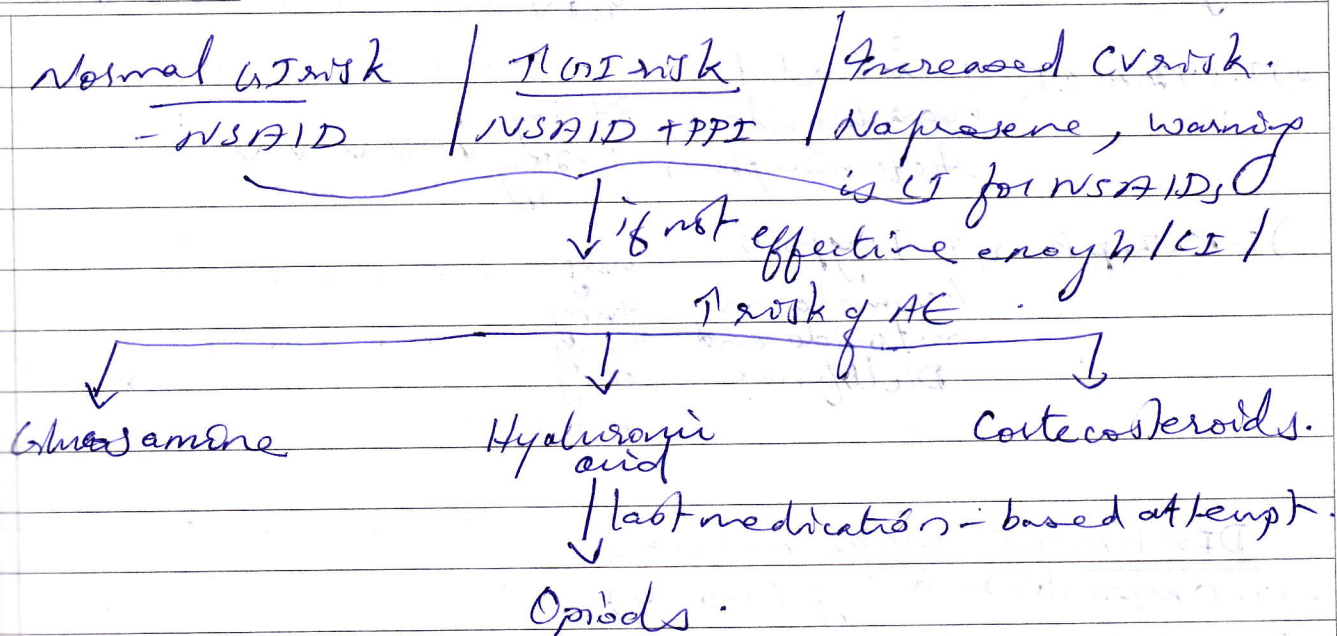
ASSESSMENT

Grade 4 osteoarthritis B/L knee.

TREATMENT PLAN

T. Name	Generic Name	Dose	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	D ₈	D ₉	D ₁₀
1) T. Tripan	T. Enteric coated Paracetamol	40mg 1-0-0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2) T. Geopirin	T. Aspirin	20mg 0-0-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3) T. Onyvestin	T. Chondroitin sulphate, collagen peptide, sodium hyaluronate and Vit C	2.5mg 1-0-0									✓	✓





* Short term therapy - low dose - prolonged release.

PHARMACIST'S INTERVENTION

- *) The indication for T. ACYVAL is not clear in this case.
- *) It's necessary to monitor Ca level in disease like arthritis.
- *) No calcium and vitamins supplement were provided to patient in order to prevent conditions like osteoporosis or other bone disease.

PATIENT COUNSELLING

- *) low fat diet with fruits, vegetables, whole grains, legumes and low fat dairy like fat free yogurt or skimmed milk.
- *) Don't stop / change medication till next review unless advised by cardiologist.
- *) Physical activities at least 30 minutes of moderate intensity aerobic activity for minimum of 5 days/week.

4) Inj. MoL	Inj. Paracetamol	1g I.V B.D						✓	✓	✓	✓
4) T. ULTRACET	T. Tramadol hydrochloride + Acetaminophen	37.5mg + 32.5mg 1-0-1	✓	✓	✓	✓	✓				
4) T. Rutrip Plus	T. Tygison Bismelain sulfate and Diclofenac	4mg 90mg 100mg 50mg 1-0-1							✓	✓	✓

DISCHARGE MEDICATIONS

- * T. Onyrestin 2.5mg (1-0-0)
- * T. Medson 40mg (1-0-0)
- * T. Cospirin 200mg (0-0-1)
- * T. Arzoclab (1-0-0) (Acetophylline 100mg + Acetylcysteine 60mg)
- * T. Mobicheal D (1-0-1)

Follow Up : After 1 week

Uses

- ✓ T. Etoricoxib - Proton Pump Inhibitor [used as prophylaxis of NSAID associated gastric ulcers in patients]
- ✓ T. Etoricoxib - NSAIDS (used for arthritis)
- ✓ T. Ultracet - NSAIDS (moderate to severe pain of osteoarthritis)
- ✓ Inj. MoL - NSAIDS (mild pain)
- ✓ T. Onyrestin - Act on the musculoskeletal system & skin protection
- ✓ T. Rutrip plus - reduce pain & inflammation in conditions like RA, ankylosing spondylitis, OA



A 86 years old women was admitted in the hospital due to fever, dysuria and vomiting for past 7 days.

SUBJECTIVE

Name of Patient: Mrs. X

Age: 86

Sex: F

Hospital No: 1057603

DOA: 7-5-2023

DOB: 14-5-2023

Medical History: Type 2 DM / HT / Dyslipidemia

Medication History: Not mentioned.

Family History: Nil

Social History: Nil

OBJECTIVE

General Examination



Date	7/5	8/5	9/5	10/5	11/5	12/5	13/5	14/5
Temp	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7
BP	130/70	130/60	120/70	140/90	120/80	120/80	120/80	100/70
Pulse	110	90	82	98	96	104	96	110
RR	22	22	22	22	22	22	22	22
SpO ₂	94%	95%	98%	95%	94%	95%	94%	94%

Provisional Diagnosis - Urinary Tract Infection.

LAB INVESTIGATIONS

Parameters	7/5	8/5	9/5	10/5	11/5	12/5	13/5
Wb (13-15)	-	10.8	-	-	-	-	-
RBC (4.2-5.4 million/mm ³)	2.3	-	-	-	-	-	1.3

16/5/23

CASE

A CASE PRESENTATION ON URINARY TRACT INFECTIONS

UTI

It's an infection in any part of urinary tract.

The infection can occur at any part of UTR-

- Bladder - Cystitis
- Kidney - Pyelonephritis
- Ureters
- Vagina

ETIOLOGY

UTI generally results from natural gut bacteria like *E. coli*. Vaginitis from STDs and asexually transmitted diseases from person to person.

- Abnormalities in UT
- Medical conditions like DM, Multiple sclerosis, Stroke etc.
- Pregnancy, Menopause, kidney stones, use of catheters, urinary surgery.

PATHOPHYSIOLOGY

An uncomplicated UTI usually involves the bladder.

Acute Kidney injury

Pyelonephritis

Acetaminophen

Uroepithelial penetration

Colonization.



N (40-80%)	-	91%	-	-	-	-	-
L (20-40%)	-	18%	-	-	-	-	-
E (1-6%)	-	10%	-	-	-	-	-
Platelet Count (1.5-4.2/lmm ²)	-	2.52/lmm ²	-	-	-	-	-
ESR mm/hr (0-22mm/hr)	-	79mm/hr	-	-	-	-	-
FBS (less than 100mg/dl)	-	86mg/dl	70mg/dl	89mg/dl	91mg/dl	95mg/dl	63mg/dl
PPBS (less than 140mg/dl)	-	86mg/dl	165mg/dl	-	-	-	-

Urine Analysis

7/5/23

U-albumin - Trace

U. sugar - Nil

Pus cells - many

Epi. cells - DCC

Bacteria - present (++)

Cast : 1-2 / Hpt

8/5/23

U-albumin - Nil

U-sugar - Nil

Pus cells - 8-10

Epi. cells : OCC

Bacteria : (+++)

9/5/23

Pus cells : 10 to 12

Epi cells : OCC

14/5/23

Pus cells : 5-6

Epi. cells : OCC

8/5/23 LAB INVESTIGATIONS

Parameters	Values
TC (125-200mg/dl)	141.00
SGPT (30-60 U/L)	11 U/L
Urea (6-24 mg/dl)	20 mg/dl
Creatinine (0.6-1.4 mg/dl)	1.0 mg/dl
Sodium (134-144 mmol/l)	129
Potassium (3.5-5 mmol/l)	5.0



RISK FACTORS

Age (children & young people), Sex (more in female), Caucasian race, voiding dysfunction, sexual intercourse, Spinal abnormalities, Constipation

STANDARD TREATMENT

- Hazy or cloudy urine alone isn't UTI indication.
- Local signs/symptoms of UTI, dysuria, haematuria, increased urine frequency.
- Systemic signs & symptoms: Fever, increased WBC ($>10,000$), flank pain, malaise & lethargy.

No catheters

Urine analysis & urine culture, Presence of WBC, blood, protein, leukocytes.

Catheters

Replace catheter, Urine analysis & Urinalysis examination, culture. Presence of WBC, blood, protein.

if infection - local symptoms (Nitrofurantoin, Ciprofloxacin)

Systemic symptoms (Cefpodoxime, Ceftriaxone)

No infection - Don't prescribe antibiotics but check urine culture results - $\geq 100,000$ CFU, provide antimicrobial treatment.

~~Non-Pharmacological treatment~~ - Drink plenty of water.

Urine Culture → Moderate growth of E. coli
FINAL DIAGNOSIS
 UTI

PLAN

Brand Name	Generic Name	Dose & Frequency	8/5	9/5	10/5	11/5	12/5	13/5	14/5
1) IV Magnova	Cefepime & Tazobactam	BD (100mg + 250mg)	✓	✓	✓	✓	✓	✓	✓
4) P-650	Paracetamol	1-1-1	✓	✓					
4) Sumol 650	Paracetamol	650mg	✓	✓					
4) Syo. Urofit	Potassium citrate and Magnesium citrate with Vit. B6	10ml BD	✓	✓	✓	✓	✓	✓	✓
*) Fosivrol Sachet	Fosfomycin Trihydrate Powder	HS			✓				
4) T. Vibart (DS)	Pae & Probiotic Capsules	1-0-0				✓	✓	✓	✓
4) HH Lero	Levocetirizine dihydrochloride	5mg				✓	✓		
4) Fenira	Fenofibrate	180mg					✓	✓	✓

DISCHARGE MEDICATIONS

Brand Name	Generic Name	Duration & Frequency
4) Cap. Vibart DS	Pae-Probiotic Capsules	1-0-0 x 15 days
4) Syo. Urofit UTI 10ml	Potassium citrate & Magnesium citrate with Vit. B6	BD x 30 days
4) T. Zoyl 2mg	Olanzapine	1/2-0-0 x continue
4) T. Rozday 10mg	Rosuvastatin	HS x continue
4) T. Zinint	Multivitamin	1-0-0 x continue
4) T. Sampraz D 40	Esomeprazole magnesium and domperidone SR Cap.	1-0-0 x continue

PHARMACIST'S INTERVENTION

- *) The patient had dyslipidemia, but cholesterol levels were not monitored and no drugs were prescribed during the treatment time. But statins were given in the discharge medications.
- *) Concurrent use of Domperidone and grapefruit juice may result in increased domperidone plasma concentration.
- *) The patient was prescribed with Paracetamol 2 times at same duration. This can lead to therapeutic duplication.

PATIENT COUNSELLING

- *) About Lifestyle Modifications.
 - Drink plenty of water and fluids. After urinating and bowel clearing - wipe from front to back. Do not delay urination when need arises. Practise good personal hygiene.

- *) About Disease

Urinate often, take prescribed antibiotics properly, never go to bed with heating pad in place.

- *) About Drugs

3000 Sachet - Drink extra juice

IV Magnesia - Avoid consumption of alcohol.



4) T. Nifedipine SR 100mg	Nitroglycerin SR	1-0-1 x 30 days
5) T. Fludart 0.4mg	Tamsulosin	HS x 30 days
6) T. Venkta M 500mg	Vildagliptin & Metformin	1-0-1 x continue

Follow up : R/A 30 days with FBS.



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK REPORT III PHARM D

Submitted by

Sandra Baby

Sneha Susan Samuel

Tania Sibi

Teresa Mary Sobi

Vaishnavi Vijay



A 66 yr old male patient was admitted in hospital with chief complaints of severe ankle pain.

SUBJECTIVE

PATIENT DETAILS

Name : Mr. X

Age : 66

Sex : Male

OP No. : 23451

IP No. : 56473

Dept. : Ortho

DOA : 27/7/22

DOD : 29/7/22

PRESENT HISTORY : Severe ankle pain & swelling

PAST MEDICAL HISTORY : Dyslipidemia

Peptic ulcer disease, obesity

PAST MEDICATION HISTORY : Extended release of NIACIN 1000 mg
PO BD since last 2 months.

Omeprazole 20mg PO OD

OBJECTIVE

Physical Examination : Conscious, Oriented, afebrile

General Examinations :

	27/7	28/7	29/7
Temp	98.4°	98.4°	98.4°
BP	156/90	150/90	120/80
RR	82	80	82
PR	18	20	20



A CASE PRESENTATION ON GOUT AND HYPERURICEMIAGOUT

Gout is a disorder of purine metabolism resulting in hyperuricemia & deposition of urate crystals in the synovium & clinically manifesting as recurrent acute arthritis progressing to chronic deforming arthritis.

Types of Gout

- > Primary or Genetic
- > Genetic polymorphism in *SLC22A12*, *SLC2A9*
- > Secondary
 - Anemia
 - Drug
 - HT

PATHOPHYSIOLOGY

↑ Uric Acid

↓

Blood

↓

Reacts with sodium crystals.

Deposited in soft tissues of joints

↓

Infiltration of granulocytes that phagocytize the urate crystals

↓

Generate free radicals, that damages the tissue

↓

Release of proteolytic enzymes glycoproteins



LAB INVESTIGATION

Parameters	Observed Value	Normal Value
ESR	22	3-10 mm
WBC	18,710	4000-11000 cells/mm ³
HDL	25	>40 mg/dl
Triglyceride	280	<150 mg/dl
LDL	130	<100 mg/dl
Uric Acid	11.6	2-7 mg/dl

OTHER TESTS : X-Ray Ankle : Negative for breakage or damage

ASPIRATION FLUID FROM ANKLE JOINT CAP

> 50 WBC/hpf containing yellow monosodium urate crystals

ASSESSMENT

FINAL DIAGNOSIS : Drug induced Gout & hyperurcemia

PLAN

Brand Name	Generic Name	Dose & Freq	27/7	28/7	29/7
Nimozide	Hydrochlorothiazide	25mg OD	✓	✓	✓
Aspirin	Acetylsalicylic acid	325mg OD	✓	✓	✓
Lipitor	Atorvastatin	20mg OD	✓	✓	✓
Mobic	Neloxicam	15mg OD	✓	✓	✓
Mobic	Ribuxostat	40mg OD	✓	✓	✓

Follow up : Review after 1 week



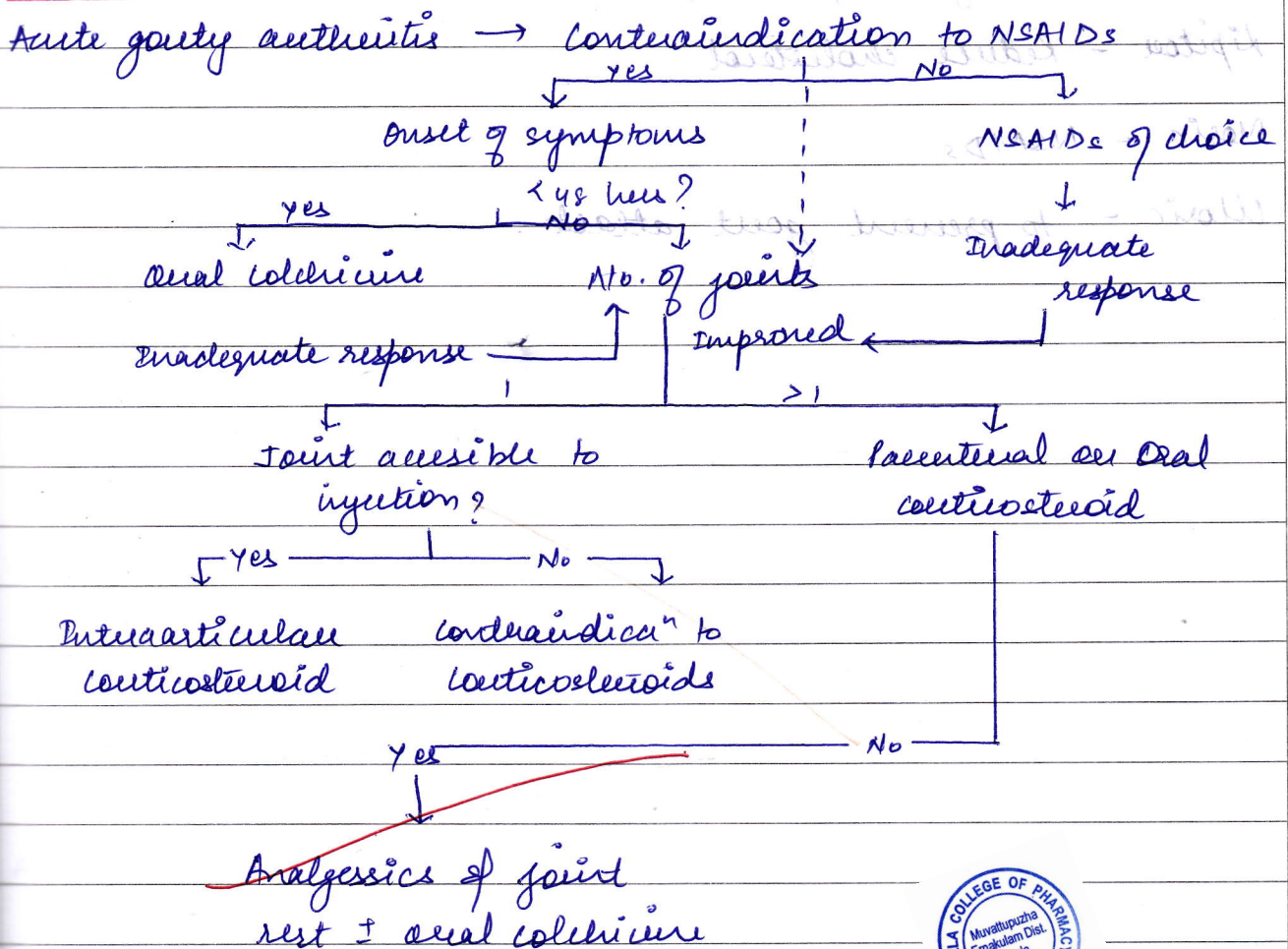
↓
Release of Lactic Acid
↓

More precipitation of urate crystals.

TREATMENT GOALS

- Relieve pain of inflammation
- Prevent development of tophi
- Prevent kidney damage from chronically elevated urate levels.

STANDARD TREATMENT



DISCHARGE MEDICATION

Febuxostat 40mg - OD - 1week

Aspirin 325 mg - OD - 1week

Alomastatin 20mg - OD - 1week

Meloxicam - 15mg - OD - 1week

Uses :

Microzide - diuretic

Aspirin - analgesic & antipyretic

Lipitor - reduce cholesterol

Mobic - NSAIDs

Uloric - to prevent gout attack.



A 53 year old patient was admitted with complaints of vomiting, diarrhoea & tiredness for past 3 days.

SUBJECTIVE

Name: Nee. K

Age: 53 yrs

Gender: Female

OP No.: 257833

IP No.: 212829

DOA: 14/2/23

DOD: 17/2/23

HISTORY OF PRESENT ILLNESS - Vomiting, Diarrhoea, Tiredness x 3 days

MEDICAL HISTORY: DM, CAD, gastritis & syncope.

MEDICATION HISTORY:

T. Atorlip - 5mg, 0-0-1

T. Nebilip (Nebivolol) - 2.5mg, 0-0-1

T. Linogen (Ferreous fumarate) - 10-0-0 (H)

T. Clopiras (Clopidogrel) - 75mg, 0-1-0

T. Peractin - 4mg

T. Pantocid - 40mg, 1-0-0 B/P (H)

OBJECTIVE

GENERAL EXAMINATION

	BP	PULSE	RR
14/2	140/90	70/mt	20
15/2	120/80	64	22
16/2	110/70	72	20
17/2	140/80	76	20



A CASE PRESENTATION ON ACUTE GASTROENTERITIS

ACUTE GASTROENTERITIS

An infection or inflammation of digestive tract, particularly the stomach & intestines is called as gastroenteritis.

It is frequently referred to as stomach or intestinal flu.

It is of 2 types :

- Bacterial gastroenteritis
- Viral gastroenteritis

ETIOLOGY

Viruses - Calicivirus, Rotavirus, Astrovirus, Adenovirus

Bacteria - Campylobacter bacterium.

Parasites - Entamoeba histolytica, Giardia lamblia

Non-infective - Poisoning with heavy metals, NSAIDs, antibiotics, mushroom etc.

SIGNS & SYMPTOMS

- Diarrhoea & Vomiting
- Abdominal Pain
- Fever
- Headache
- Muscle Pain
- Blood stool
- Abdominal cramping
- Bloating



PATHOPHYSIOLOGY

Predisposing factors

- Age
- Malnutrition

Ingestion of
contaminate food & water

Precipitating factors

contaminated food & water

Direct invasion on bowel wall

Endotoxins are released

LAB INVESTIGATIONS 15/2/23 - BLOOD

Parameters	OBSERVED VALUE	NORMAL VALUE
Hb	10.1 gms%	11.5 - 15.5 gms%
TC	6500 cells/mm ³	4000 - 10000 cells/mm ³
DC: L	56%	
N	42%	
E	2%	1-4%
ESR	19 mm/hr	
Platelet	220,000 cells/mm ³	0-20 mm/hr 137,000 - 371,000

LAB INVESTIGATIONS - 15/2/23: URINE

Urine Albumin : Nil

Urine Sugar : Nil

Urine Microscopy : a) Pus Cells : 1-2

b) RBCs : 0-1

c) EPI cells : occasional

ON 16/02/23

ECG : Mild T R - minimal MR

ON 17/02/23

S. Cholesterol : 169 mg%.

ASSESSMENT

FINAL DIAGNOSIS : Acute Gastroenteritis



Stimulation & destruction of mucosal lining
of bowel wall

Digestive & Absorptive maladaptation

Excessive gas
formation

Increase peristaltic
movement

secretion of H_2O
in the lumen

↑ distension

Mild diarrhea (2-3
stools)

Nausea &
vomiting

Fluid & electrolyte
imbalance

↑ acid protein in lumen of "realisoup" doesn't
occur.

Intense diarrhea (watery stools)

Serious fluid volume deficit

RISK FACTORS

- Infants, children
- Elderly
- Immunosuppressed patients
- Travellers
- Poor hygiene
- Swimming
- Improperly stored or cooked food.



PLAN

DRUG	DOSE & FREQ	15/02	16/02	17/02
Vomikind (ondansetron)	IV, 1 amp, 1-0-1	**	**	*
Esozet NP (esomeprazole)	40mg, 1-0-1	**	**	*
Tab. Onut-D (onidazole & ofloxacin)	1-0-1	**	**	*
Cap. VSL-#3 (live freeze dried lactic acid bac & bifido bact. cap.)	1-0-1	**	**	*
T. Cyclopam (Dicyclomine & paracetamol)	1/2, SOS		**	*
Sy. Ugel A (oxetacaine, mepaldrif, sintellicone)	2 tsp, 1-1-1		**	

DISCHARGE MEDICATION

T. Onut-D (onidazole & ofloxacin) - 1-0-1 x 3 days

Cap. VSL #13 1-0-1 x 3 days

Tab. P-650 650mg, SOS



STANDARD TREATMENT

Acute Gastroenteritis

Assess the severity of dehydration.

Some (mild-moderate) dehydration

↓

oral rehydration

200-300 ml / kg over

3-4 hours.

↓

ORT failed

Rapid IV rehydration using

saline boluses 20 ml / kg / hr

for 1-4 hrs.

Severe dehydration/shock

↓

IV bolus 0.9% NaCl or

Ringer's lactate as fast as indicated.

↓

Maintenance IV fluids

0.9% NaCl + 5% dextrose
± KCl.

↓
Oral fluid or maintenance IV fluids
Discharge after achieving satisfactory hydration

PHARMACIST INTERVENTION

- Concurrent use of oploxa or Ondansetron may result in increased risk of QT interval prolongation.

PATIENT COUNSELLING

- Disease related patient counselling

- If you have been sick or vomited, wait 5-10 min, then start drinking again but more slowly.

- Eat small meals, avoid fatty, spicy or heavy food at 1st.



Tab. Esogress (esomeprazole) 40mg 1-0-0 x 7 days.

INDICATIONS:

Vomikind: Prevent, manage nausea of vomiting

* Esozet NF: Treat acid reflux

T. Omi-D: Treat bact. & Parasitic infections

T. P650: Analgesic & Antipyretic

T. Esogress: Treat acid reflux, Peptic ulcer.

T. Cyclopam: For mild - moderate pain



A 75 year old male was admitted in GM ward with complaints of cough, breathlessness & fever.

SUBJECTIVE

PATIENT DETAILS

Name: Mr. M

Age: 75 yrs

Gender: Male

OP No.: 865970

Dept.: GM

DOA: 19-1-22

DOB: 24-1-22

History of present illness: cough & breathlessness for 2 weeks & fever.

Social History: * Alcohol
* Smoking

Past Medical History: * Diabetes Mellitus
* COPD

Past Medication History: * Asthalin Inhaler (salbutamol)
last 10 yrs sos
* Glimepiride - 2 mg

OBJECTIVE

GENERAL EXAMINATIONS

	19/1	20/1	21/1	22/1	23/1	24/1
Temp	100	100.2	100	99	99	98
BP	170/90	150/80	160/80	160/90	160/80	160/90



A CASE PRESENTATION ON COPDCHRONIC OBSTRUCTIVE PULMONARY DISEASE

A permanent & treatable pulmonary disease marked by chronic airflow limitation that is typically progressive & is not entirely reversible.

It leads to 2 conditions:

- * Emphysema: It is permanent enlargement of the lungs terminal to the distal bronchioles due to the destruction of air space walls.
- * Chronic Bronchitis: In which the lining of the airways is constantly irritated & inflamed. This causes the lining to swell & make mucus.

ETIOLOGYHost Factors

- Genetic factors
- Increased bronchial hyperresponsiveness
- Under development of lungs.

Environmental Factors

- Cigarette smoking (5 pack years)
- Environmental toxins

~~PATHOPHYSIOLOGY~~

~~Abnormal inflammatory response of lungs~~
due to toxic gases

↓

Response occurs in the airways lungs parenchyma

LAB INVESTIGATIONS ON 19/1 & 24/1

Parameters	Normal Value	Observed Value				
		19/1	20/1	21/1	22/1	23/1
HB	14-16 gm/dl	13.2				
WBC	4000 - 10000 cells/ml	14200				
DC: N	40-80%	73.6				
E	1-6%	2				
L	20-40%	19				
AFT						
BUN	7-18 mg/dl	18.6				
Creatinine	0.6-1.4 mg/dl	1.1				
Sodium	134-144 mmol/lit	13.9				
Potassium	3.5-5.0 mmol/lit	3.2				
Blood Sugar						
RBS	80-140 mg/dl	200	205	195	210	190

OTHER TESTS:

- * Chest X-Ray
- * Inflammation of both airways.

ASSESSMENT

FINAL DIAGNOSIS: COPD



of pulmonary vasculature



Neutrophils released



Activation of macrophages



TNF- α , IL, cytokines, together act as complementary, leading to wide spread destruction of lung tissues.

RISK FACTORS

- * Exposure to air pollution.
- * Breathing second hand smoking
- * Working with chemicals, dust & fumes
- * A genetic condition - α -1 deficiency.
- * History of childhood respiratory infection

STANDARD TREATMENT

the refined ABCD assessment tool.

Spirometrically
confirmed
diagnosis

>

Assessment of
airflow
limitation

>

Assessment of
symptoms/risk
of exacerbations.

~~Post bronchodilator~~

FEV₁/FVC < 0.7



Grade

GOLD 1

GOLD 2

GOLD 3

GOLD 4

FEV₁ (% predicted)

≥ 80

50 - 79

30 - 49

< 30

PLAN

Druugs	Dose of Drug	19/1	20/1	21/1	22/1	23/1	24/1
Salbutamol	2.5mg, 1-0-1	✓	✓	✓	✓	✓	✓
Budesonide	0.5mg, BD	✓	✓	✓	✓	✓	✓
T. Pan D (Clantoprazole)	40mg, 1-0-0	✓	✓	✓	✓	✓	✓
T. Dolo (Paracetamol)	650mg, Q6H	✓	✓	✓	✓	✓	✓
T. Lasix (Furosemide)	40mg, BD	✓	✓	✓	✓	✓	✓
Drj. Clavam (Amoxycillin + Clavulanic Acid)	1.2mg, OD	✓	✓	✓	✓	✓	✓
T. Ranipril	2.5mg, 1-0-0	✓	✓	✓	✓	✓	✓
O ₂ (Oxygen)	2L	✓	✓	✓	✓	✓	✓
Syp. Nurolyte (Nuc)	10ml, BD			✓	✓		
Drj. Hydrocortisone	100mg, BD			**	**	**	**
T. Zincovit (Multi vit.)	OD	✓	✓	✓	✓	✓	✓
T. Glimipride	2mg 1-0-0	✓	✓	✓	✓	✓	✓
Letrozole	10mg, OD		✓	✓	✓	✓	✓



Initial Pharmacological Treatment

> 2 moderate exacerbations or
> 1 leading to hospitalization

Group C

LAMA

Group D

LAMA or

LAMA + LABA or

ICS + LABA

0 or 1 moderate exacerbations (not leading to hospital admission)

Group A

A bronchodilator

Group B

A long acting bronchodilator (LABA or LAMA)

Follow-up Treatment

Dyspnea

LAMA or LABA

↓

LABA + LAMA ← LABA + ICS

↓

Investigate other causes

↓

LABA +
LAMA +
ICS

Exacerbation

LABA or LAMA

↓

LABA + LAMA ← LABA + ICS

↓

consider if
 $FEV_1 < 50\%$

→ LABA + LAMA + ICS

↓

Roflumilast
 $FEV_1 < 50\%$

In former smokers

Azithromycin



PHARMACIST INTERVENTION

Concurrent use of furosemide & hydrocortisone may result in hypokalemia.
Corticosteroids are generally given in combination with LABA as a combination therapy but no LABA was prescribed.

DISCHARGE MEDICATION

~~Drug~~ T. Clavum - 625 mg, 1-1-1 * 1 week

Ramipril - 5 mg, 1-0-1 * 1 week

T. Glimepiride - 2 mg, 1-0-0

Salbutamol - 2 puffs, 1-0-1

Amlodipine - 5 mg, 0-0-1

T. Pant 40 mg, 1-0-0 * 2 weeks

T. zincovit 1-0-0 * 2 week

Follow up: Review after 2 weeks.

Uses:

T. Clavum : Antibiotic

Ramipril : For HT

T. Glimepiride : Type 2 DM

Salbutamol : relax muscle of airways

Amlodipine : for HT

T. Pant : Proton pump inhib.

T. zincovit : Multivitamin



A 86 year old woman was admitted in the hospital due to fever, dysuria & vomiting for past 7 days.

SUBJECTIVE

Name : Mrs XX

Age : 87 years

Sex : F

Hospital No. : 1057603

DOA : 7/5/23

DOB : 14/5/23

Medical history : Type 2 DM/HT/Dyslipidemia

Medication history : Not mentioned

Family history : Nil

Social history : Nil

OBJECTIVE

GENERAL EXAMINATIONS

	7/5	8/5	9/5	10/5	11/5	12/5	13/5	14/5
Temp	36.7	38.7	36.7	36.7	36.7	36.7	36.7	36.7
BP	130/70	130/80	120/70	140/10	120/80	120/80	120/80	120/70
Pulse	110	90	82	98	96	104	96	110

PROVISIONAL DIAGNOSIS : UTI



A CASE PRESENTATION ON URINARY TRACT INFECTIONUTI

A urinary tract infection is an infection in any part of your urinary tract.

The infection can occur at any part of urinary tract:

Bladder - An infection in the bladder is called cystitis

Kidneys - infection of one or both kidneys - Pyelonephritis

Ureteres

Urethra

ETIOLOGY

- UTIs generally result from natural gut bacteria like *E. coli*.
- Urethritis can result from STDs & can also be sexually transmitted from person to person.
- Abnormalities in UT
- Medical conditions such as DM, Multiple sclerosis etc.
- Pregnancy.
- Menopause
- Kidney stones
- Use of catheters
- Urinary surgery

~~PATHOPHYSIOLOGY~~

An uncomplicated UTI usually only involves the bladder.

LAB INVESTIGATION

Parameter	7/5	8/5	9/5	10/5	11/5	12/5	13/5
Hb	-	10.9	-	-	-	-	-
RBC	2.3						1.3
N	-	91%	-	-	-	-	-
L	-	18%	-	-	-	-	-
E	-	1%	-	-	-	-	-
PL Count	-	2.5L/mm ²	-	-	-	-	-
ESR	-		-	-	-	-	-
FBS	-	74 mm/h 86 mg/dl	70 mg/dl	89 mg/dl	91 mg/dl	95 mg/dl	63 mg/dl
PPBS	-	86 mg/dl	165 mg/dl	-	-	-	-

URINE ANALYSIS

7/5/23

U. albumin : Trace
 U. Sugar : Nil
 Pus cells : Many
 Epi cells : Occ
 Bacteria : Present (+++)
 Cast : 1-2/Hpf

9/5/23

Pus cells : 10-12
 Epi cells : Occ

8/5/23

U. Albumin : Nil
 U. Sugar : Nil
 Pus cells : 8-10
 Epi cells : Occ
 Bacteria : (+++)

14/3/23

Pus cells : 5-6
 Epi cells : Occ



Acute kidney injury



Pyelonephritis



Ascension



Uroepithelium penetration



Colonization

RISK FACTORS

- Age (mostly in children & young people)
- Sex - more in females
- Caucasian Race
- Voiding dysfunction
- Sexual intercourse
- Spinal abnormalities
- Constipation.

STANDARD TREATMENT

- Hazy or cloudy urine is not alone indicative of UTI
- Local signs/symptoms of UTI, dysuria, haematuria, increased urine frequency.
- Systemic signs & symp - Fever, increased WBC, flank pain, malaise & lethargy.

no catheters

urine analysis & urine culture

catheters

Replace catheters



8/5/23 LAB INVESTIGATION

Parameters	Values
TC (125-2000/ μ L)	14,100
SPT (30-60 U/L)	11 U/L
Urea (6-24 mg/dL)	20 mg/dL
Creatinine (0.6-1.4 mg/dL)	1.0 mg/dL
Sodium (134-144 mmol/L)	129
Potassium (3.5-5 mmol/L)	5.0

URINE CULTURE : Moderate growth of E. coli

FINAL DIAGNOSIS : Urinary Tract Infection

PLAN

Drugs	Dose & Freq	8/5	9/5	10/5	11/5	12/5	13/5	14/5
IV Magnona (cefepime & Tazobactam)	100mg BD	+	+	+	+	+	+	+
P650 (Paracetamol)	1-1-1	+	+					
Sumol 650 (Paracetamol)	650mg	+	+					
Syp. Usafit (Potassium Citrate & Magnesium citrate with V.I.E.B.)	10ml BD	+	+	+	+	+	+	+
Fasinol Sachet (Co-trimoxazole + Paracetamol)	HS				+			



presence of WBC, blood
protein, leukocytes

Urine analysis & culture
+ve of WBC, blood, protein

↓
of infection - local symptoms (nitrofurantoin)
ciprofloxacin

systemic symp (cefopodoxime, ceftriaxone)
No infection → Don't prescribe antibiotics but
check urine.

Culture results → 100000 CFUs provide antimicrobial
treatment

* Non pharmacological treatment → drink plenty of
water.

PHARMACIST INTERVENTION

→ The patient had dyslipidemia, but cholesterol
levels were not measured & no drugs were
given.

→ Concurrent use of domperidone & grapefruit
juice may result in ↑ed domperidone conc in
plasma.

→ Patient was prescribed with 8' mol twice at
same time. This may lead to therapeutic
duplication.

PATIENT COUNSELLING

About lifestyle modifications

Drink plenty of water & fluids
after micturition & bowel cleaning, wipe from
front to back.



T. Vibact DS (Probiotic cap.)	1-0-0							+	+	+	+
H.H. Leno (Lansoprazole dihydrochloride)	5mg							+	+		
Fenixa (Fexofenadine HCl)	180mg							+	+	+	

DISCHARGE MEDICINES

- 1) Cap. Vibact DS - 1-0-0 x 15 days
- 2) Symp. Urofit UTI 10ml, BD x 30 days
- 3) T. Zorigl, 2mg, 1/2-0-0 x Continue
- 4) Roseday 10mg, HS x Continue
- 5) T. Sampraz D 40, 1-0-0 x Continue
- 6) T. Verifica M 500mg, 1-0-1 x Continue

FOLLOW UP: R/A 30 days with FBS



SUBJECTIVE

A 71 yr old male was admitted in GM ward with complaints of chest pain & body pain for 10 days.

PATIENT DETAILS

Name : Mr. X

Age : 71

Sex : M

Dept : GM

DOA : 21-12-22

DOD : 23-12-22

PAST MEDICAL HISTORY :- Type 2 DM on Asquemedic
Treatment

PAST MEDICATION HISTORY :- Nil

SOCIAL HISTORY : Nil

FAMILY HISTORY : Nil

OBJECTIVE

GENERAL EXAMINATIONS

	21/12	22/12	23/12
Temp	N	N	N
BP	130/80	130/80	130/90
Pulse	78	80	80
RR	22	22	22



CASE No. 20A CASE PRESENTATION ON DM, UTIDIABETES MELLITUS

DM refers to a group of diseases that affect how the body uses blood sugar (glucose). The main class of DM is called type 2. It is a group of common endocrine diseases characterized by sustained high blood sugar levels.

UTI

A UTI is an infection in any part of your urinary tract.

The infection can occur at any part of urinary tract:

- Bladder
- Kidneys
- Uterus
- Urethra

ETIOLOGY

- Insulin deficiency
- Gradual resistance

PATHOPHYSIOLOGY (DM)

Impaired insulin secretion in pancreas.

↓
 glucose production in liver → ↑ glucose → leads to receptor & post receptor defects

Provisional Diagnosis: Uncontrolled Type 2 DM

LAB INVESTIGATIONS

Parameters	Normal Value	Observed Value
Hb	14-16 gm%.	11.6
RBS	70-160 mg%.	296
PPBS	<140 mg/dl	188
FBS	65-110 gm%.	183
Creatinine	0.4-1.04 mg%.	1.2
Na ⁺	135-145 mEq/L	135
K ⁺	3.5-5.5 mEq/L	3.9
Urea	9-40 mg%.	23
T. Bilirubin	0.2-1.2 mg%.	0.8
D. Bilirubin	0.1-0.25 mg%.	0.2
S/GPT	10-40 U/L	22
Globulin	2-3 g/dl	3.7
Albumin	3.5-5.2 g/dl	3.8
Hb A1C	4.6% - 6.2%	9.2
WBC: N	55-70%	44
L	20-40%	44
E	0-2%	2
ESR	0-20 mm/hr	70
Platelet	1.5-4 lakhs/cells	80,000



FINAL DIAGNOSIS: Uncontrolled Type 2 DM, UTI

↓
Insulin resistance
in peripheral tissue
↓

Type 2 DM

PATHOPHYSIOLOGY OF UTI

An uncomplicated UTI on the bladder
↑

Acute kidney injury
↑

Pyelonephritis
↑

Ascession
↑

Uroepithelium penetration
↑

Colonization

STANDARD TREATMENT

Diet + exercise
↓

Exum Not

No

Yes

80 or rapid

NET or T2D

antagon secretagogues

→ Poor Control

↓
Add another oral antidiabetic
(Poor Control)



PLAN

BRAND NAME	GENERIC NAME	DOSE FREQ	21/12	22/12	23/12
T. Ultracet Semi	Tramadol + Acetaminophen	1-1-1 (3.7mg + 325mg)	+	+	+
T. Ralium	Rabeprazole	20mg 1-0-1	+	+	+
T. Uribid	Nitrofurantoin	100mg, 1-0-1	+	+	
Syp. Citralka	Sodium hydrogen citrate	1-0-1 1.53gm/sml	+		
T. Trilex	Alprazolam	0.25mg	+		
T. Gemener	Glimepride + Metformin	1-0-1/2 1mg + 500mg		+	+
T. Flubale	Flupirtine	1-0-1, 100mg		+	+
T. Lumia 60H	Urocalciferol	60000IU		+	
T. Zimconit	Mettinitamin	1-0-0	+	+	+
Sig. Pantop	Pantoprazole	1-0-1 40mg		+	+
Sig. Periset	Erdanetlecon	2mg 1-0-1		+	+

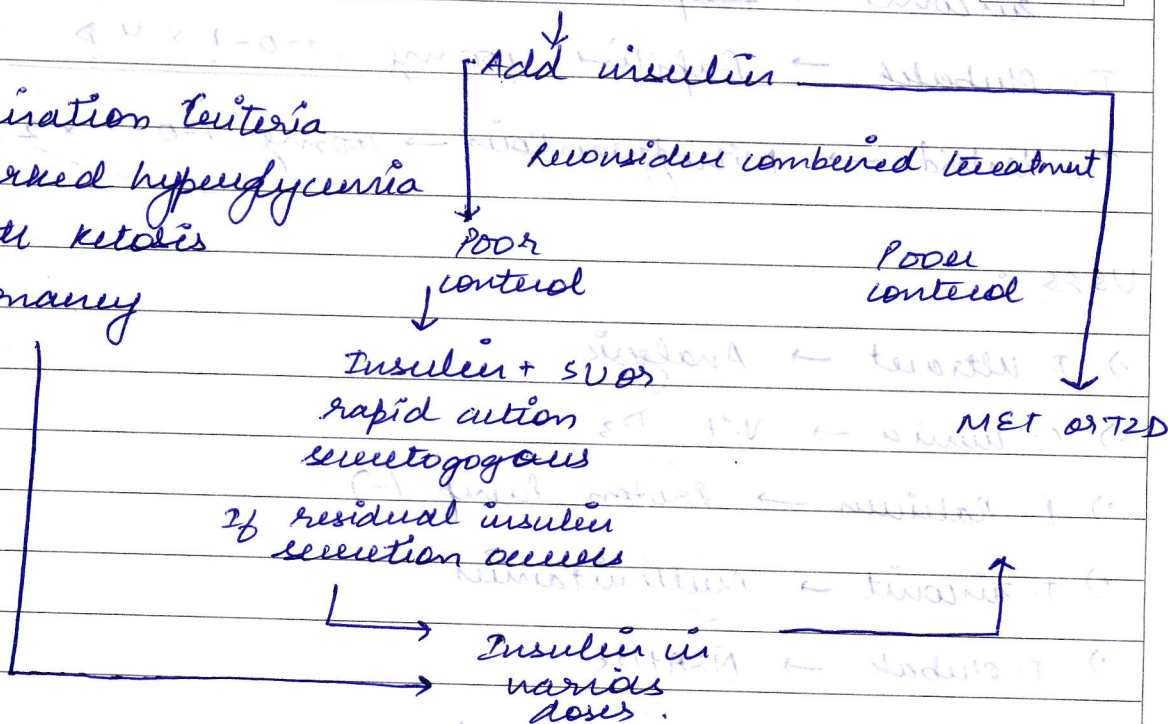
DISCHARGE MEDICATION

- T. Gemener → 1mg + 500mg, 1-0-1
- C. Lumia → Urocalciferol 60000IU, once a week
- C. Ralium → 20mg, 1-0-1 for 10 days
- T. Typlin → Anti Typhus 10mg, 0-0-1/2



Insulinisation criteria

- marked hyperglycaemia with ketosis
- Pregnancy



PHARMACIST INTERVENTION

- Alprazolam < Acetaminophen : Use of tramadol & CNS depressant may result in ↑ risk of CNS & respiratory depression.
- Concurrent use of Tramadol & serotonergic agents may result in ↑ risk of serotonin syndrome.
- Dose for alprazolam is not mentioned.
- Blood sugar test ~~was~~ not performed on 22/12
- 2 tablets of ~~rabeprazole~~ were prescribed, one is enough.



T. zincovit $\rightarrow$ ~~Puppi~~ Multivitamin 1-0-0

T. Plubaka $\rightarrow$ Rupitine 100mg, 1-0-1 $\times$ 4 D

T. Urilid $\rightarrow$ Nitrofurantoin $\rightarrow$ 100mg 1-0-1 $\times$ 2 D

USES :

1) T. ultraet $\rightarrow$ Analgesic

2) C. luvica $\rightarrow$ Vit D₃

3) L. Ralium $\rightarrow$ Proton Pump (-)

4) T. zincovit $\rightarrow$ Multivitamin

5) T. Plubak $\rightarrow$ NSAIDs

6) T. Urilid $\rightarrow$ Anti UTI Agent



NIRMALA COLLEGE OF PHARMACY, MUVATTUPUZHA



FIELD WORK PHOTOS III PHARM D





G. Badmanabhan

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